

The London School of Economics and Political Science

(Under)privileged bureaucrats?

**The changing fortunes of public servants in
Kenya, Tanzania and Uganda, 1960–2010**

Rebecca Simson

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Declaration

I certify that the thesis I have presented for examination for the PhD degree of the London School of Economics and Political Science is solely my own work other than where I have clearly indicated that it is the work of others (in which case the extent of any work carried out jointly by me and any other person is clearly identified in it).

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Abstract

At independence the emerging African elite was dominated by employees of the state. Many academics have since speculated that this over-reliance on public employment contributed to the continent's poor economic performance, as resources extracted from society were captured by a rent-seeking public sector class. Because this elite was directly beholden to the state, it also lacked the independence needed to hold the political class to task. Was this diagnosis accurate and has the state's role as a creator of the elite persisted? This dissertation explores how three East African governments –those of Kenya, Tanzania and Uganda - have used their powers as the single largest employer in their respective countries to influence the structure of society. Using quantitative evidence, it traces how public employment and pay evolved between the 1960s and the present. It examines the effects of these changes on the economic standing of public sector employees and the educational, regional and ethnic backgrounds of the people who came to work for the state. This long-run perspective shows that the public services in all three countries have changed a great deal over the past half-century and suggests that public sector salaries have declined in importance for the region's educational and income elites. It also reveals that public sector jobs have been more evenly distributed - on a regional, ethnic and gender basis - than is sometimes presumed. The thesis relates these findings to a rich political economy literature on public employment, social stratification and the development of the African postcolonial state.

Note regarding referencing of data sources

An accompanying data appendix provides the main constructed data series used in this thesis. For the figures and tables drawing on these data series, the underlying sources are given in the excel data appendix. Because of the large number of statistical sources consulted – in total over a 130 reports, statistical series or datasets giving roughly 12,000 entries – I use a coding system with abbreviated titles for all statistical sources. This code combines country, organisation (where applicable), source and year. For instance, the Kenyan Statistical Abstract from 1967 is given the abbreviation KE SA 1967. The IMF Recent Economic Developments publication for Uganda in 1987 has the abbreviation UG IMF RED 1987. The full citation is then given in a dedicated data source bibliography at the end of the thesis, organised by country, author, source and year. Where these same sources are cited directly in the chapters, these abbreviated codes are also used rather than giving full notes.

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Map 1. Administrative maps of Kenya, Tanzania and Uganda

Source: Nations Online Project (<http://www.nationsonline.org/>)





Chapter 1.

The political economy of public employment

1.1. INTRODUCTION

How did the role of the state change with the coming of independence in Africa in the 1960s? Three schools of thought, all coloured by the continent's disappointing economic performance since independence, have left a strong mark on the study of Africa's political economy. In the 1960s and 1970s dependency theorists challenged the optimistic narratives of Africa's nationalist leaders, arguing that African independent states were doomed to become neo-colonies, tethered to their colonial masters through continued dependence on foreign capital. In the 1980s the public choice school concluded that Africa's woes stemmed from its disproportionately powerful urban lobby that steered state spending towards the urban sector and a misconceived industrial policy at the expense of an over-taxed peasantry. In the 1990s a literature on clientelism and patrimonialism traced the continuities across pre-colonial, colonial and postcolonial African governance structures. It highlighted how colonial governments empowered and manipulated ethnic leadership structures to govern the colonies, resulting in a toxic postcolonial ethnic politics exercised through patron-client relationships.

In all three narratives public sector employees make frequent appearances. Dependency theorists saw public servants as the main winners at independence, forming a 'bureaucratic bourgeoisie' that prevented the emergence of a capitalist elite. Some also viewed the broader public sector wage earning class as a labour aristocracy and 'guarantors of the neo-colonial solution.'¹ The public choice school similarly viewed public sector employees as a disproportionately powerful interest group that earned high wages financed by excessive taxation of the rural sector. The patrimonial school (the label is used loosely here to refer to a broad literature on patronage and ethnicity), saw public sector jobs as one of the crucial patronage resources that leaders used to shore up the support of key individuals or constituencies.

Similar arguments have been made about other parts of the world. Literature on class in Latin America and South Asia for instance, has also emphasised the disproportionate role of the state

¹ John S. Saul, "The 'labour Aristocracy' thesis Reconsidered," in *The Development of an African Working Class: Studies in Class Formation and Action*, ed. Richard Sandbrook and R. Cohen (London: Longman, 1975), 305.

in stratifying society, in comparison with the rise of a private sector-dominated bourgeoisie in Western Europe and North America during the 18th and 19th centuries.² But these arguments have taken on a particular salience in the African context because of the extremely narrow indigenous capitalist elite at independence, the continent's greater ethnic fragmentation, and its failure to grow at the same pace as other developing regions over the second half of the 20th century.

This political economy literature, however, makes limited use of quantitative evidence about public employment in Africa to support such arguments. Perhaps because public sector employment is often treated as a puzzle piece in a larger political economy argument, it is rarely the object of study itself. Quantitative studies of public employment have primarily been produced by policy researchers, who use data on employment and wages to inform debates about the efficacies of particular policy reforms or governance capacity.³ Less has been said about the long-term dynamics of state employment and its historical significance.

This thesis aims to bridge the policy and theoretical literatures, by bringing economic data and policy discourse to bear on questions about the evolution of the postcolonial state. It does this by examining how public employment levels, composition and remuneration changed over the course of the postcolonial era (c.1960 to the present) in Kenya, mainland Tanzania⁴ and Uganda, how these policy choices were justified, and how these developments accord with those in other regions of the world. It examines the consequences of these policies on the stratification of society and composition of elites. It relates this evidence about public sector employment to the theoretical arguments about the state-society relationship in postcolonial Africa.

The main contribution of this thesis is its evidence base. It brings new quantitative evidence, analysed in novel ways and over a 50 year time horizon, to bear on theoretical debates. It focuses on the changes experienced over the course of the postcolonial period rather than assuming that colonial or precolonial legacies persisted and mechanically determine current

² Rachel Heiman, Carla Freeman, and Mark Liechty, "Introduction: Charting an Anthropology of the Middle Classes," in *The Global Middle Classes: Theorising through Ethnography* (Santa Fe: School for Advanced Research Press, 2012).

³ See for instance: Derek Robinson, "Civil Service Remuneration in Africa," *International Labour Review* 129, no. 371–286 (1990); David L. Lindauer, Oey Astra Meesook, and Parita Suebseng, "Government Wage Policy in Africa: Some Findings and Policy Issues" (Washington D.C., 1988); Ian Leinert and Jithendra Modi, "A Decade of Civil Service Reform in Sub-Saharan Africa," IMF Working Paper (Washington D.C.: International Monetary Fund, 1997).

⁴ This dissertation focuses on mainland Tanzania. Unless otherwise specified, none of the analyses include Zanzibar.

economic outcomes. It thereby seeks to ‘decompress’ postcolonial African economic history.⁵ In so doing it also demonstrates the breadth and availability of data sources from the postcolonial era, showing the extent to which economic historians can make greater headway in the comparatively understudied history of postcolonial Africa.

This a large research topic and some qualifiers are in order. By focusing on public sector employment in depth, this thesis explores one specific channel through which governments influence society. It is not offering a full account of state development an state-society relations in Africa. It does not consider the many ways in which governments control, regulate and shape economic incentives in the private sector. Neither is it a study of state efficiency and provides no measures of how well public services are delivered. Rather it considers the wages paid by the state as a form of transfer and examines some of its economic and social effects.

To briefly summarize the arguments in this thesis, it finds that East Africa’s public services share much in common with public services elsewhere in the world, challenging the idea of a uniquely African public employment-mediated political settlement. As in other parts of the world, the Kenyan, Tanzanian and Ugandan public services grew in the post-war era and then contracted in the 1980s with the slowdown in economic growth. Public sector wages were restrained in the 1970s and 1980s in the interest of industrial development, which reduced the high earning differentials that had characterised the colonial service. With time the public sector share of the elite therefore declined.

As in other regions, East Africa’s public services employs a disproportionate share of the highly educated workers in each respective country, resulting in a considerably higher average educational attainment than in the labour force at large. Among higher educated Kenyans, Tanzanians and Ugandans there is little sign of a public sector wealth premium today, although lower skilled public sector workers appear to be better off than private sector comparators (a common feature of public sector labour markets). As in Europe and North America, tertiary educated women are overrepresented in public employment. Moreover, because state services are designed to reach the entire population, public sector jobs tend to be spread more equitably on a geographic basis than private employment. Consequently, people in more remote and underdeveloped regions of their respective countries are overrepresented in the public sector, conditional on their educational attainment.

⁵ In reference to Gareth Austin’s suggestion that the use of regression analysis to examine the persistence of institutional legacies in Africa has resulted in a ‘compression of history’, see: Gareth Austin, “The ‘Reversal of Fortune’ Thesis and the Compression of History: Perspectives from African and Comparative Economic History,” *Journal of International Development* 1027, no. July (2008): 996–1027.

These findings have implications for political economy theories of state development in Africa. Rather than a patronage-ridden or elitist institution, I argue that public sector employment served the nation building efforts of East Africa's independence leaders. Unable to satisfy high popular expectations for improved living standards after independence, all three governments rationed opportunities to join the coveted formal labour force on the basis of educational performance, while simultaneously seeking to improve the regional equity in educational access. As educational attainment increased, governments chose to hold down wages and spread jobs more widely to the growing group of secondary and tertiary graduates who had come to expect a safe public sector career, rather than protecting a narrow group of insiders. In this way the Kenyan, Tanzanian and Ugandan governments used public sector jobs to satisfy the aspirations of a broad cross section of the educational high achievers in society, while feeding the thirst for more educational opportunities by expanding educational supply.

This strategy eventually collapsed under the strain of a declining budget. With the fiscal crises of the 1980s and early 1990s the state was forced into retreat, leaving a growing share of graduates to make their own way in the private sector and in the process weakening the state's hold over, and responsibilities towards, the educational elite. Consequently, today's public sector employees constitute a smaller share of the top income or wealth strata than they did in the 1960s and 1970s. With regard to public employment, the Kenyan, Tanzanian and Ugandan examples show that state-society relations have indeed changed a great deal over the course of the past half-century.

These arguments will be developed over the coming three chapters. Chapter 2 examines the growth and decline in public sector employment and how public sector wages performed and why. Chapter 3 investigates where public sector employees fell in the national income distribution and how their relative economic standing changed over time. Chapter 4 studies the resulting vertical and horizontal inequalities in public sector job access. Chapter 5 concludes.

To set the scene this introductory chapter provides a justification for the case study choices and short history of the three countries highlighting their similarities and differences. It then provides a discussion of the colonial antecedent to the postcolonial public service, showing how late colonial policies influenced academic thinking about the future of Africa's elites and the political and economic consequences of independence. This is followed by a review of how the academic literature has analysed and made sense of public sector employment over the course of the postcolonial era. The last section discusses the research contribution and methodology, including a description of the sources that will be used throughout the rest of the thesis to test the various theoretical predictions in the secondary literature.

1.2. COLONIAL LEGACIES AND POSTCOLONIAL PATHS

Kenya, Tanzania and Uganda are three neighbouring countries clustered around Lake Victoria in eastern Africa. While each has its own complex history, they are nonetheless illustrative of the African postcolonial experience, to the extent that such a generalisation can be made. Their political trajectories are typical of the continent, with rising authoritarianism and political discord following independence in the early 1960s. Their economies performed relatively well in the 1960s and 1970s, but all three suffered a severe downturn in the 1980s (or in the Ugandan case starting already in the early 1970s), characterised by falling terms of trade, high inflation and debt service difficulties. Their economies began to recover in the 1990s-2000s, and all three reintroduced multiparty elections in the same period. With populations of between 40-50 million and a GDP per capita ranging between US\$700-1,400 (2015),⁶ they are relatively large, low- or lower-middle income countries without considerable resource wealth and predominantly agrarian populations. They score slightly above the continental average on the quality of governance while their GDP per capita is somewhat below average.⁷

While they share some economic and political characteristics, there are also important differences between the countries. This variation provides an opportunity to explore the relative effect of different conditions on public service outcomes. Of particular relevance is the varying degree of ethnic polarization across the three countries, the different ideological leanings of their founding fathers and the educational policies they pursued, and differences in the severity of the economic and political crises in the 1970s-1990s. Before discussing their histories of public sector employment therefore, the following section provides a brief political history of the sub-region, highlighting some of the legacies that are thought to have influenced postcolonial public employment policy.

Colonial legacies

The modern-day political configurations of the sub-region date back to the 1885 Berlin conference, which established a British sphere of influence in today's Kenya and Uganda, and German influence over what was to become the Tanzanian mainland. After the German defeat in the First World War, part of German East Africa came under British Administration as a Mandate of the League of Nations (becoming a UN trust territory after WWII), and was renamed Tanganyika. The islands of Zanzibar, off the Tanganyikan coast, became a British protectorate in 1890 and merged with Tanganyika in 1964 to form the United Republic of

⁶ WB WDI 2017 (comparing GDP in current US\$)

⁷ WB WDI 2017 (using the country policy and institutional assessment scores to measure governance)

Tanzania. From the 1920 until the late 1970s, various iterations of an East African regional organisation provided some joint administrative functions for the region as a whole.

Colonial conquest expanded cash crop production in the region, which came to account for the bulk of exports. Coffee, sisal, tea, cotton and pyrethrum dominated production across the colonies, in addition to food crops, livestock and on a smaller scale mining of copper in Uganda and diamonds and gold in Tanganyika.⁸ In Kenya a nascent industrial sector began to develop in the colonial era while manufacturing was limited in Uganda and Tanganyika.⁹

The nature of this economic production, and its effects on the people of the region, differed in important respects across the colonies. Following the construction of the Uganda railway (started in 1896), which traverses today's Kenya, the British opened up the Kenyan highlands to European settlement. The colonists laid claim to the most productive lands, pushing Africans onto the reserves at its fringes where they served as a labour pool for European-owned farms.¹⁰ A further consequence of the building of the railway was the arrival of over 30,000 Indian construction workers in East Africa. Many settled permanently in the region and others joined them over time, forming a numerically small but economically important strata across East Africa that came to dominate the region's trade and commerce.

European settlement also resulted in an uneven process of integration of Africans into the Kenyan colonial economy and rising intra-ethnic inequality, predominantly affecting those groups living in what became the white highlands. Tension over land blossomed into the Mau Mau uprising in the 1950s, a grassroots movement that drew its support from poorer members of the Kikuyu ethnic group and targeted settlers and wealthier Kikuyus seen to be collaborating with the colonial state.¹¹ In response the government introduced a state of emergency from 1952 to 1956. Over a million people were placed in detention camps or guarded villages, and a costly military operation was launched against the Mau Mau.¹² The Emergency coloured the

⁸ KE SA 1955, Table 34; TZ IMF ARTICLE IV 1965, Table 29; UG IMF ARTICLE IV 1965, Table 25.

⁹ Michael McWilliam, "The Managed Economy: Agricultural Change, Development and Finance in Kenya, 1945 - 63," in *History of East Africa. Vol.3, [1945 to 1963]*, ed. D. A. Low and Alison Smith (Oxford, 1976).

¹⁰ Karuti Kanyinga, "Land Redistribution in Kenya," in *Agricultural Land Redistribution: Towards Greater Consensus*, ed. Hans P. Binswanger-Mkhize, Camille Bourguignon, and Roger van den Brink (Washington D.C.: World Bank, 2009).

¹¹ Bennett and Smith, "Kenya: From 'White Man's Country' to Kenyatta's State, 1945-63," in *History of East Africa. Vol.3, [1945 to 1963]*, ed. D. A. Low and Alison Smith (Oxford: Clarendon Press, 1976).

¹² Caroline Elkins, *Imperial Reckoning: The Untold Story of Britain's Gulag in Kenya* (Henry Holt and Company, 2005).

decolonisation process and nature of economic reforms in this period, which were designed in part to contain further violence by empowering a group of conservative middle class Kikuyus.¹³

Uganda in contrast was never opened up to European settlement and Uganda's cash crop production remained in African hands. However, the nature of British alliances with the colonies different kingdoms had long-lasting consequences, in particular the unusual status of colony's most populous Kingdom, Buganda.¹⁴ Buganda was one of the strongest and most centralized kingdoms in eastern Africa in the 18th and 19th centuries, with a well-organised tax collecting state. The British established a protectorate in Buganda in 1894 and in 1900 signed a further agreement with a representative of Buganda's king, granting the Kingdom considerable rights, including freehold land tenure for the Ganda elite. Neighbouring kingdoms were gradually incorporated into the Uganda protectorate, but with less autonomy than Buganda. The Protectorate initially grew to the east and west, incorporating other centralised kingdoms, while the northern, semi-arid region, home to communities without centralised state structures, was incorporated after. This led to an unequal economic geography, with greater wealth in the Baganda-dominated south. As in Kenya, an Asian community occupied a politically awkward (and widely resented) position as traders and industrialists, and colonial policy reserved Asians the sole right to engage in the cotton ginning industry.¹⁵

German East Africa also became a settler colony in the early 20th century, with European settlement concentrated in the northeast. With regards to agricultural policy the Germans treaded a path somewhere between that of Kenya and Uganda, allowing white settlement but encouraging African cash crop production alongside it.¹⁶ While the level of economic development varied across Tanganyika's regions, it did not accord neatly with pre-existing ethnic divisions, owing in part to the country's extreme ethnic fragmentation.¹⁷ This also meant that there were no larger ethnic groups able to build independent ethnically-based political movements. Ethnic tensions are thus thought to have had less salience in the run up to independence, as political movements had to rely on broad, cross-ethnic support.

¹³ Bennett and Smith, "Kenya: From 'White Man's Country' to Kenyatta's State, 1945-63," 138.

¹⁴ For general history of Uganda, see: D. A. Low, "Uganda: The Establishment of the Protectorate 1894-1919," in *History of East Africa. Vol.2*, ed. Vincent Harlow et al. (London: Oxford University Press, 1965); Mahmood Mamdani, *Politics and Class Formation in Uganda* (New York and London: Monthly Review Press, 1976).

¹⁵ Ibid.

¹⁶ For general history of Tanzania, see: Andrew Coulson, *Tanzania: A Political Economy* (Oxford: Clarendon Press, 1982).

¹⁷ Tanganyika had a higher degree of ethnic fragmentation, with the largest single group constituting only 13% of the population and the second largest 4%, see: Yusuf Bangura, "Ethnic Inequalities in the Public Sector: A Comparative Analysis," *Development and Change* 37, no. 2 (2006): 303.

Independence

The three countries gained independence in rapid succession: Tanganyika in 1961, Uganda in 1962 and Kenya in 1963. The independence leaders of all three countries were quick to reform the governance structures adopted at independence. All three adopted new constitutions, turning their countries into republics, centralising power in the office of the President and reducing the power of local governments or disbanding them entirely. By the 1970s they were de-facto or official one-party states. A regional organisation, the East African Common Services Organisation and its successor organisation, the East African Community (EAC), provided a common market, common customs tariff and some joint public services across the sub-region in the first decade of independence, but this organisation was dissolved in 1977 as Uganda slid into autocracy and relations between the three countries deteriorated.

In Kenya and Uganda these political developments were coloured by ethnic tensions. Kenya's two main parties at independence, the Kenya African National Union (KANU) and Kenya National Democratic Union (KADU), drew their support from different ethnic communities. KANU developed out of distinctly Kikuyu political organisations, and gained its main support from the most economically and educationally advantaged groups in central Kenya, the Kikuyu, Meru and Embu. KADU's support base lay with the Kalenjin and other smaller groups, including those of the coastal regions. KANU, led by Jomo Kenyatta, won the independence election. In 1964 Kenyatta brokered a merger with the opposition, bringing KADU's most prominent members into senior roles within KANU, and making Kenya an effective one-party state. KADU's leader, Daniel Arap Moi, (of Kalenjin ethnicity) assumed the Vice Presidency of a new and united (if uneasy) KANU. Upon Kenyatta's death in 1978 Moi assumed the presidency in spite of various efforts to ensure the continued rule by Kenyatta's inner Kikuyu clique.¹⁸ Moi's ascendance has been interpreted by many as a shift in power from a Kikuyu centre of gravity to a Kalenjin one.¹⁹

Uganda's party landscape was shaped by the Buganda question. Tension arose almost immediately within the uneasy ruling coalition, which included the Uganda People's Congress (UPC), led by the northerner Milton Obote, and the conservative Baganda Kabaka Yekka party, led by the Baganda kabaka (king), Mutesa II. At independence Milton Obote became Prime Minister while the Kabaka held the ceremonial role of President. Following the 1966 Buganda crisis, however, when Buganda's parliament tried to expel the Ugandan government from

¹⁸ Daniel Branch, *Kenya: Between Hope and Despair, 1963-2011* (London and New Haven: Yale University Press, 2011).

¹⁹ *Ibid.*

Bugandan territory, Obote forced the Kabaka into exile. He issued a new constitution in 1967 that made Uganda a republic and abolished the kingdoms in favour of a centralised structure of governance.

In Tanganyika in contrast, the Tanganyika African National Union (TANU) led by Julius Nyerere, commanded a broader following and faced no serious political contenders in the independence elections. While the country had a less fractured party landscape, Nyerere faced opposition from within the party, primarily to his economic policies.²⁰ As in the neighbouring countries he therefore sought to centralise power, instituting a new republican constitution in 1962 and making Tanganyika an official one-party state in 1963, with continued Parliamentary elections between pre-approved Party candidates.

Although all three countries registered disappointing rates of growth over the postcolonial era, economic policy and performance across the region differed in important respects. Kenya and Tanzania are often contrasted to highlight the differences between Kenya's pro-capitalist route after independence and Tanzania's African socialism,²¹ although this binary should not be overstated. Both countries nationalized large sections of industry after independence, created development banks and repressed wages in the interest of industrial development, although the Tanzanian reforms were further reaching. In addition to nationalizing most of the Tanzania's nascent industry and restricting private capital ownership, in the 1970s the government's villagization reforms shifted a large proportion of the population into collectivized *ujamaa* villages. These policies are broadly regarded as failures, and the forced collectivization resulted in a decline in agricultural production.²² In Kenya in contrast, the government encouraged the development of a domestic capitalist class and through its indigenisation policies it increased African participation on company boards and as private business owners in the commercial sector.²³ A large land reform programme, started in the late colonial era, transferred land from the former white highlands back into African hands and empowered a group of comparatively well-off large and medium-sized landowners.²⁴

Tanzania's economic performance lagged that of Kenya throughout most of the 1970s and 1980s. The economy contracted severely in the 1980s, compounded by droughts and a

²⁰ Coulson, *Tanzania: A Political Economy*, chap. 16; Mahmood Mamdani, *Define and Rule: Native as Political Identity* (Cambridge and London: Harvard University Press, 2012), chap. 3.

²¹ Joel D. Barkan, *Politics and Public Policy in Kenya and Tanzania*, ed. Joel D. Barkan (New York: Praeger, 1984); Paul Nugent, *Africa since Independence*, 2nd ed. (Palgrave Macmillan, 2012), chap. 5.

²² Coulson, *Tanzania: A Political Economy*, chap. 22.

²³ Donald Rothchild, "Kenya's Africanization Program: Priorities of Development and Equity," *The American Political Science Review* 64, no. 3 (1970): 737–53.

²⁴ Kanyinga, "Land Redistribution in Kenya," 103.

protracted fiscal crisis.²⁵ Kenya's economy held up better than most of its neighbours through the 1970s and 1980s, although it too faced serious fiscal imbalances and debt crises by the 1980s. In the 1990s Tanzania abandoned its socialist policies and liberalized many aspects of the economy and experienced strong economic growth over the 1990s and early 2000s. Kenya's economy in contrast stagnated in the 1990s with a recovery first in the 2000s.

Uganda in contrast, saw its economy plummet and state institutions virtually disintegrate following the 1971 coup which brought Idi Amin, Obote's former army commander, to power. Amin's rule from 1971-79 was characterised by extreme brutality and loss of life. In 1972 he expelled Uganda's Asian population and confiscated their businesses, which weakened the Ugandan economy severely. With Tanzanian intervention, Amin was overthrown in 1979 and Milton Obote returned to rule the country. This ushered in a second period of political instability and civil conflict, which continued to exact its toll on the fractured Ugandan economy. In 1986 the National Resistance Army seized power, bringing Yoweri Museveni to the presidency (of southern origin, from the Banyankole ethnic group). Since then Uganda has experienced a strong economic recovery. Museveni's rise brought peace to the southern part of the country, while lingering conflicts, primarily in the east and the north, only drew to a close in the 2000s.

Starting in the 1990s, many of the political reforms of the 1960s and 1970s were reversed and all three countries began to democratize. In 1992 Kenya held its first multiparty presidential election since independence, although the country only saw a regime shift in the 2002 election. Kenya's successive elections since 1992 have had a strong ethnic character, with party affiliations broadly following ethnic lines. The 2007 election results were contested by the opposition and resulted in the outbreak of ethnic violence. Tanzania held a multiparty general election in 1995, although the ruling party, Chama Cha Mapinduzi (CCM), has so far remained in power. Uganda held its first multiparty election in 2006, although Museveni's National Resistance Movement (NRM) has remained in power to date. All three countries have also reversed the centralisation policies of the 1960s and decentralised some administrative powers to local governments. In 1999 the East African Community was re-established and regional integration has deepened since.

²⁵ Roger Nord et al., "The Story of an African Transition" (Washington D.C., 2009).

Country differences and similarities

These three countries offer some important variation in both institutional legacies and postcolonial political trajectories. In relation to public employment policies, four factors are particularly salient.

Ethnicity. Although all three countries are multi-ethnic, the greater ethnic fragmentation in Tanzania may in fact have served it well, as its political parties did not arise out of ethnic movements and Julius Nyerere proved an able nation-builder.²⁶ In Kenya and Uganda in contrast, the colonial penetration had an asymmetrical impact on different ethnic groups, which heightened postcolonial ethnic cleavages. Ethnic polarization is expected to influence public employment policies by intensifying competition for state jobs and incentivizing politicians to rule through the distribution of ethnic patronage rather than programmatic policymaking (as will be discussed in further detail in Section 1.4).

Conflict. Kenya and Tanzania experienced relatively limited armed civil conflict in contrast to Uganda, which experienced a protracted civil war. Some have suggested that wars in Africa are a consequence of inequalities in access to state resources, including public sector jobs, while leaders who successfully avert conflict do so either through military deterrence or by redistributing state resources so that groups excluded from power are co-opted.²⁷

Economic policy and conditions. Although all three countries experienced financial difficulties in the 1970s and 1980s, economic conditions varied considerably across the sub-region, with a stronger economic performance and a more developed industrial sector in Kenya. Uganda experienced by far the most serious economic decline with a virtual state collapse towards the end of Idi Amin's rule, while Tanzania trod a path somewhere between the two. The relationship between fiscal crisis and public employment growth is ambiguous. While some link fiscal imbalances to excessive employment,²⁸ poor public finances may also limit employment and wage growth.

Education. Kenya's education sector developed faster than in the neighbouring countries and consumed an unusually large share of budgetary resources. In contrast to Kenya, Tanzania

²⁶ Mamdani, *Define and Rule: Native as Political Identity*, chap. 3.

²⁷ Jean-Paul Azam, "The Redistributive State and Conflicts in Africa" 38, no. 4 (2001): 429–44; Stefan Lindemann, "Exclusionary Elite Bargains and Civil War Onset: The Case of Uganda," Crisis States Working Papers Series (London, 2010).

²⁸ World Bank, "Accelerated Development in Sub-Saharan Africa: An Agenda for Action" (Washington D.C., 1981).

initially restricted its secondary education system to the projected manpower needs of the country, leading to an unusually low secondary attainment rate today. Uganda's educational development fell somewhere between the two. To the extent that education mediated access to public employment, a faster pace of educational expansion may affect the intensity of competition for state jobs.

In emphasising difference however, it is important not to lose track of the similarities. All three countries are examples of poor, economically undiversified, young and ethnically fragmented nations. All three are former British colonies, none are oil producers and only Tanzania is currently classified as resource rich.²⁹ These commonalities may well prove the more crucial determinants of postcolonial state development and public employment policies. Part of the rationale for a case study approach is to gather evidence on trends and changes in a small sample of cases and to develop hypotheses that can be tested more systematically in the future, using a larger and more diverse set of countries.

1.3. THE COLONIAL STATE AND THE ORIGINS OF AFRICA'S PUBLIC EMPLOYMENT PREDICAMENTS

The colonial state

African colonial states have been described as a 'gatekeeper states'³⁰ and 'administration on the cheap',³¹ on account of their skeletal structures and limited developmental ambitions. Certainly in comparison to other parts of the British Empire, the British East African colonial states were slim, with low revenue per capita and limited public expenditure beyond basic state administration and security.³² The vast differentials between the incomes of colonial civil servants remunerated according to wage conditions in Britain, and the taxable income of the African peasantry, led to very high personnel costs, which in the 1920s consumed almost 60% of the budget in a sample of British colonies.³³ Within British East Africa revenue and expenditure was highest in Kenya, the most economically developed of the three colonies,

²⁹ Resource rich countries are those where non-renewable resources constitute >25% of exports. Tanzania only recently exceeded this threshold on account of its gold and precious stone exports.

³⁰ Frederick Cooper, *Africa since 1940: The Past of the Present* (Cambridge: Cambridge University Press, 2002), 5.

³¹ Jeffrey Herbst, *States and Power in Africa: Comparative Lessons in Authority and Control* (Princeton, New Jersey: Princeton University Press, 2000), 73.

³² Tax revenue per capita in New Zealand for instance, was 40-60 times higher than in British East Africa in 1937, see: Ewout Frankema, "Colonial Taxation and Government Spending in British Africa, 1880–1940: Maximizing Revenue or Minimizing Effort?," *Explorations in Economic History* 48, no. 1 (January 2011): 136–49. Appendix Table 2.

³³ *Ibid.*, 16.

followed by Uganda and lastly Tanganyika.³⁴ African states were also small in personnel terms, even if pay absorbed a relatively large share of public spending. The public sector labour force was largest in Kenya (at roughly 2% of the population c.1950), followed by Uganda (1.5%) and Tanganyika (1%).³⁵

Their public services mirrored the racial inequalities in colonial societies at large, with senior and mid-level positions held by Europeans and Asians, while African employees predominantly staffed the low-skilled occupations. By the 1950s the public sector labour force consisted of a civil service proper (the established services) constituting roughly 40% of total public employment.³⁶ It was subdivided into the senior unified service (staffed almost exclusively by Europeans), other semi-professional positions, and the clerical and artisanal grades, staffed by Asians (predominantly in the higher clerical posts) and Africans. Below the civil service was the larger subordinate service comprised of unskilled African workers on monthly contracts and casual wage labourers on daily rates.

Starting in the 1920s separate service structures and salary scales were established for the different racial groups. Kenya introduced non-European terms of service in 1920, dedicated salary scales for Asian staff in 1923, and a separate African clerical service in 1927.³⁷ Up until the 1930s the colonial government recruited some of its staff directly from India, thus necessitating a salary scale set to Indian labour market conditions. The Tanganyikan and Ugandan governments similarly had racially-segmented public service structures.

For much of the colonial era the working conditions for the thousands of low-skilled African engaged in the colonial wage labour market were far from favourable. Labour scarcity was a recurring colonial concern. Policies in the early colonial era focused on the inducements necessarily to push 'lazy' and 'reluctant' Africans into the colonial labour market, through forced labour obligations, taxation policies, or dispossession from arable land.³⁸ African workers were presumed to be target workers, seeking wage employment only to meet specific cash needs (such as tax payments or marriage). This was used to justify coercion, as it was

³⁴ Frankema, "Colonial Taxation and Government Spending in British Africa, 1880–1940: Maximizing Revenue or Minimizing Effort?"

³⁵ Statistical Appendix 1.

³⁶ Estimate for Kenya in 1954, based on data given in: Sir Gilbert Flemming, "Report of the Commission on the Public Services of the East African Territories and the East Africa High Commission, 1960" (Government Printer, 1960).

³⁷ Details on public service structures: Maurice Holmes, "Report of the Commission on the Civil Services of Kenya, Tanganyika, Uganda and Zanzibar" (London: His Majesty's Stationery Office, 1948).

³⁸ John. F. Weeks, "Wage Policy and the Colonial Legacy - a Comparative Study," *The Journal of Modern African Studies* 9, no. 3 (1971): 361–87; Bill Freund, *The African Worker* (Cambridge: Cambridge University Press, 1988); Frederick Cooper, *Decolonization and African Society: The Labor Question in French and British Africa* (Cambridge: Cambridge University Press, 1996).

argued that raising wages would simply enable workers to meet their targets more quickly and reduce their labour market participation further. A recent study on household incomes in colonial Uganda found that average peasant households earned more than an unskilled wage labourer up until the 1950s,³⁹ while studies from Kenya have argued that coerced labour was critical to the profitability of European-owned farms.⁴⁰ Governments also encouraged the use of migrant labour and prevented Africans from settling permanently in the urban areas. This limited the ability of workers to organise politically and kept them and their dependents linked to their rural farms and communities.⁴¹

In contrast to unskilled labourers, however, some strata of colonial African society clearly benefitted from their association with the colonial state. The colonials governed through alliances with chiefs and headmen (sometimes appointed by colonial officials), who received income and other benefits from the government.⁴² Over time the share of Africans in semi-skilled and skilled public service ranks also grew, as a growing number of mission-educated Africans gained employment as clerks, translators and teachers and in skilled manual positions.⁴³ Yet the colonial state had an ambivalent relationship to these skilled and semi-skilled cadres, who already by the 1920s earned well above average farm incomes and occupied an awkward position within the racial hierarchy.⁴⁴ The British were reluctant to grant this nascent elite too much authority. They limited educational opportunities for Africans beyond primary schooling for fear that the rise of an educated elite would resist colonial rule, pointing to the need to avoid the Indian predicament of an educated and vocal indigenous elite.⁴⁵

That said, educational policies differed somewhat across the region, with more educational opportunities for Africans in the non-settler colony, Uganda. In Kenya, as late as 1946, there were only 35 African students passing the annual Form IV Cambridge School Certificate

³⁹ Michiel De Haas, "Measuring Rural Welfare in Colonial Africa: Did Uganda's Smallholders Thrive?," *Economic History Review* 70, no. 2 (2017): 605–31.

⁴⁰ Paul Collier and Deepak Lal, *Labour and Poverty in Kenya, 1900-1980* (Oxford: Clarendon Press, 1986).

⁴¹ Cooper, *Decolonization and African Society: The Labor Question in French and British Africa*; Collier and Lal, *Labour and Poverty in Kenya, 1900-1980*.

⁴² Bruce J Berman, "Ethnicity, Patronage and the African State: The Politics of Uncivil Nationalism," *African Affairs* 97 (1998): 305–41.

⁴³ Gavin Kitching, *Class and Economic Change in Kenya: The Making of an African Petite-Bourgeoisie* (New Haven: Yale University Press, 1980), chap. IX; Holmes, "Report of the Commission on the Civil Services of Kenya, Tanganyika, Uganda and Zanzibar."

⁴⁴ Kitching, *Class and Economic Change in Kenya: The Making of an African Petite-Bourgeoisie*, 257. Table IX:2.

⁴⁵ Coulson, *Tanzania: A Political Economy*, 124; Mamdani, *Define and Rule: Native as Political Identity*, 86.

exams.⁴⁶ At the time of independence Tanganyika had only 120 university graduates in total.⁴⁷ The first university in the region, Makerere University in Uganda, first began offering certificate courses in 1937 and became a university college in 1949, while the first universities on Kenyan and Tanzanian soil were established in 1961.⁴⁸

The decolonisation era and changing nature of public sector employment

Colonial rule changed considerably in form and function in its twilight years as the colonial powers grew more responsive to economic and social conditions in the colonies over the course of the 1940s and 1950s. These changes were driven by fortuitous economic conditions, changing global ideas about the role of the state, and growing opposition to colonial rule. Higher domestic revenues owing to the commodity price boom during the Korean War coupled with increased transfers from the metropolises, allowed a considerable expansion in the size and reach of the late colonial state. Some academics have defined this phase as a ‘second colonial invasion’ on account of the growth in the size of the colonial service in areas such as education, health and agriculture.⁴⁹

Furthermore, in the aftermath of WWII, governments across the world embraced an ideology of state-led development.⁵⁰ The failure of capitalism during the 1930s had generated scepticism towards the benefits of unfettered markets.⁵¹ Across both East and West, electorates were more favourable to state activism than previously, including in the colonies. Governments involved themselves directly in the productive sectors and provision of social services, with the aim of mitigating the economic and political crises of the first half of the century.

But perhaps most critically, after the end of the Second World War the racial order on which colonialism was predicated came under fire, both within the colonies and on the international stage. In response to labour strikes and uprisings across their empires (including strikes in Uganda in 1945, Mombasa in 1947, Dar es Salaam in 1948 and Nairobi in 1950), coupled with international condemnations of imperialism, both the British and French governments

⁴⁶ Equivalent to today’s UK GCSEs. World Bank, “Cost-Benefit Analysis in Education : A Case Study on Kenya” (Washington D.C., 1969).

⁴⁷ Godfrey Mwakikagile, *Tanzania under Mwalimu Nyerere: Reflections on an African Statesman*, 2nd ed. (Dar es Salaam and Pretoria: New Africa Press, 2006), 31.

⁴⁸ These three universities formed the joint University of East Africa and served students from across the region.

⁴⁹ D. A. Low and J. M. Lonsdale, “Introduction: Towards the New Order, 1945-63,” in *History of East Africa. Vol.3, [1945 to 1963]*, ed. D. A. Low and Alison Smith (Oxford: Clarendon Press, 1976); J. D. Hargreaves, *Decolonization in Africa* (Harlow: Longman, 1988).

⁵⁰ Cooper, *Africa since 1940: The Past of the Present*.

⁵¹ For a good overview see: Tony Judt, *Postwar: A History of Europe since 1945* (Heinemann, 2010), chap. 3.

embraced the language of development to justify their empires.⁵² Colonial policy papers came to espouse a modernization framework, labelling the colonies as backward or traditional, and framing the role of the colonial state as shepherding its subjects towards modernity by bringing about the social and economic progress necessary to make Africans ‘fit for self-government’.⁵³ These changes were underpinned by the Colonial Development and Welfare Act of 1940, and its French equivalent FIDES (Investment fund for the economic and social development of overseas territories), which sanctioned transfers from the metropolitan budgets to the colonies for developmental purposes.

Integral to this policy shift was a changed perspective on African labour. Despite efforts to keep African wage workers tethered to their rural communities, by the 1940s colonial governments were forced to recognize the growing presence of an increasingly assertive and militant African urban-based working class, much of which worked for the government or its parastatals. To temper worker militancy, colonial governments began to promote labour stabilization policies designed to enable a permanent African worker presence in the cities. Governments introduced minimum wages in urban areas set to levels that would allow African workers to support an urban-based family. They also began to encourage ‘responsible’ trade unionism, and supported the establishment of formal worker unions.⁵⁴

A famous testament to this shift in policy is the Kenyan report of the committee on African wages from 1954.⁵⁵ Produced at the height of the Emergency in Kenya, this report recommended the introduction of a family wage which would effectively triple the minimum wage in urban areas.⁵⁶ The committee argued that low labour productivity was a result of low wages and a reliance on a migrancy system. It called for a dual labour market, with a relatively small, highly paid and permanent urban labour force divorced from the ‘traditional’ sector. The commission argued that ‘[w]e cannot *hope* to produce an effective African labour force until we have first removed the African from the enervating and retarding influences of his economic and cultural background.’⁵⁷ This dual labour market was intrinsic to the vision of how Africa

⁵² John M. Lee, *Colonial Development and Good Government: A Study of the Ideas Expressed by the British Official Classes in Planning Decolonization, 1939-1964* (Oxford, 1967); Low and Lonsdale, “Introduction: Towards the New Order, 1945-63”; Cooper, *Decolonization and African Society: The Labor Question in French and British Africa*; Hargreaves, *Decolonization in Africa*.

⁵³ Low and Lonsdale, “Introduction: Towards the New Order, 1945-63,” 13.

⁵⁴ R. D. Grillo, *Race, Class, and Militancy; an African Trade Union, 1939-1965* (New York: Chandler Pub. Co, 1974); Cooper, *Decolonization and African Society: The Labor Question in French and British Africa*.

⁵⁵ Colony and Protectorate of Kenya, “Report of the Committee of African Wages” (Nairobi: Government Printer, 1954).

⁵⁶ The minimum wage increases were to be phased in over a 10 year period.

⁵⁷ *Ibid.*, 11.

was to develop: individuals would gradually enter the wage labour market, adopt a modern way of life and shed their traditional identities and practices, thereby driving social progress.⁵⁸

At the forefront of this transformation was the growing group of the mission school educated Africans holding salaried positions in the bureaucracy or private firms as teachers, clerks and other mid-level roles. They too, saw employment conditions improving in the 1950s, and colonial governments hoped to find in them the role models and leaders who would promote modernity.⁵⁹ As calls for decolonisation escalated, governments sought to promote more members of this narrow, skilled African labour force into senior positions in the colonial service. A British Colonial Office noted already in 1946 that ‘the road to self-government’ required that the colonial service ‘to the greatest possible extent be staffed by local people’.⁶⁰ Educational investments in post-primary education were cautiously increased, with the explicit aim of producing the skilled manpower required to staff public institutions.⁶¹ In the early 1960s the British East African governments introduced affirmative action policies, which gave preference to Africans over Europeans in the public sector.⁶² From a negligible share in the immediate postwar era, by the time of independence, Africans filled between a quarter and a third of middle and high level public service positions in Kenya, Tanganyika and Uganda.⁶³

The employment terms and conditions for this growing group of educated African mid-level public sector employees were a politically sensitive issue, as colonial governments faced the challenge of reforming a public service structure with an inbuilt racial hierarchy. This raised the thorny question of how to remunerate African and Asian appointed to positions previously held by Europeans. In 1947 an East African commission on the restructuring of the civil service argued for a cautious, gradual approach to Africanization. The commission concluded that East Africa was not ready for the unification of the racially-based pay scales and recommended that Africans and Asians in higher grades should be paid three-fifths of the European salary. It

⁵⁸ Cooper, *Decolonization and African Society: The Labor Question in French and British Africa*.

⁵⁹ Lee, *Colonial Development and Good Government: A Study of the Ideas Expressed by the British Official Classes in Planning Decolonization, 1939-1964*; Crawford Young, *The African Colonial State in Comparative Perspective* (New Haven: Yale University Press, 1994).

⁶⁰ Colonial Office, “Organisation of the Colonial Service” (London: His Majesty’s Stationery Office, 1946), 3.

⁶¹ See for instance: Tanganyika. National Assembly., “High-Level Manpower Requirements and Resources in Tanganyika, 1962 - 1967” (Dar es Salaam, 1963); Kenya. Ministry of Economic Planning and Development, “High-Level Manpower Requirements and Resources in Kenya, 1964-1970” (Nairobi, 1965); Uganda Protectorate, “Report of the Commissioners for Africanisation 1962, Part 1: Africanisation, Retention of Expatriates and Scholarships” (Entebbe: Government Printer, 1962).

⁶² *Ibid.*

⁶³ Government of Tanganyika, “Report of the Africanisation Commission” (Dar es Salaam: Government Printer, 1962); Uganda Protectorate, “Report of the Commissioners for Africanisation 1962, Part 1: Africanisation, Retention of Expatriates and Scholarships”; Kenya. Ministry of Economic Planning and Development, “High-Level Manpower Requirements and Resources in Kenya, 1964-1970.”

argued that 'it would be wrong for any Government, in pursuit of this or that ideology, to disrupt the economy of its territory by paying salaries to Africans, or, for that matter, to Asians or Europeans, four or five times as high as those paid for similar work in outside employment.'⁶⁴ It concluded that '[t]he disadvantages of so remunerating any class of Africans as to create a Mandarin caste, divorced in income and interests from their fellows, would not be confined to the economic field.'⁶⁵

Such blatant racial discrimination was less acceptable by the 1950s. Only six years later a new civil services commission recommended the immediate removal of racially demarcated pay scales and the controversial three-fifths rule and encouraged greater local recruitment of staff and a reduced reliance on expatriates.⁶⁶ But the report also sounded the warning that '[p]ublic servants should not become a privileged class', and soberly noted the dangers of using the British colonial pay scale as the reference scale.⁶⁷

This rapid reversal of position is testament the rapidly accelerating pace of decolonization in the 1950s and the tensions inherent in this process. The racially based dualism of the colonial wage structure was politically untenable, yet due to underinvestment in the education system, senior salaries had to be set at a level that would attract local skilled manpower as well as expatriate personnel. At the local level moreover, commissioners reflected on the difficulty of setting wage rates, expressing exasperation over the dearth of private sector employment alternatives with which to determine what a fair, market-determined wage should be.⁶⁸

While the number of Africans in the higher levels of the public service expanded and their salaries increased, opportunities for Africans to enter and compete with foreign entrepreneurs or employees in the business and firm sector remained constrained for longer. Colonial rule had in many respects prevented the emergence of an African business elite able to compete directly with foreign business interests or with the local Asian business communities. Albeit more so in Kenya than in Uganda or Tanganyika, restrictions had limited the rights of Africans to engage in certain industries or crop production, settle permanently in cities, and determine a taxation structure favourable to their business activities.⁶⁹ Genuine African capitalists, with

⁶⁴ Holmes, "Report of the Commission on the Civil Services of Kenya, Tanganyika, Uganda and Zanzibar," 27.

⁶⁵ Ibid.

⁶⁶ Although staff recruited from abroad were eligible to 'inducements', which in practical terms meant that a wage differential remained, see: David Lidbury, "Report of the Commission on the Civil Services of the East African Territories and the East Africa High Commission 1953-54" (Margate, 1954).

⁶⁷ Ibid., 55.

⁶⁸ Flemming, "Report of the Commission on the Public Services of the East African Territories and the East Africa High Commission, 1960," 26.

⁶⁹ Collier and Lal, *Labour and Poverty in Kenya, 1900-1980*; Mamdani, *Politics and Class Formation in Uganda*.

capital, business networks and know-how, were in short supply. Transferring wealth, networks and entrepreneurial skills proved harder and slower than training and deploying young graduates into senior public sector posts.

Consequently, the first beneficiaries of decolonization were those with the educational or skills qualifications required by the state apparatus. These public sector employees came to constitute a large proportion of the well-to-do ranks of postcolonial society. An estimated three-quarters of all tertiary educated Kenyans, Ugandans and Tanzanians were employed directly or indirectly by the state in the 1960s.⁷⁰ In 1963, 75-80% of African wage earners in the highest income bracket (above Shs.1,000/month) were public sector employees.⁷¹ Moreover, by the late 1950s unskilled wage employees, a large share of whom worked for the government or parastatal sector, earned well above rural peasant farmers.⁷² Governmental pay and employment policies therefore shaped the postcolonial distribution of income and the composition of the nascent middle and upper classes. This point did not go unnoticed by contemporary observers. Peter Lloyd argued in 1966 that one of the distinguishing features of newly independent African countries was that ‘[t]he overwhelming majority of the elite (...) are in bureaucratic employment,’⁷³ while Rene Dumont’s 1966 study characterised Africa’s elite as a ‘bourgeoisie of the civil service.’⁷⁴

The predominance of public sector employees within the new, postcolonial national elite has led to a range of theories about its consequences for the continent’s growth and development. What did this mean for the development of the postcolonial state and its relationship with society? Is it to blame for the region’s disappointing economic performance after independence? The next section explores the secondary literature on postcolonial Africa’s public sector employees and the development of the African state.

1.4. PUBLIC EMPLOYMENT IN POSTCOLONIAL AFRICA

The African state and global development paradigms

The literature on the African state and its employees is itself a product of its time and place, shaped by changing global attitudes to the role of the state, shaped in turn by economic conjunctures. The African postwar growth trajectory is commonly divided into three main

⁷⁰ See discussion in Section 4.3 and Appendix IV.

⁷¹ 80% in Uganda, 77% in Tanganyika and 75% in Kenya, calculated from: KE SA 1964, TZ SA 1964 and UG SA 1964.

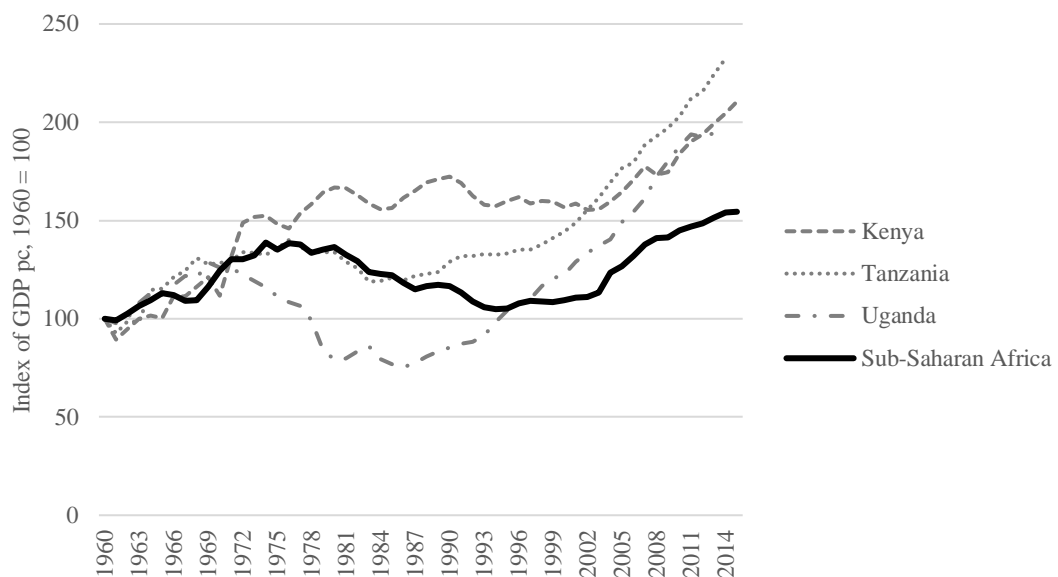
⁷² De Haas, “Measuring Rural Welfare in Colonial Africa: Did Uganda’s Smallholders Thrive?”; Collier and Lal, *Labour and Poverty in Kenya, 1900-1980*.

⁷³ P.C. Lloyd, *The New Elite of Tropical Africa* (Oxford: International Africa Institute, 1966), 7.

⁷⁴ Rene Dumont, *False Start in Africa* (New York: Praeger Publishers, 1966), 81.

phases: the developmental era of strong growth from the end of the Second World War until the mid/late-1970s; the growth reversal of the 1980s and early 1990s; and the period of economic recovery since the mid/late-1990s until the present (Figure 1.1). While these inflection points correspond to shifts in global conditions (with the 1970s marking the end of the three decades of strong postwar growth in the global north), the African continent saw a more pronounced decline in the 1980s and protracted recovery. The Kenyan, Tanzania and Ugandan growth trajectories broadly follow the African trend, although Uganda saw an earlier and more dramatic income decline, while Kenya's growth decline was less severe than that of the continent in aggregate.

Figure 1.1. Sub-Saharan Africa: GDP per capita, 1960-2015



Sources: Sub-Saharan Africa and Kenya: WDI 2017; Tanzania and Uganda: PENN WT 9.0.

African development discourse roughly accords with these three phases. The period from WWII until the 1970s has been characterised as the developmental or modernization era.⁷⁵ In this phase the state was expected to lead its country's economic development by appropriating or directing the economic surplus towards industrial development and social welfare, thereby overcoming the market failures that had ravaged the world in the interwar period. This ideology was shared by the postwar colonial governments and the nationalists alike and rested on the theories of scholars such as Alexander Gerschenkron who envisaged a particularly large role for the state in late developing countries.⁷⁶ In the absence of sufficient private accumulation,

⁷⁵ Cooper, *Africa since 1940: The Past of the Present*; Benno J. Ndulu, "The Evolution of Global Development Paradigms and Their Influence on African Economic Growth," in *The Political Economy of Economic Growth in Africa, 1960-2000*, ed. Benno J. Ndulu et al. (Cambridge, 2008).

⁷⁶ Alexander. Gerschenkron, *Economic Backwardness in Historical Perspective*. (Cambridge, Mass.: Harvard University Press, 1962).

governments would mobilize the necessary capital for industrial development and enable their lagging countries to catch up. Development was viewed as broadly synonymous with industrialisation and structural transformation, a process involving the transfer of surpluses from the traditional, rural sector into a higher productivity modern, industrial sector.⁷⁷ Through import substitution, exchange rate management and capital controls, states sought to use pricing to tilt the incentives in favour of domestic industrial production. These developmental policies were pursued against the backdrop of the cold war, which spurred a funding race between East and West and raised the flow of aid and concessional financing to developing countries.

Towards the end of the 1960s dependency theory also entered the African development discourse. The Prebisch-Singer thesis, which argued that the terms of trade for primary producers were continuously declining, provided a further rationale for industrial policy and nationalisation of industries.⁷⁸ The dependency school faulted the earlier modernisation theorists for failing to recognize an unequal global division of labour which locked countries at the periphery into the production of low-value primary products and dependence on foreign capital. Such economic prerogatives were also used to justify the introduction of one-party states across the continent.⁷⁹ Only through strong, centrally-directed control could a country mobilize the surpluses necessary for development and break the hold of metropolitan commercial control over African economies.

Cooper dates the end of this developmental era to the oil price shock of 1973, which ushered in a period of greater price volatility, growing fiscal imbalances and political unrest (c.1973-1990).⁸⁰ Ndulu in contrast, focusing on governance regimes rather than economic performance, argues that the dirigiste policies of the postwar era dominated into the early 1980s.⁸¹ As economic conditions tightened in the 1970s and fiscal conditions deteriorated, the faith in state-led development gradually weakened and the state began to be seen as the problem rather than solution to underdevelopment.

⁷⁷ Ndulu, "The Evolution of Global Development Paradigms and Their Influence on African Economic Growth."

⁷⁸ James C. W. Ahiakpor, "The Success and Failure of Dependency Theory : The Experience of Ghana," *International Organization* 39, no. 3 (1985): 535–52.

⁷⁹ Cooper, *Africa since 1940: The Past of the Present*; Thandika Mkandawire, "From the National Question to the Social Question," *Transformation: Critical Perspectives on Southern Africa* 69, no. 1 (2009): 130–60.

⁸⁰ Cooper, *Africa since 1940: The Past of the Present*.

⁸¹ Ndulu, "The Evolution of Global Development Paradigms and Their Influence on African Economic Growth."

These ideas gained global traction with the election of Ronald Reagan in the USA and Margaret Thatcher in the United Kingdom, who's supply side economic policies sought to reduce distortionary taxation and cut back the reach of the state. In the 1980s international development organisations began to advise African governments to scale back their overbearing states, reduce the size of the public service, privatize industries, and 'get prices right' by devaluing the exchange rate and liberalising financial sector.⁸² Such reforms formed the conditions for further borrowing from the IMF and World Bank. Furthermore, with the waning power of the Soviet Union, the IMF and World Bank's policy leverage increased as the alternative financing sources dried up.

By the 1990s however, the difficulty of gaining traction for these reforms and their failure to bring about a swift recovery shifted attention from policies to politics. In the wake of the fall of the Soviet Union, multiparty democracy was reintroduced in countries across the continent and development donors began to place more emphasis on political and institutional reforms. This discourse was inspired by advances in institutional economics, which highlighted the property rights regimes and other institutional incentives that underpinned investment and growth.⁸³ The World Bank and other international agencies came to re-evaluate the role of government in recognition that an efficient state was indispensable to a thriving private sector.⁸⁴ A good governance agenda emerged, emphasising democratic contestation, a free press and other accountability measures that could hold the state in check and allow the market to flourish.

With these shifting development paradigms as the backdrop, the remainder of this chapter explores narrower debates about public sector employment in Africa. This literature contains two main strands. During the developmental era (1960s-1970s), the public employment debate was framed in class terms, pitting the more optimistic modernization theory against dependency theory. The debate hinged on two matters: whether public servants were incentivised to serve the best interests of their fellow citizens or would come to calcify into an exploitative class, and whether this group would consume or invest the surplus they extracted from the economy.

With the crisis of the 1980s, however, attention to class waned and a new political economy literature focused on the origins of extractive and growth-inhibiting institutions (which to a large extent still dominates the discourse on the African state). The contrast with Asia's

⁸² World Bank, "Accelerated Development in Sub-Saharan Africa: An Agenda for Action."

⁸³ Douglass C. North, "Institutions," *The Journal of Economic Perspectives* 5, no. 1 (1991): 97–112.

⁸⁴ World Bank, *World Development Report 1997: The State in a Changing World* (Washington D.C., 1997).

extraordinary rise gave impetus to Africa-specific explanations for the continent's poor economic performance. Ethnicity, persistent state weaknesses and other social fissures were seen as drivers of Africa's poor policy choices. In many of these models, public sector jobs, a patronage resource *par excellence*, played an important role in mediating ethnic settlements.

In the past five years the literature has begun to come full circle with a return of an African class debate. After almost two decades of strong growth in many African countries, academics have announced that a new middle class is on the rise. Its politics, allegiances and consumption patterns are increasingly a topic of scrutiny, as are its sources of income and sectors of employment. The more optimistic of these observers have argued that today's middle class is more oriented towards the private sector than in previous periods. They suggest that Africa's middle class may finally be freeing itself of its statist shackles and gaining the independence needed to hold governments to account.

Public servants: vanguard or bourgeoisie? (1960s – 1970s)

‘If the government gives it enough time and opportunity, this bourgeoisie [of the civil service] will manage to put away enough money to stiffen its domination. But it will always reveal itself incapable of giving birth to an authentic bourgeois society with all the economic and industrial consequences which this entails.’ (Fanon 1961: 179)

‘The damned salaries! These are the salaries which build this kind of attitude in the educated people, all of them. Me and you. We belong to a class of exploiters.’ (Julius Nyerere criticising a student protest for higher post-study earnings at the University of Dar es Salaam in 1966, cited in Coulson 1982: 182)

A natural consequence of the developmental ambitions of the postwar era was a bigger role for the state and a growing share of the labour force in public sector employment. Both colonial and postcolonial governments recognized that a Western educated cadre of high-level manpower was critical to this modernization process, even if it fostered social inequality in the short run.⁸⁵ Opinions differed however, about the consequences of this growing income inequality among Africans. The more optimistic narratives argued that African societies were classless in the Marxist sense and held together by traditional social solidarities, which prevented class exploitation.⁸⁶ In the absence of entrenched classes, politicians, the intelligentsia and professionals served as leaders or a vanguard to which the masses would

⁸⁵ For example: Fabius Odubi Passi, “Planning for the Supply and Demand of Qualified Teachers in Uganda,” *International Review of Education* 36, no. 4 (1990): 441–52; James Katorobo, *Education for Public Service in Uganda* (Vantage Press Inc., 1982).

⁸⁶ For a discussion, see: Giovanni Arrighi and John S. Saul, “Socialism and Economic Development in Tropical Africa,” *Journal of Modern African Studies* 6, no. 2 (1968): 141–69.

aspire. Thus Sékou Touré, Mali's first President, argued against those that criticised the wealth of the new elite:

In our denunciation of bourgeois tendencies we must not (...) accuse of being bourgeois the peasant, the worker or the civil servant (...) who by his personal efforts has been able to build a modern house, purchase a car or acquire honestly anything which contributes to the material well-being of his family. Since the main objective of our revolution is to make it possible for all to attain through work the highest possible degree of prosperity, we cannot blame these people. On the contrary, a man must utilize his energies and faculties for the constant improvement of his living standard.⁸⁷

This vision of a pioneering cadre of African public sector officials, teachers and professionals was also captured in some of the academic literature of the era, including in a volume from 1964 edited by Peter Lloyd on 'the new elites of tropical Africa.'⁸⁸ The study defined the elite as western-educated men earning at least £250 per annum, of which public sector employees constituted the majority. It chose to use the term elite rather than social class in order to stress that this group was not (yet) a hereditary group where privilege was perpetuated through inheritance of wealth or educational opportunities. Qualitative and quantitative evidence showed that most of the members of this elite came from humble beginnings. Many had been raised in rural households by illiterate parents and retained ties to their rural communities. The study understood these elite members as creators of new African identities that mediated 'between western and traditional influences'.⁸⁹ They promoted a value system and life style that others could aspire to, imitate and adopt.

This literature also argued that in the absence of an entrepreneurial, capital-owning African class, social status were largely a function of educational performance, as this, quite mechanically, determined entry into a high-paying job, usually in the public sector.⁹⁰ A number of articles in the 1970s reasoned that because of the large role of the state as an employer of skilled manpower, meritocratic criteria were in fact a stronger determinant of social status in developing countries than in wealthier parts of the world.⁹¹ Surveys of students at the top

⁸⁷ Sékou Touré, 1963, cited in: *Ibid.*, 155.

⁸⁸ Lloyd, *The New Elite of Tropical Africa*.

⁸⁹ *Ibid.*, 51.

⁹⁰ John B. Knight, "Earnings, Employment, Education and Income Distribution in Uganda," *Bulletin of the Oxford University Institute of Economics & Statistics* 30, no. 4 (1968): 267–97; Kenneth Prewitt, "Schooling, Stratification, Equality: Notes for Research," in *State, School, and Politics: Research Directions*, ed. M. Kirst (Lexington Mass.: Committee on Basic Research in Education, 1972); Kenneth Prewitt, "University Students in Uganda: Political Consequences of Selection Patterns," in *University Students and African Politics*, ed. John Hanna William (New York and London: Africana Publishing Co., 1975).

⁹¹ Philip J. Foster, "Secondary Schooling and Social Mobility in a West African Nation," *Sociology of Education* 37, no. 2 (1963): 150–71; Janice Currie, "Family Background, Academic Achievement and

ranked secondary schools and universities in various African countries confirmed that in the 1960s and 1970s at least, the education system was relatively open, with the majority of students hailing from poor, rural communities.⁹² These candidates owed their academic and career progression to their academic acumen and strong exam performance.

Academic and political attitudes towards this public sector-dominated elite was also coloured by another major concern of the era: economic sovereignty. Many of Africa's nationalist leaders argued that without freeing their countries from dependence on foreign-owned firms they were not truly independent of their former colonial masters. A further question therefore, was how the nascent elite or bourgeoisie would use the rents that it commanded, and whether they would help to shift the ownership of productive assets into African hands.⁹³

Some argued that public sector salaries offered a spring-board into private enterprise, as wage earners invested their savings in agriculture or smaller enterprises. Collier and Lal and Kitching found that in the absence of functioning financial markets in Kenya, wage earnings in the formal sector formed an important source of investment capital, allowing households to expand or intensify their land holdings or start small businesses.⁹⁴ This, they predicted, was creating greater social differentiation and the emergence of a relatively broad-based middle class or petty bourgeoisie. If this process continued, Kenya's disproportionately large bureaucratic elite could prove a transitional phenomenon as a relatively benign process of primitive accumulation spawned a new entrepreneurial bourgeoisie.

Yet many of these writers also noted clouds on the horizon. Several questioned whether the state could afford to continue acting as the main creator of middle class employment. Would this dynamic be curtailed by the financial constraints to an over-ambitious developmental agenda? Already by the 1960s politicians were raising alarm over what they perceived to be a growing unemployment problem among the educated African youth.⁹⁵ These graduates and their families had frequently made big sacrifices to finance their education and expected a salaried job in the formal sector upon completion of their studies. They looked to the state to aid this process of social mobility by ensuring that aspirants with secondary or tertiary

Occupational Status in Uganda," *Comparative Education Review* 21, no. 1 (1977): 14–28; Stephen P Heyneman, "Why Impoverished Children Do Well in Ugandan Schools," *World Bank Reprint Series*, vol. 15, World Bank Reprint Series, 1979.

⁹² Rees Hughes, "Revisiting the Fortunate Few: University Graduates in the Kenyan Labor Market," *Comparative Education Review* 31, no. 4 (1987): 583–601; Currie, "Family Background, Academic Achievement and Occupational Status in Uganda."

⁹³ Mkandawire, "From the National Question to the Social Question."

⁹⁴ Paul Collier and Deepak Lal, "Why Poor People Get Rich: Kenya 1960-79," *World Development* 12, no. 10 (1984): 1007–18; Collier and Lal, *Labour and Poverty in Kenya, 1900-1980*; Kitching, *Class and Economic Change in Kenya: The Making of an African Petite-Bourgeoisie*.

⁹⁵ Kenya. National Assembly., "Report of the Select Committee on Unemployment" (Nairobi, 1970).

education could enter formal, middle class professions. Pressure on the state to expand employment was exacerbated by the relatively dismal rate of private sector employment growth, which failed to keep pace with the growth in the economy.⁹⁶ Both government publications and academic literature from the 1960s and 70s therefore expressed the fear that growing unemployment, particularly among secondary educated men, would prove politically destabilising.⁹⁷ Kitching's reflections are an apt example of this line of thinking:

'From the point of view of political stability it is particularly important that the number of 'better paid' jobs, from which savings and investments can be made, should be expanded and the 'educated unemployed' (often produced by immense consumption sacrifices within the household) bought off. To keep the political system stable this must continue to happen, and given the rate of population growth and the ever-increasing number of households entering runners in the 'education race' it must happen at an accelerating rate, at least in the immediate future.'⁹⁸

What then would be the consequence of a downturn in revenue? Lloyd argued that if economic growth stalled, '[t]he expansion of the bureaucracies experienced in the past decade will slow down considerably, and the present elite will be able to fill a high proportion of vacant posts with their own children (...) Competition within the elite for higher posts will become more intense; the aspirations of the sub-elite will be less frequently rewarded.'⁹⁹ This would intensify the tension and conflict between the 'frustrated literates and an entrenched elite.'¹⁰⁰ Thus the classless Africa described with optimism in the 1960s may already have been on its way to becoming a class society.

These pessimistic predictions of class calcification in Africa already had their proponents among the neo-Marxist scholars. Theorists associated with the dependency school began raising doubts in the early 1960s about the incentives and motivations of Africa's 'modernizing vanguard' to act in the national, collective best interest. According to Frantz Fanon (quoted above) the over-reliance of Africa's post-independence elite on income from the state rather

⁹⁶ Duncan Nderitu Ndegwa, "Report of the Commission of Inquiry: Public Service Structure and Remuneration Commission 1970-71" (Nairobi, 1971); David Abernethy, "Bureaucratic Growth and Economic Stagnation in Sub-Saharan Africa," in *Africa's Development Challenges and the World Bank: Hard Questions Costly Choices*, ed. Stephen J. Commins (Colorado: London: Rienner, 1988).

⁹⁷ Kenya. National Assembly., "Report of the Select Committee on Unemployment"; Lloyd, *The New Elite of Tropical Africa*; Kitching, *Class and Economic Change in Kenya: The Making of an African Petite-Bourgeoisie*; Abernethy, "Bureaucratic Growth and Economic Stagnation in Sub-Saharan Africa"; John. M Cohen, "Importance of Public Service Reform: The Case of Kenya," *The Journal of Modern African Studies* 31, no. 3 (1993): 449-76.

⁹⁸ Kitching, *Class and Economic Change in Kenya: The Making of an African Petite-Bourgeoisie*, 429.

⁹⁹ Lloyd, *The New Elite of Tropical Africa*, 60-61.

¹⁰⁰ *Ibid.*, 27.

than returns to capital created an incentive problem.¹⁰¹ This weak and wage-reliant middle class or petty bourgeoisie was easily co-opted by the foreign capitalists who had been extracting resources and agricultural commodities from Africa throughout the colonial period. The bureaucratic bourgeoisie would be offered an immediate independence dividend – a share of the extracted rents - in exchange for maintaining the economic status quo. This would perpetuate the extraction and exploitation previously practiced by the colonial powers and limit the ability of a genuine domestic capitalist class to emerge in its place. Samir Amin identified a similar phenomenon, using the term ‘comprador class’ to denote a dependent elite at the periphery of the global economic system that derived its social position from its connection to international firms or investors.¹⁰²

In the footsteps of Fanon, several dependency theorists set about describing the African middle class or petty bourgeoisie through country case studies, several of which focused on Kenya, Tanzania or Uganda. Best known is perhaps Issa Shivji’s work on Tanzania, which coined the term ‘bureaucratic bourgeoisie’ and concluded that public officials used Tanzania’s nationalisation policies to reduce the power of the capitalist class and gain control of the nation’s productive resources, in the process elevating themselves to the position of a bourgeoisie.¹⁰³ Mahmood Mamdani’s study of class formation in Uganda made a similar argument, by showing that Milton Obote, Uganda’s first president, sought to create a ‘bureaucratic petty bourgeoisie’, a beholden middle tier, while leaving the commercial (foreign) elite intact.¹⁰⁴ Collin Leys similarly drew a parallel between Louis Bonaparte’s and Jomo Kenyatta’s effort to build an independent power base in support of the presidency through the expansion of the bureaucracy.¹⁰⁵

While writers such as Fanon, Mamdani and Shivji primarily focused on senior officers at the top of the public service, other theorists expanded this dependency framework to incorporate the urban working class. Saul and Arrighi argued that workers and low-skilled employees in public enterprises and other state employment formed a labour aristocracy vis-à-vis the peasantry.¹⁰⁶ Because of the labour stabilisation policies introduced in the late colonial era, those fortunate enough to hold a formal sector job earned many times the rural wage. These

¹⁰¹ Frantz Fanon, *The Wretched of the Earth* (New York: Grove Weidenfeld, 1963). See also the discussion by: John S. Saul, “The Unsteady State: Uganda, Obote & General Amin,” *Review of African Political Economy* 3, no. 5 (1976): 12–38.

¹⁰² Samir Amin, “Democracy and National Strategy in the Periphery,” *Third World Quarterly* 9, no. 4 (1987): 1129–56.

¹⁰³ Issa G. Shivji, *Class Struggles in Tanzania* (London: Heinemann, 1976).

¹⁰⁴ Mamdani, *Politics and Class Formation in Uganda*.

¹⁰⁵ Cited in: Jay O’Brien, “Bonapartism and Kenyatta’s Regime in Kenya,” *Review of African Political Economy* 3, no. 6 (January 3, 2007): 90–95.

¹⁰⁶ Arrighi and Saul, “Socialism and Economic Development in Tropical Africa.”

comparatively high earnings meant that lower skilled formal sector workers would side with the middle and upper classes against rural producers, to the detriment of economic growth. In the absence of radical policy change they predicted that '[t]he labour aristocracy will therefore continue to use its power in a state-controlled modern sector in order to appropriate a considerable share of the surplus in the form of increasing discretionary consumption.'¹⁰⁷ Not only would this reduce investment in the agricultural sector, they also speculated that high urban wages encouraged firms to adopt labour-saving, capital-intensive technologies which slowed the pace of structural transformation.

Although the labour aristocracy thesis was quickly challenged and its authors moderated some of their original claims,¹⁰⁸ this idea was re-formulated in non-Marxist terms in the 1980s when Robert Bates raised concerns about the urban bias in African policymaking.¹⁰⁹ Bates used an interest group perspective rather than a class lens to show how urban workers and white-collar employees, most of whom were directly or indirectly working for the state, extracted from the peasantry. He argued that because of the success of labour movements in the decolonisation struggle, the urbanites had greater political voice and influence. They belonged to better organised labour movements, had direct ties to the nationalist political leaders who came to power in the 1960s, and lived in closer proximity to the seat of government. The large peasantry, in contrast, was politically fragmented and weak. Through their control of marketing boards, governments therefore taxed the peasantry heavily to fund a growing state apparatus staffed by highly paid bureaucrats and industrial workers. They also used national pricing policies to hold down food prices for urban consumers to the detriment of the peasant producers.

Some have argued that high urban wages also led to distortions in educational investments. Because the public sector placed strong emphasis on educational qualifications, households over-invested in education at the expense of other more productive forms of investment.¹¹⁰ Children spent many years preparing for secondary school exams which most of them would fail, giving them educational skills of little value in the informal economy where most were destined to remain.

¹⁰⁷ Ibid., 151.

¹⁰⁸ Saul, "The 'labour Aristocracy' thesis Reconsidered," 305.

¹⁰⁹ Robert H. Bates, *Markets and States in Tropical Africa : The Political Basis of Agricultural Policies* (Berkeley and London: University of California Press, 1981).

¹¹⁰ World Bank, "Cost-Benefit Analysis in Education : A Case Study on Kenya"; International Labour Office, *Paper Qualification Syndrome (PQS) and Unemployment of School Leavers: A Comparative Sub-Regional Study* (Addis Ababa: ILO, 1982).

These arguments proved influential in international policy circles as they chimed well with the advice proffered by the neoliberal international finance institutions. By removing market distortions, such as the urban wage premium, food subsidies or subsidised higher education, African governments could restore incentives for rural producers. Ironically, what started as a neo-Marxist critique of African power relations came to justify neoliberal economic reforms.

Yet both dependency theory and the urban-bias framework were overtaken by events. Whether by design or default, public sector salaries began to decline shortly after independence. In the 1960s and 1970s, governments across Africa proved quick to reign back the power of labour unions and institute incomes policies that promoted wage restraint.¹¹¹ Urban-bias and dependency theory was often used to justify these very policy decisions.¹¹² Studies of wage dynamics in Africa in the 1970s and 1980s concluded that the urban wage premium had been a short-lived phenomenon as salaries fell sharply in the 1970s.¹¹³

Patrimonialism, clientelism and ethnic favouritism (1980s – present)

‘Ministers, district commissioners and even some permanent secretaries saw themselves, and were regarded, as the chief patrons and protectors for their localities, and in accordance with the system their relatives and clients came to Kampala or gathered at district headquarters to claim their appointments, promotions and financial rewards. All this increased the importance of alliances and accounts for the constant jockeying for positions within and between tribal groups in the period after independence. Competition for office and jobs became the nation’s growth industry.’ (Glentworth & Handcock, 1973: 240)

‘The politics of political tribalism and moral ethnicity become linked to the ability of the ‘big men’ of ethnic communities holding positions in the state to obtain for the districts and regions a significant share of the large-scale collective benefits of development in infrastructure projects of roads, schools, dispensaries, etc, as well as the more individual rewards apportioned through the discrete personal contacts of the back verandah.’ (Berman, 1998: 335)

The declining formal sector fortunes in the 1970s called into question the presumed political leverage of the nascent, urban middle class or petty bourgeoisie. As members of this new urban elite proved unable to perpetuate their privilege, critics began to argue that they did not in fact represent a consolidated interest group. Some writers faulted Fanon and other dependency

¹¹¹ Cooper, *Decolonization and African Society: The Labor Question in French and British Africa*.

¹¹² See for instance: TANU, *The Arusha Declaration and TANU’s Policy on Socialism and Self-Reliance* (Dar es Salaam, 1967).

¹¹³ Vali Jamal and John Weeks, “The Vanishing Rural-Urban Gap In Sub-Saharan Africa,” *International Labour Review* 127, no. 3 (1988): 271–92; Theodore Valentine, “Government Wage Policy, Wage and Employment Trends, and Economic Instability in Tanzania since Independence,” Economic Research Bureau Paper (Dar es Salaam, 1981); Collier and Lal, *Labour and Poverty in Kenya, 1900-1980*.

theorists for having been *too optimistic* when predicting that a local bourgeoisie would replace the colonial order and perpetuate the extractive role of the state. A prior condition was the consolidation of a petty bourgeoisie with sufficient cohesion and solidarity to protect its class interests. In 1976 Saul speculated that the African petty bourgeoisie was too fractionalised, along ethnic, regional, or narrow institutional groupings, to properly play its allotted role as intermediary to foreign capitalist interests.¹¹⁴ He examined the striking case of Uganda where Idi Amin expropriated the Asian capitalist class in 1972 and allowed the country's economy to collapse, in the process eliminating the rents that fed the African bureaucratic bourgeoisie.

This line of reasoning was expanded and formalized in what has been loosely described as the neopatrimonialism school,¹¹⁵ which emphasised the importance of social solidarities such as ethnicity and religion, which cleave and neuter economic interest groups.¹¹⁶ Patrick Chabal and Jean-Pascal Daloz, for instance, argued that African societies are organised through vertical rather than horizontal ties. Kinship and ethnicity connects rural villages, towns and the political centres, while horizontal organisations such as business associations and trade unions are comparatively weak.¹¹⁷ Jean-Francois Bayart explicitly set this literature apart from the dependency school and modernization theory, which in his view imposed a Western lens on African development that was blind to the ways in which African actors developed political structures based on local conditions, traditions and power relations.¹¹⁸

This literature should be seen in light of Africa's disappointing growth performance in the 1980s and the frustrating failure of structural reform efforts. Academics searched for answers that could explain Africa's exceptionally poor growth performance. Many rooted their arguments in the persistence of growth-inhibiting precolonial and colonial institutions, such as the salience of ethnicity. They pointed to factors such as low population density,¹¹⁹ disease burden,¹²⁰ and the slave trade,¹²¹ which had prevented the emergence of larger political polities

¹¹⁴ Saul, "The Unsteady State: Uganda, Obote & General Amin"; Mamdani, *Politics and Class Formation in Uganda*.

¹¹⁵ See: Thandika Mkandawire, "Neopatrimonialism and the Political Economy of Economic Performance in Africa: Critical Reflections," *World Politics* 67, no. 3 (2015): 563–612.

¹¹⁶ See for instance: Rene Lemarchand, "Political Clientelism and Ethnicity in Tropical Africa: Competing Solidarities in Nation-Building" 66, no. 1 (1972): 68–90; Jean-Francois Bayart, *The State in Africa: The Politics of the Belly* (New York: Longman, 1993); Patrick Chabal and Jean-Pascal Daloz, *Africa Works: Disorder as Political Instrument* (James Currey Publishers, 1999); Daron Acemoglu and James A. Robinson, "Why Is Africa Poor?," *Economic History of Developing Regions* 25, no. 1 (June 2010): 21–50.

¹¹⁷ Chabal and Daloz, *Africa Works: Disorder as Political Instrument*.

¹¹⁸ Bayart, *The State in Africa: The Politics of the Belly*.

¹¹⁹ Herbst, *States and Power in Africa: Comparative Lessons in Authority and Control*.

¹²⁰ Jared M. Diamond, *Guns, Germs and Steel: A Short History of Everybody for the Last 13,000 Years* (Random House, 1998).

¹²¹ Nathan Nunn, "The Long-Term Effects of Africa's Slave Trades," *Quarterly Journal of Economics* 123, no. 1 (2008): 139–176.

in Africa and resulted in high ethnic fragmentation. Colonialism aggravated this problem by imposing arbitrary borders on these small polities, empowering despotic ethnic leaders to administer their localities and exploiting inter-group rivalries to divide and rule.¹²² As a result, postcolonial leaders inherited ethnically and socially fragmented states with weak national cohesion.¹²³ This made postcolonial states exceptionally vulnerable to internal conflict. In order to prevent war, leaders would rule through pork-barrel politics rather than building coalitions for developmental policies.¹²⁴ That Botswana, one of the undisputed postcolonial African success stories, is relatively ethnically homogenous, added intuitive appeal to such explanation.

While their finer details may have differed, most of these studies saw patronage as a critical ingredient in these uneasy postcolonial political settlements. Leaders governed by purchasing the political loyalty of particular ethnic, regional or religious leaders and their supporters through the distribution of jobs and other patronage, rather than seeking mass support for a particular political platform. Political appointments, directorships of state-owned enterprises and senior civil service posts were awarded to local leaders in order to strike an uneasy coalition of support for the ruler. These patrons in turn used public employment to reward their supporters for their political loyalty, or conversely, withheld jobs as punishment.¹²⁵ In similarity with the dependency theorists then, this literature also viewed the state as ‘the essential focus for the accumulation of wealth.’¹²⁶

Beyond a general emphasis on patronage and social cleavages however, this literature offers a wide variety of models and predictions. The concept of patronage is used differently by different writers. Clientelism, or patronage, is by no means a uniquely African phenomenon. It draws its conceptual roots from Max Weber, who defined patrimonialism as a traditional form of authority where power is concentrated in the person (rather than the office) of the ruler, who gains his or her legitimacy through systems of reciprocity.¹²⁷

¹²² Mahmood Mamdani, *Citizen and Subject: Contemporary Africa and the Legacy of Late Colonialism* (Princeton, New Jersey: Princeton University Press, 1996); Stelios Michalopoulos and Elias Papaioannou, “The Long-Run Effects of the Scramble for Africa,” NBER Working Paper, 2011.

¹²³ Pierre Englebert, “Pre-Colonial Institutions, States, and in Economic Development Tropical Africa,” *Political Research Quarterly* 53, no. 1 (2000): 7–36; Berman, “Ethnicity, Patronage and the African State: The Politics of Uncivil Nationalism.”

¹²⁴ Englebert, “Pre-Colonial Institutions, States, and in Economic Development Tropical Africa”; Azam, “The Redistributive State and Conflicts in Africa”; Jean-Paul Azam, “The Political Geography of Redistribution,” in *The Political Economy of Economic Growth in Africa, 1960-2000*, ed. Benno J.b Ndulu et al. (Cambridge: Cambridge University Press, 2008); Patrick Francois, Iliia Rainer, and Francesco Trebbi, “How Is Power Shared in Africa?,” *Econometrica* 83, no. 2 (2015): 465–503.

¹²⁵ Acemoglu and Robinson, “Why Is Africa Poor?”; James A Robinson and Thierry Verdier, “The Political Economy of Clientelism,” *The Scandinavian Journal of Economics* 115, no. 2 (2013): 260–91.

¹²⁶ Berman, “Ethnicity, Patronage and the African State: The Politics of Uncivil Nationalism,” 334.

¹²⁷ See discussion in: Anne Pitcher, Mary H. Moran, and Michael Johnston, “Rethinking Patrimonialism and Neopatrimonialism in Africa,” *African Studies Review* 52, no. 1 (2009): 125–56.

Kitschelt and Wilkinson and Hicken formally define clientelism or patronage as a ‘contingent exchange’, where a political patron rewards a client with a public sector job or other benefit in exchange for delivering votes or other forms of political support.¹²⁸ They distinguish between targeted benefits (programmatic or club goods), which politicians may use to sway particular voter constituencies but without any guarantee of a particular behaviour or action on the part of the beneficiaries, from clientelism, where the client’s quid pro quo is explicitly or implicitly guaranteed and non-performing clients can be sanctioned. Building on Hicken's framework, Robinson and Verdier argue further that public sector jobs are a particularly attractive form of patronage because they allow patrons to overcome a time-inconsistency problem: the job is contingent on continued cooperation and can be withdrawn if the client reneges.¹²⁹

A critical feature of clientelism then, is its discretionary nature. Individual patrons choose how to allocate or withdraw jobs. Because politicians reward clients based on their political influence or acumen rather than the skills needed in the delivery of public services, it is expected to lead to a bloated public service staffed by people ill-suited for their official job responsibilities. Robinson and Verdier assert that this problem is particularly acute in Africa.

A related literature, which has gained considerable traction in the African context, considers ethnic favouritism. While often conflated with patronage, much of this literature uses the concept in a softer sense to describe the distribution of state resources towards a favoured ethnic, religious or regional group, without making a clear distinction between targeted spending and clientelism ‘proper’. Here then, different groups compete for control of the state, and once victorious will use the resources of the state to reward their followers and cement their own power, as vividly described in the much quoted catch-phrase, ‘it’s our turn to eat’.

Several papers have found evidence of such targeting of state resources towards favoured ethnic groups in Africa. Franck and Rainer use a sample of 18 countries to look at the effect of ethnic favouritism on primary educational attainment and infant mortality and find a positive and significant effect of being a coethnic of the country’s leader during childhood.¹³⁰ With a focus on Kenya, Burgess et al. show that the ethnicity of the president influenced the level of road investment at district level.¹³¹ Kramon and Posner, also focusing on Kenya, found that

¹²⁸ Herbert Kitschelt and Steven I. Wilkinson, “Citizen–politician Linkages: An Introduction,” in *Patrons, Clients, and Policies: Patterns of Democratic Accountability and Political Competition*, ed. Herbert Kitschelt and Steven I. Wilkinson (Cambridge: Cambridge University Press, 2007), 1–49; Allen Hicken, “Clientelism,” *Annual Review of Political Science* 14, no. 1 (June 15, 2011): 289–310.

¹²⁹ Robinson and Verdier, “The Political Economy of Clientelism,” 264.

¹³⁰ Raphaël Franck and Ilia Rainer, “Does the Leader’s Ethnicity Matter? Ethnic Favoritism, Education, and Health in Sub-Saharan Africa,” *American Political Science Review* 106, no. 2 (2012): 294–325.

¹³¹ Robin Burgess et al., “The Value of Democracy: Evidence from Road Building in Kenya,” *American Economic Review* 105, no. 6 (2015): 1817–51.

being a coethnic of the President during primary school age increased educational attainment, attendance and completion rates.¹³² Using experimental methods, Carlson examined voter behaviour in Uganda and found that voting patterns are consistent with the expectation that a coethnic leader will provide more resources to his or her ethnic constituency.¹³³ In many of these studies state resources are skewed towards a politically favoured group by virtue of their geographic location or conditions of use, such as the building of roads or schools in areas where the president's coethnics predominantly live. But individuals who do not support the president are not necessarily prevented from using the road or school, and the resource may be competitively allocated among those who qualify. Thus ethnic favouritism need not be antithetical to merit. One of the economic drawback of ethnic favouritism is thought to be that it heightens inter-ethnic competition for political office and resources. This in turn increases the risk of conflict, skews public spending towards items that can be targeted to particular constituencies, and incentivizes an over-investment of resources in the political game itself.¹³⁴

In contrast to this understanding of ethnic favouritism where the incumbent group has a large resource advantage, others have argued that multi-ethnic societies in Africa redistribute in an inclusive manner. A recent paper by Francois, Rainer and Trebbi studied the ethnic composition of cabinets in Africa and found that ministerial positions were allocated in relatively close proportion to the ethnic composition of the population.¹³⁵ They argue that this strategy reduces the risk of conflict or coups. A similar argument has been made by Bangura, based on a global study of ethnic inequalities in the public sector.¹³⁶ This study highlighted several examples of politically inclusive multi-ethnic societies both in Africa and other regions of the world. Francois, Rainer and Trebbi suggest that the members of these ethnically-inclusive cabinets use the ministries over which they preside to extend the flows of patronage to their respective ethnic groups, ensuring a relatively equitable ethnic distribution of spending in aggregate.¹³⁷

Focusing on resources rather than ruling coalitions, Azam has similarly argued that to stave off a civil war in a multi-ethnic society, a ruling group can either invest in deterrence or

¹³² Eric Kramon and Daniel N Posner, "Ethnic Favoritism in Primary Education in Kenya," *Quarterly Journal of Political Science* 11, no. 1 (2016): 1–58.

¹³³ Elizabeth Carlson, "Ethnic Voting and Accountability in Africa: A Choice Experiment in Uganda," *World Politics* 67, no. 2 (2015): 353–85.

¹³⁴ See for instance: Kramon and Posner, "Ethnic Favoritism in Primary Education in Kenya."

¹³⁵ Patrick Francois, Ilia Rainer, and Francesco Trebbi, 'How Is Power Shared in Africa?,' *Econometrica* 83, no. 2 (2015).

¹³⁶ Yusuf Bangura, 'Ethnic Inequalities in the Public Sector: A Comparative Analysis,' *Development and Change* 37, no. 2 (2006).

¹³⁷ Francois, Rainer, and Trebbi, 'How Is Power Shared in Africa?,' 466.

redistribute.¹³⁸ He shows that some governments in Africa have been able to credibly commit to redistributing to the ethnic groups excluded from power, thereby placating potential rebels. Green has argued further that the choice of patronage strategy is shaped by the types of political threats that rulers face. When leaders face a risk of rebellion or secession from provincial regions, they will distribute patronage at the centre to counteract it. When faced with competition from within, they will instead seek to broaden their power base by extending patronage to the rural periphery.¹³⁹ Both Azam and Green also argue that this redistribution can take many different forms. Some leaders have placated potential dissenters by improving educational access and infrastructural development in under-served regions, while in other cases the redistribution takes more insidious and growth-inhibiting forms. Azam thus concludes that the economic consequences of such patronage or redistribution depends on the nature of the goods and services supplied. Where leaders redistribute by improving basic education and healthcare in underserved regions, it need not inflict an economic cost on society. This strand of literature therefore suggests that it is not ethnic polarization in and of itself, but how it is managed, that shapes economic outcomes.

Scholars also differ in their understandings of the depth and density of these patron-client relationships in Africa. Many of the models assume that political patrons will redistribute a share of the resources he or she commands to buy the loyalty of his kinsmen or other allies, while skimming off some for his or her own personal benefit.¹⁴⁰ Others have queried the importance of redistribution in the first place. Nicolas van de Walle concluded that African clientelism is not broad-based, but instead limited to an exchange of favours and benefits among a narrow, elite clique.¹⁴¹ Ordinary people acquiesced because they had little option but to support the leader from their locality or tribe, regardless of his or her ability to deliver benefits to the constituency. One of the perverse consequences of ethnic polarization, according to this line of thought, is that by capitalising on group fears of the ‘other’ it enables exceptionally high elite capture.¹⁴²

¹³⁸ Azam, “The Political Geography of Redistribution.”

¹³⁹ Elliott Green, “Patronage as Institutional Choice: Evidence from Rwanda and Uganda,” *Comparative Politics* 43, no. 4 (2011): 421–38.

¹⁴⁰ Francois, Rainer, and Trebbi, “How Is Power Shared in Africa?”

¹⁴¹ Nicolas van de Walle, “Meet the New Boss, Same as the Old Boss? The Evolution of Political Clientelism in Africa,” in *Patrons, Clients, and Policies: Patterns of Democratic Accountability and Political Competition*, ed. Herbert Kitschelt and Steven Wilkinson (Cambridge University Press, 2007), 50–67.

¹⁴² G. Pedro-I-Miguel, “The Control of Politicians in Divided Societies: The Politics of Fear,” *Review of Economic Studies* 74, no. 4 (2007): 1259–74.

As a body of work then, this literature on ethnicity and clientelism is highly varied in its economic and political predictions.¹⁴³ Some writers have argued that a reliance on patronage crowds out public goods and social service provision in the interest of creating unproductive, well-remunerated government jobs.¹⁴⁴ Others have claimed that clientelist states easily revert to a tragedy of commons, where competing political patrons will seek to extract as many jobs from the government as possible for their clients, even when this threatens fiscal sustainability.¹⁴⁵ Some writers acknowledge multiple equilibria, where leaders will sometimes succeed in averting civil conflict by compensating the losing groups, and other times slide into civil conflict.¹⁴⁶ The nature of this compensating redistribution can take many forms, from conspicuous consumption by elites to broad-based investments in schooling and healthcare. As a result, these theories predict everything from civil war and ethnically-divisive, kleptocratic rule, to developmental social policy.¹⁴⁷ By acknowledging the interaction between ethnic fragmentation and political institutions, leadership quality and external economic conditions, it suggests that these conditioning factors may be equally relevant explanators after all.

Africa's growth recovery and the revival of the class debate

Over the 2000s many African countries have seen a recovery in economic growth, a fall in the poverty incidence¹⁴⁸ and cautious improvements in governance.¹⁴⁹ These improved economic conditions have revived interest in class analysis once more. Evidence of falling levels of poverty and rising household wealth in particular, has inspired a literature proclaiming the 'emergence of the African middle class.'¹⁵⁰ In the more optimistic of this writing, this growing group of middle class Africans are once again expected to serve as modernizers and role models and promoters of democracy, human rights and progressive policies.¹⁵¹ In contrast to the modernization theorists of the 1960s however, these writers have highlighted the

¹⁴³ This argument builds on Mkandawire, who argues that neopatrimonialism lacks 'predictive value': Mkandawire, "Neopatrimonialism and the Political Economy of Economic Performance in Africa: Critical Reflections," 564.

¹⁴⁴ Chabal and Daloz, *Africa Works: Disorder as Political Instrument*; Acemoglu and Robinson, "Why Is Africa Poor?"

¹⁴⁵ Herbst, *States and Power in Africa: Comparative Lessons in Authority and Control*, 133.

¹⁴⁶ Azam, "The Political Geography of Redistribution."

¹⁴⁷ Booth and Golooba-Mutebi have even coined the term 'developmental (neo)patrimonialism': David Booth and Frederick Golooba-Mutebi, "Developmental Patrimonialism?: The Case of Rwanda," *Africa Power and Politics Working Paper* (London, 2011).

¹⁴⁸ Kathleen Beegle et al., "Poverty in a Rising Africa" (Washington D.C., 2016).

¹⁴⁹ Mo Ibrahim Foundation, "Ibrahim Index of African Governance (IIAG)," accessed June 16, 2017, <http://iiag.online/>.

¹⁵⁰ Mthuli Ncube and Charles Leyeka Lufumpa, *The Emerging Middle Class in Africa* (New York: Routledge, 2015); Maurice Mubila and Mohamed-Safouane Ben Aissa, "The Middle of the Pyramid: Dynamics of the Middle Class in Africa," Market Brief (Tunis, 2011); Charles Roxburgh et al., "Lions on the Move: The Progress and Potential of African Economies" (New York, 2010).

¹⁵¹ See for instance: Ncube and Lufumpa, *The Emerging Middle Class in Africa*.

entrepreneurial activities of the new middle class, its private sector focus and global connectedness, rather than its statist orientation.

Pushing back against these optimistic predictions however, other academics have challenged the assumption that the growth of the middle class will have positive political consequences.¹⁵² The fault-lines in this debate are similar to those of the 1970s and 1980s, with academics asking whether the middle class, defined on a consumption or income basis, share a middle class identity or common political aspirations. A recent collection of papers edited by Henning Melber for instance, leans against using class distinctions to explain contemporary Africa, highlighting that ethnic political allegiances still tend to trump economic interest groups.¹⁵³

So far, however, there are relatively few studies that take a historical perspective on social stratification in Africa, and investigate whether the occupational, educational and sectoral basis of the middle class have changed since the 1960s and whether the government's role in stratifying society has reduced. Given this gap in the literature, the coming chapters will examine how public employment structures have changed over the past half-century, how this has shaped the relative standing of public sector employees, and how these dynamics speak to the various predictions in the theoretical literature just discussed.

1.5. RESEARCH QUESTIONS, CONTRIBUTION, METHODS, SOURCES AND DEFINITIONS

Research questions and contribution

The preceding section has discussed the rich secondary literature on state development in postcolonial Africa and the varied interpretations of the social and political salience of public employment. Table 1.1 summarizes these theories of public employment and their predicted effect on public employment and the broader economy. The coming chapters of this dissertation brings quantitative evidence to bear on these various predictions.

In Chapter 2 I examine the growth of public employment and the public sector wage bill, using a budgetary lens to understand how the wage bill evolved relative to other spending priorities. This speaks to the predictions of the dependency and public choice theorists, by showing when public sector earnings began to fall and why the high-earning public sector class did not persist.

¹⁵² Danielle Resnick, "The Political Economic of Africa's Emergent Middle Class: Retrospect and Prospects," *Journal of International Development* 27 (2015): 573–87; Henning Melber, *The Rise of Africa's Middle Class: Myths, Realities and Critical Engagements* (London: Zed Books, 2016); Nicolas van de Walle, "Barrington Moore in the Tropics: Democracy and the African Middle Class," Political Economy of Regime Transitions Research Workshop, 2014.

¹⁵³ Melber, *The Rise of Africa's Middle Class: Myths, Realities and Critical Engagements*.

It also tests the claims made in some of the patronage literature that patronage politics leads to excessive employment growth and wage spending at the expense of more socially productive spending. Lastly it examines the consequences of structural adjustment and the extent to which it marked a break in spending patterns.

The third chapter establishes where public sector employees fell within the national income distribution and what share of the income or wealth elite they comprised. This speaks to the dependency theory assumptions that bureaucrats dominated the nascent elite and middle class in Africa. It also addresses current debates about whether Africa's current, growing middle class is less beholden to the state and more oriented towards private enterprise.

The last chapter examines inequalities in access to public sector jobs and what this tells us about the types of people that came to work for the government. This addresses various hypotheses in the patronage/ethnicity literature: are certain ethnic groups or regions favoured in the distribution of jobs? What discretion do politicians have over the distribution of public sector jobs? How has educational attainment growth shaped the composition of the public service? It also tentatively addresses the question of social reproduction by examining the parental educational characteristics and asset wealth of current public servants.

To investigate these questions I use a case study approach focusing on three countries in East Africa. Case studies have the advantage that they allow careful, country-level analysis of the context and history, but the disadvantage that their findings are not necessarily generalizable. But although these cases cannot be presumed to be representative of the continent as a whole, they can nonetheless inform theoretical debates. To the extent that these three cases refute a proposition about Africa, they challenge the generalizability of such theories, and demonstrate, at the very least, the need to modify the theory to account for such deviations. By digging deeply, a case study approach may also offer new ideas or insights, thereby generating hypotheses that can be tested across a greater range of cases in the future.

These case studies in turn rest on data about government finances, public employment, and the structure of labour markets, data that hasn't previously been collated or analysed in such ways. By demonstrating the usability of economic data for the postcolonial period, moreover, this dissertation seeks to correct the current skew in African economic history towards the study of the colonial period. Given the importance of this data to the contribution of this thesis, it is useful to review what these sources are, how they will be used, and what quality and coverage challenges they pose.

Table 1.1. Theories of public employment

Theory of public employment	Description	Effect on public employment	Channel through which it retards (or aids) growth
Modernization theory	Public servants (and other elite members) formed a vanguard of educated modernizers and proto-capitalists to which the masses could aspire	- Growth in public employment; strong emphasis on merit/education	- Aids (selective) upward mobility - Creates a middle class - Reinvestment of earnings in enterprises
Dependency theory	Public employees form a cohesive rentier class who facilitate continued exploitation by foreign capital	- Highly paid public service - Hereditary, in the sense that children of the elite have disproportionate access to public jobs.	- Limits investment - Prevents emergence of local capitalist class (and thus economic diversification) - Reduces incentive to deliver services - Limits social mobility
Urban bias	Urban workers as well as public servants constituted disproportionately influential interest groups that encouraged high spending on urban wages at the expense of heavily taxed rural producers	- Public sector and urban pay premium, financed through taxation of agriculture	- Reduces investment/development in rural sector - Excessive investment in educational paper qualifications - High urban unemployment (queuing for jobs)
Clientelism / patrimonialism	Public employment is used instrumentally by political patrons to reward specific clients for their political loyalty/support	<i>Clientelism</i> - Public sector jobs discretionarily awarded to political clients - Excessive job creation & wage bill growth crowds out public goods	- Jobs not awarded on merit (misallocation of skill) - Under-provision of goods and services - Budget imbalances
		<i>Ethnic favouritism</i> - Favoured ethnic groups hold disproportionate share of jobs	- Suboptimal allocation of resources - Excessive investment in the competition for resources - Ethnic conflict
		<i>Redistribution & ethnic equity</i> - Strong /“excessive” emphasis on equity (‘fair shares’)	- Contingent on type of redistribution; can impose economic inefficiencies if it encourages spending on non-productive items
‘Africa rising’	Renewed growth in Africa has created a new, private sector-oriented middle and upper class that will drive growth and development; falling relevance of state employment	- Falling share of the middle class in public employment - Falling public sector pay premium	- Private sector friendly economic policy - Greater accountability between new private sector elite & state

Data sources and data quality

African economic history suffers from a missing middle. While the colonial period is well documented by economic historians, the postcolonial period often features as an outcome of past conditions rather than a period of study in its own right, with various methods used to show how colonial or postcolonial legacies shape contemporary economic performance. Gareth Austin characterised this research approach as ‘the compression of history.’¹⁵⁴ It risks overlooking the significant economic policy changes that took place in the decades after independence or explain adequately if and how political independence changed African states.

One of the reasons for the limited study of the postcolonial period is presumably the deterioration and change in data availability after independence. Many of the economic data sources used by historians of colonialism changed in form and function after independence, making harder, in many instances, to study the postcolonial than the colonial period. This thesis is therefore also an attempt to show that these data challenges are not insurmountable and that more can be done with the available postcolonial sources.

The traditional sources used by economic historians collected and collated by the colonial powers changed after independence and are no longer as systematically collected by libraries or archives. While colonial governments were accountable to a metropole who demanded regular reporting for monitoring purposes, the relationship between independent African states and the analogous postcolonial organisations – international financial institutions and UN bodies – did not have the same strength. Moreover, with the rise of autocratic one-party states in Africa in the 1970s in combination with the onset of a severe and protracted economic crisis, many statistical bureaus found themselves short of resources and lacking in political incentive to actively monitor development performance. As a result of these limitations, some academics have questioned the usefulness of what data is available. Morten Jerven’s ‘Poor Numbers’ has revealed the serious quality gaps in Africa’s national accounts reporting and questioned the validity of African GDP estimates.¹⁵⁵ A recent special issue on African statistics concluded that ‘while the sheer amount of data on these issues has multiplied in recent years, reliable and inter-

¹⁵⁴ Austin, “The ‘reversal of Fortune’ Thesis and the Compression of History: Perspectives from African and Comparative Economic History.”

¹⁵⁵ Morten Jerven, *Poor Numbers: How We Are Misled by African Development Statistics and What to Do About It* (Ithaca and London: Cornell University Press, 2013).

temporally and internationally consistent information on many basic economic and social variables remains scarce in Sub-Saharan Africa.¹⁵⁶

But although the quality of data may not always live up to the academic ideal, the advantage of the postcolonial period is precisely the growth in the ‘sheer amount of data,’ which gives us greater ability to triangulate and cross-check between sources and thereby account for potential biases or quality gaps. Furthermore, while coverage is patchier, some postcolonial governments continued to collect some of the same routine information as their precolonial predecessors, and in other cases new forms of statistical surveys, particularly the proliferation of household surveys, compensate for some of the decline in administrative data generation.

Moreover, accessibility of this data is continuously improving. Since the early 2000s, national statistical bureaus have begun to publish a range of statistical sources and reports on their websites. Furthermore, because many African countries relied heavily on borrowing from the IMF and World Bank, these organisations have produced a relatively consistent set of reports for each country dating back to the early 1960s, many of which have been digitized and made publicly available in their online archives. IMF reports such as ‘Recent Economic Developments’ and the Article IV consultation reports contain a range of tables with macroeconomic and fiscal data. The World Bank economic memoranda, and its later series of public expenditure reviews, frequently included large data annexes with macroeconomic, fiscal and social data. The International Labour Organisation (ILO) has also digitized a large proportion of its archives which include a rich set of studies on labour markets. These sources generally republish statistics from the national statistical bureaus rather than producing alternative series, but they provide a long-term repository that compensates for gaps in library collections and national statistical websites. These sources also have the advantage of providing a running commentary on events and trends and contemporaneous assessments of the reliability of the available statistics.

Drawing from these online repositories in addition to published volumes in libraries, five types of data sources provide the main underlying material for this thesis. The richest source of data on public employment is the Employment and Earnings Surveys (EES) or Annual Enumeration of Employees Survey (the survey has been titled slightly differently in the three countries and in different time periods). This survey was started in the late colonial era in response to colonial concerns about labour unrest and urban unemployment. It provides data on formal sector

¹⁵⁶ Stephan Klasen and Derek Blades, “Issues and Challenges in Measuring National Income, Wealth, Poverty, and Inequality in Sub-Saharan African Countries: An Introduction,” *Review of Income and Wealth* 59, no. SUPPL1 (2013): S7.

employment and earnings, disaggregated by sector, industry and geographic location and collected using a questionnaire sent annually to all formal sector establishments.¹⁵⁷ In Kenya this survey has been administered annually up until the present, while the Tanzanian and Ugandan survey is only available for parts of the postcolonial period.

Because the EES only surveyed the formal sector however, which constituted roughly 10-15% of the total labour force, I use censuses and household surveys to understand how this narrow formal sector fits into the broader labour force and income distribution. Censuses have the advantage of providing comprehensive information on the contours of the labour market, such as the working aged population, size of the labour force and its educational attainment. Certain censuses contain some labour market information such as status in employment, employment industry and occupation, and in the case of the 2009 Kenyan census only, an invaluable breakdown by the sector of employment. Most of the censuses are available as microdata sets curated by the Minnesota Population Center IPUMS project (usually as a 10% sample of all census records).

The East African censuses do not, however, contain data on incomes or consumption. I therefore turn to household budget surveys and labour force surveys to place public servants within the national income (or consumption) distribution. Many of these surveys are available to researchers in microdata form. Most of these household surveys provide questions on sector of employment which makes it possible to identify public sector employees among the sampled respondents. For these surveys it is therefore also possible to derive alternative estimates of total public employment. These surveys are based on the national sampling frames and designed to be nationally representative. Their disadvantage however, is their relatively small sample sizes (usually in the order of 10,000 households), which raises the confidence intervals and introduces a risk of sampling biases.

In addition to these surveys, some national budgets (or public finance summary tables) contain summary data on the number of government employees along with an important second source of data on total government earnings. A challenge is to establish the exact scope of the reported employment or wage bill data, as some personnel expenditure takes the form of transfers to autonomous agencies or subnational governments and is therefore not classified under the personnel budget.

For the first few years of independence all three governments also published income tax reports, containing schedules of taxpayers by income bracket, which can be used to reconstruct

¹⁵⁷ In the earlier periods all establishments were surveyed; more recent survey instruments relying on sampling of private establishment.

the very top tail of the income distribution.¹⁵⁸ Unfortunately these reports are of less value after the introduction of Pay As You Earn (PAYE) schemes in the 1960s, as the reports stopped listing taxpayers individually when the burden of tax collection was shifted to employers.

In addition to these main sources, various ad hoc surveys such as manpower surveys, educational surveys and tracer surveys are used to complement the sources above.

Admittedly, the availability and quality of these sources varies significantly across countries and periods. This study has purposely selected countries with relatively strong statistical systems by continental standards. The high degree of administrative centralisation in all three countries also simplifies the exercise considerably. Kenya has particularly strong data records on labour markets, with consistent data on labour markets running back to the late colonial period. Tanzania's economic data is less consistent, but its commitment to economic planning in the first three decades of independence generated a considerable volume of statistical reports. Uganda's postcolonial statistical records are the patchiest of the three owing to the erosion of the state after the coup of 1971, but the records improve in the 1990s with the country's economic recovery and large inflow of aid and technical assistance. Thus, while not necessarily representative for the continent as a whole, these three cases suggest that we can make more progress in the writing of economic histories of particular parts of the continent at least.

The decision to include three case study countries with relatively similar endowments and colonial institutions can also help to dispel data concerns. An unexpected data finding in one country may throw doubt on the quality of the data, but finding similar patterns, trends or levels across three different countries can increase confidence in the results.

Furthermore, the bar for improving the evidence base is currently low. To provide meaningful contributions to the discourse it is not always necessary to estimate economic variables with perfect precision. Understanding the rough direction of travel and estimating orders of magnitude, or including plausible low and high case scenarios, is sometimes enough to enrich the debate. While level differences across countries may be hard to accurately determine, differences or similarities in time trends provide an alternative method of comparing countries.

¹⁵⁸ This approach was used by Atkinson to measure income inequality across a range of Anglophone African countries, see: A B Atkinson, "Top Incomes in East Africa before and after Independence," WID.world Working Paper No. 2015/2, 2015.

Definitions

Any discussion of public sector employment is sensitive to the definition used. While the appropriate definition will depend on the narrower research question, unless otherwise stated this study uses a broad definition of public employees, covering all workers whose salary and employment conditions are controlled or strongly guided by the state. The ILO defines public employment in relation to three levels of control: the central government which includes the civil service and employees of non-profit institutions directly controlled by the central government; the general government, which includes central, state and local governments, social security funds and non-profit institutions controlled or financed by the government; and the public sector, which combines the general government and the parastatal sector.¹⁵⁹ Although officially a part of the public sector labour force, the military is often excluded from the official data on public employment (for security reasons). In this study I use estimates of the armed forces from the International Institute for Strategic Studies (IISS) Military Balance to give a rough idea of the magnitude of this omission.

Another definitional issue is the treatment of casual workers. Many of the data tables in this study include casual workers in the aggregate data on public employment as excluding them could skew the results. After independence governments regularised many jobs that had previously been conducted on a casual basis. That said, it is hard to ascertain exactly what type of casual workers are included in administrative data. Short-term workers, outsourced service providers and consultants (who are paid out of the non-wage budget) are for instance not captured, and their numbers have probably increased in recent decades.

A further point of note regards the classification of the staff of regional organs. Up until 1977 Kenya, Tanzania and Uganda retained some region-wide public sector functions, carried out by the East African Common Services Organisation (renamed the East African Community in 1967). In this study the EACSO/EAC personnel (most of whom were employed by the rail and harbour parastatals) are considered to belong to the public sector of the country in which they reside.

With these clarifications and qualifiers, the next three chapters uses the sources and approaches just discussed to examine changes in public employment levels, composition and earnings, relating these changes to public expenditure outcomes, income dynamics in society at large and the growth in educational attainment.

¹⁵⁹ International Labour Organisation, "Public Sector Employment," *LABORSTA*, accessed April 27, 2014, <http://laborsta.ilo.org/applv8/data/sectore.html>.

Chapter 2.

Paying for the public service: a budgetary perspective on public employment and pay

2.1. INTRODUCTION

As African countries gained independence in the 1960s, academics cautioned that the colonial legacy of a privileged and highly paid public service was contributing to growing social inequalities and distorting the labour market by crowding out talent from the private sector and taxing the peasantry disproportionately. Later analyses from the 1980s and onwards also raised concerns about public employment imbalances, but focused less on wage levels than on the excessive reach of the bloated African state. Policy literature of the World Bank and IMF blamed this on an overambitious industrial policy and statist orientation,¹⁶⁰ while political economists downplayed policy ambition and instead linked Africa's bloated wage bills to ethnic patronage.¹⁶¹ How well do these various assertions fit the statistical record on public employment and wage growth in Kenya, Tanzania and Uganda? This chapter addresses this question by examining trends in employment and earnings from a budgetary perspective.

The number of staff employed by the government and their level of pay is at its heart a budgetary matter. Governmental decisions about how to tax or borrow determine the overall availability of resources, and staffing costs compete with other budget priorities for space within this resource envelope. Within the share of the budget allotted to wages, governments annually determine how to balance the creation of new posts against adjustments to the wage level. Using data on public spending and employment collected and digitized from a range of statistical sources, this chapter therefore examines how the public sector wage bill and employment evolved in relation to the overall resource envelope and other spending priorities, illuminating both domestic budget priorities and the nature of overall resource constraints on public employment and wages. It also compares these three East African trajectories to developments in other parts of the world to shed light on African exceptionalism, or lack thereof.

¹⁶⁰ World Bank, "Accelerated Development in Sub-Saharan Africa: An Agenda for Action."

¹⁶¹ Berman, "Ethnicity, Patronage and the African State: The Politics of Uncivil Nationalism"; Englebert, "Pre-Colonial Institutions, States, and in Economic Development Tropical Africa"; William Easterly and Ross Levine, "Africa's Growth Tragedy: Policies and Ethnic Divisions," *Quarterly Journal of Economics*, no. November (1997); Acemoglu and Robinson, "Why Is Africa Poor?"

The chapter concludes that employment growth and wage determination in the Kenyan, Tanzanian and Ugandan public sectors were strongly circumscribed by the general health of the economy and global ideas about the role of the state. As in many other regions of the world, overall public spending and employment grew strongly in the 1960s and 1970s then plateaued or contracted in the 1980s as fiscal imbalances worsened. During the expansionary period the wage bill grew at roughly the same pace as GDP, and in this sense it did not crowd out other spending categories. With the onset of the structural adjustment era in the late 1980s, the level of public employment fell sharply. The public employment to labour force ratios are today lower or on par with the levels at independence.

Where these East African cases diverge from trends in the west however, is in the severity of the earnings decline. Average earnings fell by 70-95% over the course of the 1970s through 1990s, and were the most severe for the higher skilled public employees. This was partly by design, as governments chose to continue employing new staff even after real wages began to fall on the grounds that job creation was more important than the protection of earnings. But the fall in earnings was exacerbated by a shrinking wage budget and a severe terms of trade decline and exchange rate shock, which dramatically weakened the purchasing power of wage earners. Contrary to some of the predictions in the political economy literature which described the public service as a privileged and protected class, public servants proved to be some of the biggest relative losers during the economic downturn.

As a result, some of the imbalances inherited at independence were overcome. Urban wages fell and the duality of the racially segmented colonial service withered. Furthermore, the growth in schooling and other frontline services shifted a greater share of public employment out of the capital cities and closer to the population, countering the colonial era urban bias in public spending. While domestic policy choices clearly influenced these outcomes, this chapter places domestic policy choices in the context of broader economic swings and external conditions. It concludes that public sector employment outcomes were less of a cause than a consequence of such swings.

The bloated African state?

The notion of the bloated African state is strongly tied to the World Bank and IMF analyses that underpinned structural adjustment. The stylized story in this literature, first fully elaborated in the World Bank's 1981 report on growth in Africa, laid considerable blame for the continent's growth slow-down on domestic policies, in particular an overextended state and

protected industry.¹⁶² Comparisons with other developing regions suggested that African governments consumed too much, and that employment and wages had grown excessively.

More careful comparative studies of African public employment and spending, however, have already challenged some of these charges. By the 1990s the severity of the urban wage declines in Anglophone Africa came into relief and the policy literature began to raise concerns about excessive wage falls and its effect on productivity.¹⁶³ Using cross-country comparisons, Arthur Goldsmith and Dani Rodrik have both found that African countries on average had smaller civil services and wage bills than other developing regions of the world in the 1980s and 1990s. The biggest civil services were found in two of the most economically successful and least patrimonial African states, Botswana and Mauritius.¹⁶⁴

While these cross-sectional studies provide valuable insights into whether and how African states differ from those in other regions, they shed less light on how these conditions came to be or what their consequences were. This chapter in contrast takes a long-run perspective on expenditure and employment growth and uses the changing composition of spending to deduce budget priorities and public sector wage dynamics. This approach builds on Aaron Wildavsky's insight from the 1960s that budgeting is incremental.¹⁶⁵ Governments rarely reduce funding for their existing base programmes, but by using the budget increment to address new priorities, they gradually shift the composition of spending over time. In keeping with this logic, this chapter assumes that policy priorities are best understood by examining the direction of change rather than differences in absolute levels between countries.

This chapter has five main sections that successively unpeel the budget. As a starting point, it looks at the rate of revenue and expenditure growth in aggregate terms, to understand the broader resource envelope and its influence on the wage bill. It then turns to the composition of public expenditure to establish what categories of spending grew most in the postcolonial era and their relationship to the widening or contraction of the deficit. The third and fourth

¹⁶² World Bank, "Accelerated Development in Sub-Saharan Africa: An Agenda for Action."

¹⁶³ Valentine, "Government Wage Policy, Wage and Employment Trends, and Economic Instability in Tanzania since Independence"; Jamal and Weeks, "The Vanishing Rural-Urban Gap In Sub-Saharan Africa"; Vali Jamal and John Weeks, *Africa Misunderstood, or Whatever Happened to the Rural-Urban Gap?*, ed. International Labour Organization (London: Macmillan Press Ltd, 1993); David L. Lindauer, *Rehabilitating Government: Pay and Employment Reform in Africa*, ed. David Lindauer and Barbara Nunberg (Washington D.C.: World Bank, 1994).

¹⁶⁴ Arthur A Goldsmith, "Sizing up the African State," *Journal of Modern African Studies* 38, no. 1 (2000): 1–20; Arthur A Goldsmith, "Africa's Overgrown State Reconsidered: Bureaucracy and Economic Growth," *World Politics* 51, no. 4 (1999): 520–46; Dani Rodrik, "What Drives Public Employment in Developing Countries?," *Review of Development Economics* 4, no. 3 (2000): 229–43; Schiavo-Campo, de Tommaso, and Mukherjee, "Government Employment and Pay: A Global and Regional Perspective."

¹⁶⁵ Aaron Wildavsky, *The Politics of the Budgetary Process* (Boston: Little Brown, 1964).

sections examine internal wage bill dynamics: how did the level of public employment change over this period? How did the size of the wage bill and level of public employment influence average public sector wages? Lastly it also considers the geographic distribution of public employment and wage spending. First however, as a point of departure, it provides a stylized account of state growth around the world over the same time period.

2.2. STATE GROWTH IN INTERNATIONAL PERSPECTIVE

Over the past century the size of government has grown the world over, both in terms of public expenditures and employment. While the pace and scope of state expansion may have differed across countries and regions, the trend has cut across ideological divides and been underpinned by a considerable change in public perceptions about the role of government.¹⁶⁶ Over the second half of the 20th century states came to take on a far greater range of services and functions than ever before, from the provision of social safety nets to universal provision of education and healthcare.¹⁶⁷ Growing state intervention in the productive sectors, through the creation of public corporations and nationalisation of industry, also brought an unprecedented share of industrial employment and investment under state control. This growth of the state was underpinned by the Keynesian idea that discretionary fiscal policy could be used to manage aggregate demand and maintain full employment.¹⁶⁸

A new IMF database provides historical data on the public expenditure and revenue for a range of countries across the world, illustrating the remarkable growth in the state over the 20th century (Figure 2.1). With the exception of South Africa however, the database contains no African country observations prior to 1980. The available data shows that the growth of the state was most marked in today's advanced economies. For a sample of eight Western European countries (Denmark, Finland, France, Germany, Italy, Portugal, Sweden, United Kingdom),¹⁶⁹ public expenditure grew from an average of 10% of GDP in 1890 to 46% in 2000, an almost five-fold increase. In the USA and Canada public expenditure grew from 4% to 38% of GDP between the same period, in India from 7% to 27%, and for a sample of Latin American countries from 7% in 1905 to 24% in 2000. In the western world the Second World War was an important watershed, shifting spending to a permanently higher level and followed by continued strong state growth from the 1950s through 1970s. In Asia and Latin America state

¹⁶⁶ Vito Tanzi and Ludger Schuknecht, *Public Spending in the 20th Century: A Global Perspective* (Cambridge and New York: Cambridge University Press, 2000).

¹⁶⁷ Peter H. Lindert, *Growing Public: Social Spending and Economic Growth Since the Eighteenth Century* (Cambridge University Press, 2004).

¹⁶⁸ Carolyn Webber and Aaron Wildavsky, *A History of Taxation and Expenditure in the Western World* (New York: Simon and Schuster, 1986).

¹⁶⁹ Countries included in samples selected based on data availability and broad representativeness.

growth took off after the war. Unlike in the 19th and early 20th century, when governments sought to maintain balanced budgets, many countries ran persistent deficits in the post-WWII era (Table 2.1). In Europe, Latin America and Asia the primary balance was on average negative during the postwar golden era.

Public expenditures grew rapidly until around 1980, after which state growth slowed or plateaued in most parts of the world. Latin America experienced a decline in spending the 1980s followed by a recovery in the late 1990s. Budget balances improved during this period of state consolidation.

Figure 2.1. Growth in public expenditure, c.1890 – 2010

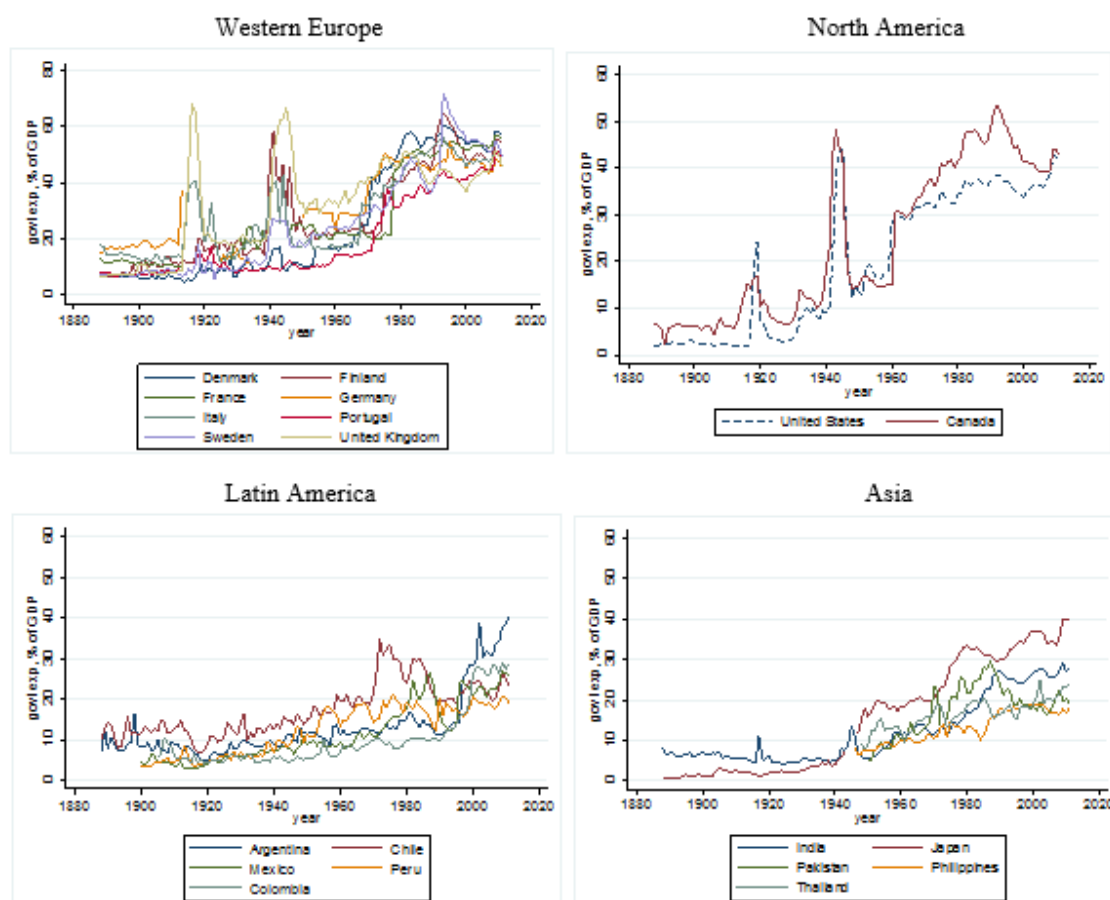


Table 2.1. Government primary balance, % of GDP*

	Europe	North America	Latin America	Asia
1890-1913	1.6	0.5	0.7	0.7
1920-1937	-0.2	0.8	0.5	0.8
1946-1979	-0.5	1.6	-0.1	-0.6
1980-2007	1.4	1.8	1.7	-0.4

Notes: * Simple averages, same samples as above.

Sources: Public Finances in Modern History database: Ariel J. Binder et al., “A Modern History of Fiscal Prudence and Profligacy,” IMF Working Paper (Washington D.C., 2013), <https://www.imf.org/external/pubs/cat/longres.aspx?sk=40222.0>.

Although there are fewer comparative studies on public employment growth, the available data shows a similar trajectory. A study using a sample of six Western countries found that government employment roughly doubled as a share of the labour force between 1951 and 1981.¹⁷⁰ In tandem came the growth of the state-owned enterprise sector, which by the late 1970s employed around 8-15% of the labour force and accounted for over 10-15% of GDP in sample of seven OECD countries.¹⁷¹

Since the 1980s however, the level of public employment has stagnated or fallen in many parts of the world, in part due to privatization policies that resulted in divestures from public corporations.¹⁷² Table 2.2 reproduces data from a World Bank study of public employment and pay; it found a marked decline in the level of central government employment across all regions of the world over the 1980s.¹⁷³ In neither period, moreover, did African countries stand out as having exceptionally high levels of central government employment compared to other developing regions.

Table 2.2. Government employment, early 1980s and early 1990s compared

	Central government employment as percentage of population		
	# obs	Early 1980s	Early 1990s
Africa	13	1.8	1.1
Asia	5	2.6	1.1
Latin America	5	2.4	1.5
OECD countries	15	2.9	1.9
Total sample	38	2.5	1.5

Source: Salvatore Schiavo-Campo, Giulio de Tommaso, and Amitabha Mukherjee, "Government Employment and Pay: A Global and Regional Perspective," Policy Research Working Papers (Washington D.C., 1997)., Table 3.

2.3. REVENUE AND EXPENDITURE IN KENYA, TANZANIA AND UGANDA

Aggregate growth in revenue and expenditure

In light of this global trend towards bigger states in the 20th century, with states peaking in size around 1980, how do Kenya, Tanzania and Uganda compare? In Figure 2.2 general government

¹⁷⁰ Richard Rose, *Public Employment in Western Nations* (Cambridge: Cambridge University Press, 1985), 11.

¹⁷¹Countries with parastatal sectors above 10% of GDP: France, Austria, Italy, Sweden, UK, Australia, West Germany, see: Leslie Hannah, "A Failed Experiment: The State Ownership of Industry," in *The Cambridge Economic History of Modern Britain, Vol. III, Structural Change and Growth, 1939-2000*, ed. Roderick Floud and Paul Johnson (Cambridge: Cambridge University Press, 2004), 85.

¹⁷² Schiavo-Campo, de Tommaso, and Mukherjee, "Government Employment and Pay: A Global and Regional Perspective."

¹⁷³ However, central government employment can be misleading indicator of state size as in many advanced economies only a minority of public sector employees are employed by the central government.

revenue (before grants) and expenditure (including net lending) are plotted as a percentage of GDP, with the deficit presented adjacent. The sources and assumptions made in building these time series are discussed in Appendix II.

Because of the well-known problems of estimating historical GDP series in Africa,¹⁷⁴ Figure 2.3 present the expenditure trend in constant per capita terms (deflated by the consumer price index) as an alternative, which has the added advantage of incorporating the effect of price changes for the goods traded in East Africa, rather than those produced domestically only. Given the big terms to trade swings over the 1970s and 1980s, this provides an important alternative perspective on the government's ability to sustain its spending on goods and services. Unlike GDP estimates moreover, consumer price indices are available as early as the 1940s, which makes it possible to examine these expenditure and revenue trends further back in time. Public finance data for the 1940s and 1950s, however, has only been compiled for the central government (see dotted line), but nonetheless indicates the direction of change.

Figure 2.2 shows that the Kenyan, Tanzanian and Ugandan revenue and expenditure trajectories roughly match the global inflection points, with strong state expansion from the late 1940s through the 1970s and a stagnation or decline thereafter. Independence did not mark a break with the past; the expansion of the African state started well before decolonization and lasted until after the global shocks of the 1970s.¹⁷⁵ The region saw a marked rise in revenue and expenditure in the immediate postwar era, buoyed by strong demand for commodities during the postwar reconstruction and Korean War. Revenue slumped briefly in the late 1950s after the end of the Korean War, then resumed in the early 1960s and grew strongly until the early 1980s in Kenya and Tanzania, while in Uganda growth tapered off earlier in the 1970s. This was followed by Africa's growth stagnation, when GDP per capita remained flat or regressed and the level of state expenditure fell.¹⁷⁶ Here the contrast with other regions of the world is more marked. While many OECD and Asian countries saw public expenditure levels plateau in the 1980s, these East African cases, like some Latin American countries, experienced declines in revenue and expenditure relative to GDP and only a partial recovery in expenditure in the 2000s.

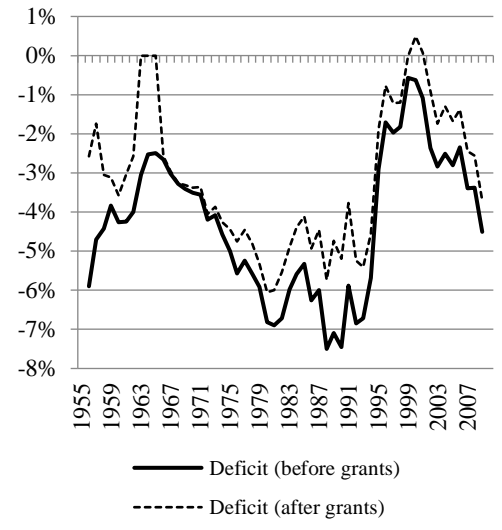
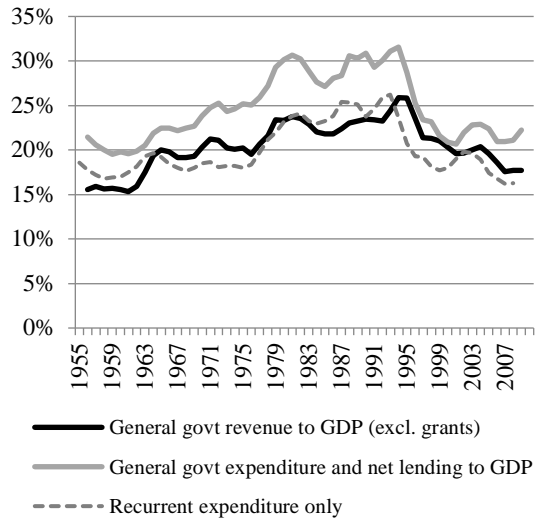
¹⁷⁴ Jerven, *Poor Numbers*

¹⁷⁵ This argument has also been made by: Cooper, *Africa since 1940: The Past of the Present*.

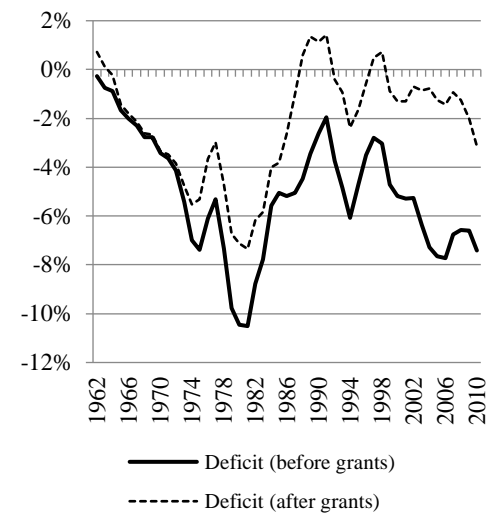
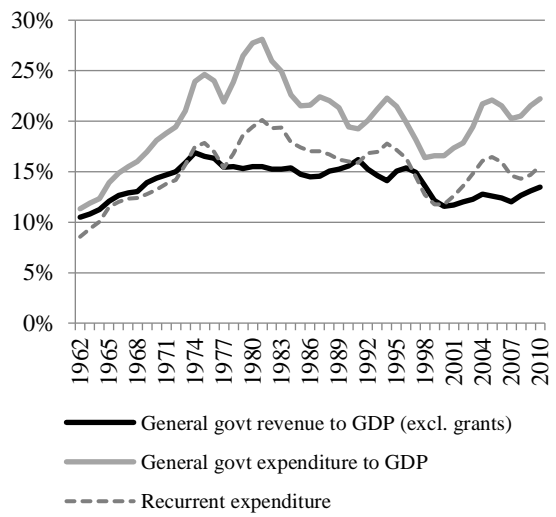
¹⁷⁶ William Easterly, "The Lost Decades: Developing Countries' Stagnation in Spite of Policy Reform 1980–1998," *Journal of Economic Growth* 6, no. 2 (2001): 135–157.

Figure 2.2. General government revenue, expenditure and deficit as % of GDP, 1950s – 2010 (3-year moving ave)

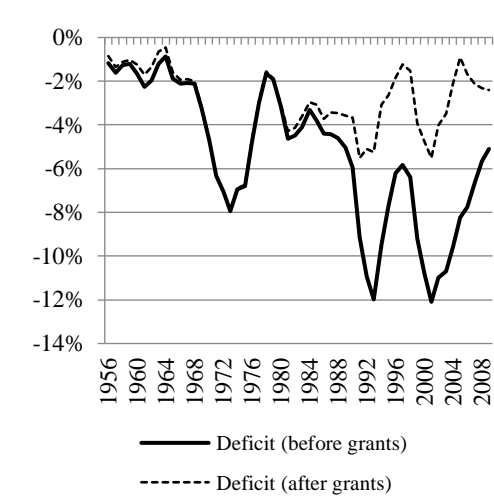
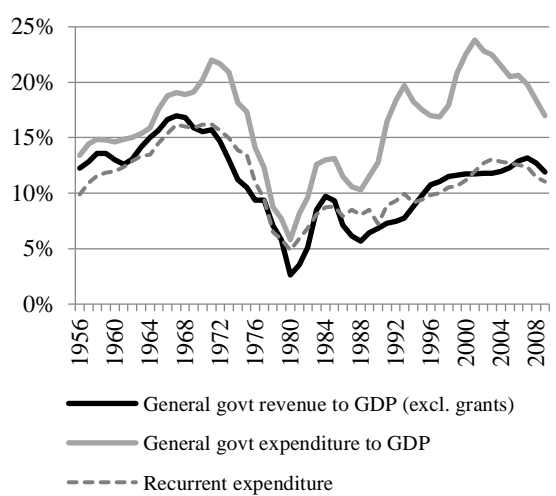
Kenya



Tanzania



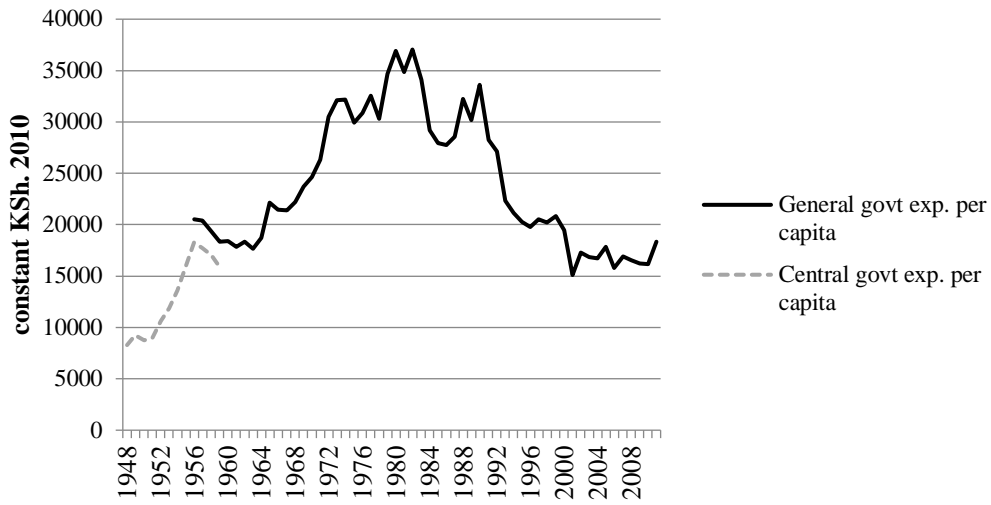
Uganda



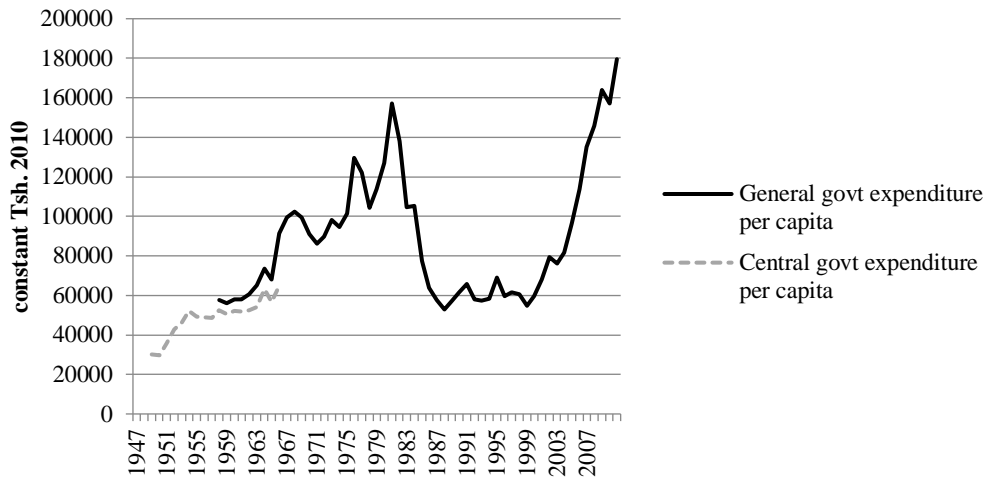
Sources: Statistical appendix 1.

Figure 2.3. Government expenditure in real per capita terms 1940s – 2010

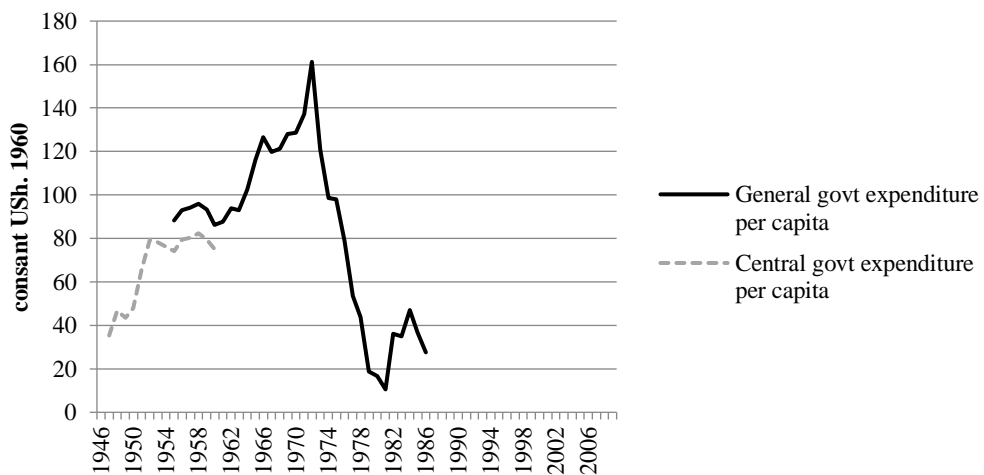
Kenya



Tanzania



Uganda



Sources: Statistical appendix 1.

Yet spending expressed as a share of GDP doesn't fully account for the severity of the expenditure decline. In all three cases, deflating public expenditure by consumer prices rather than expressing it as a share of GDP shows a more marked rise and decline (Figure 2.3). Real per capita government spending halved in Kenya and Tanzania over the 1980s and 1990s and fell by a factor of six in Uganda (1970s), partly as a result of the rising cost of imports brought about by worsening terms of trade and currency depreciations. Per capita spending fell back to the levels of the early 1950s, or in the Ugandan case the 1940s. Government spending was therefore hit by several shocks in the 1980s-1990s: expenditure to GDP was reined back at the same time as input costs increased. Furthermore, as will soon be discussed, debt payments rose during the same period placing even further downward pressure on domestic spending.

Although state growth was not exceptionally fast, East African post-independence deficits were high by international standards, as spending outpaced revenue growth. Budget deficits expanded significantly in the 1970s and 1980s, peaking at almost 7% of GDP in Kenya (1980), 11% in Tanzania (1980) and 11% in Uganda (1973). But these deficits were in large part a consequence of the dual budgeting practices of the 1960s and 1970s rather than uncontrolled consumption spending. The dotted lines in Figure 2.2 trace the growth in recurrent spending. During the period of strong expenditure growth (c.1960 – late-1970s, or early 1970s in Uganda), all three countries maintained their recurrent spending below revenue and allowed it to grow roughly in line with revenue growth. This practice was in keeping with the budgeting orthodoxy of the times: recurrent costs were to be kept below recurrent revenue, while capital projects with a projected rate of return above the interest rate could be debt-financed.¹⁷⁷ This approach had theoretical backing in the economic literature of the era, which stressed the economic catch-up potential of developing countries by importing capital and technology.¹⁷⁸

These trends in revenue and expenditure also reveal important country variation. Kenya had an unusually high budget deficit in the 1950s on account of the Emergency, which raised state outlays in the effort to suppress the Mau Mau uprising. In the early 1960s the deficit fell as security spending decreased. It then began to grow in the 1970 and peaked in the late 1980s. Kenya's economy also held up better than its neighbours through the shocks of the 1970s and 80s. The revenue to GDP ratio increased considerably between the late 1950s and early 1980s, then plateaued and fell first in the 1990s with the introduction of structural reforms.

¹⁷⁷ Discussed in: UG BtB 1958/59 & 1967/68; Government of Tanganyika, "Development Plan for Tanganyika, 1961/62 - 1963/64" (Dar es Salaam: Government Printer, 1961); Kitching, *Class and Economic Change in Kenya: The Making of an African Petite-Bourgeoisie*.

¹⁷⁸ Moses Abramovitz, "Catching Up, Forging Ahead, and Falling Behind," *The Journal of Economic History* 46, no. 2 (1986): 385.

Tanzania ran the highest deficits of the three, particularly in the 1970s and 1980s, but also received considerable aid throughout the period, thus the deficit after grants was markedly lower. Figure 2.2 also shows the considerable expense of the war with Uganda in 1978-79, which caused a sharp increase in expenditure followed by a consolidation in the 1980s. Also note that high inflation and rapid exchange rate depreciation led to a severe decline in government purchasing power in the 1980s.

Uganda stands out as the most extreme case. Revenue as a share of GDP peaked earlier in 1966, with the start of Uganda's postcolonial political upheavals. It then experienced a dramatic fiscal collapse in the mid-1970s, following Idi Amin's 1971 coup and the 1972 expulsion of the Indian community. Revenue fell from 17% to 2%, and expenditure from 23% to 6%, and in many years receipts covered less than half of all spending. The official figures probably overstate the true decline in public spending, as record keeping also deteriorated and off-budgetary transactions likely increased. Nonetheless, even as an account of official outlays only, this figure is indicative of Uganda's state implosion. After Yoweri Museveni came to power in 1986 the country experienced a rapid recovery and revenue and expenditure returned to their pre-crisis levels.

The changing composition of public expenditure

These dynamics can also be examined by category of expenditure. Figure 2.4 presents a modified economic classification of general government expenditure to examine how the composition of spending changed over time. In contrast to a normal economic classification, defence (a functional category) is included as an independent spending category in these charts. The sources and adjustments to it are discussed in Appendix II. The Ugandan estimates from the late 1970s and early 1980s should be taken with a grain of salt, but the wage bill was, if anything, the most reliable of the public expenditure estimates according to the IMF.¹⁷⁹

This analysis shows that it was indeed the development budget which consumed most of the incremental rise in government expenditure in the first decade of independence. In Kenya and Tanzania the development budget rose from roughly 15% of expenditure at independence to 30% by 1971, while it peaked at 26% in Uganda in 1969. As discussed in Chapter 1, an important objective of Africa's first postcolonial leaders was to develop an industrial base.¹⁸⁰ Concerned that an undiversified primary commodity-based economy would perpetuate economic dependence, many African governments vigorously pursued industrial policies,

¹⁷⁹ UG IMF RED 1983.

¹⁸⁰ Cooper, *Africa since 1940: The Past of the Present*.

taxing imports heavily and using state resources to build and subsidise a nascent domestic manufacturing industry.¹⁸¹ Nationalisation policies, whereby the government formed or bought stakes in foreign-owned corporations, also provided a means of indigenizing the economy, thereby reducing foreign ownership of productive resources.¹⁸² Big infrastructure projects, in trunk roads, power generation and port infrastructure, also featured strongly in development plans.

Funds reserved for 'development' because the prime budget objective - in budget speeches, economic analyses and development plans, officials show a preoccupation with shrinking the recurrent outlays in order to make fiscal space for investment.¹⁸³ Tanzania's third development plan for instance, stressed that 'it will be imperative (...) to control the government recurrent budget in order to realize a sizeable investible surplus.'¹⁸⁴ A World Bank report from 1977 noted that 'There is likely to be considerable resistance in Tanzania to any suggestion that the investment rate be reduced for the sake of macrofinancial balance. (...) it is clear from Tanzanian policy documents that maintenance of the investment rate is regarded as a principal indicator of commitment to development.'¹⁸⁵

The largely debt- and grant-financed development budget therefore drove up the debt stock, which in time translated into higher interest payments. As loans were denominated in foreign currency, currency depreciations also pushed the debt burden higher. By the 1980s debt payments began to crowd out capital spending. This was particularly marked in Kenya, where subsidies and interest peaked at 30% of spending in the early 1990s, displacing both capital and recurrent spending. Tanzania also experienced a high debt burden with interest payments peaking at 18% of expenditure, while this was less the case in Uganda which had less access to capital markets during Idi Amin's rule and started receiving debt relief earlier than its neighbours.¹⁸⁶ Furthermore, the composition of capital spending grew less socially productive. In Tanzania in particular, transfers to the floundering parastatal sector grew to consume an increasing share of the development budget.¹⁸⁷

¹⁸¹ Ibid.; Gareth Austin, "The Developmental State and Labour-Intensive Industrialization: 'Late Development' Reconsidered," *Economic History of Developing Regions* 25, no. 1 (June 2010): 51–74.

¹⁸² Mamdani, *Politics and Class Formation in Uganda*, 315.

¹⁸³ Government of Tanganyika, "Development Plan for Tanganyika, 1961/62 - 1963/64"; Uganda, "Sessional Paper no.2 of 1962: Proposals for the Implementation of the Main Recommendations of the Report of the World Bank Economic Survey Mission – 'the Economic Development of Uganda,'" 1962.

¹⁸⁴ Tanzania, "Third Five Year Plan for Economic and Social Development, 1st July 1976 - 30th June 1981. Part One," 1976 (Dar es Salaam, 1976), 3.

¹⁸⁵ World Bank, "Tanzania: Basic Economic Report, Annex 1 - Domestic Finance and Resource Use" (Washington D.C., 1977), 93.

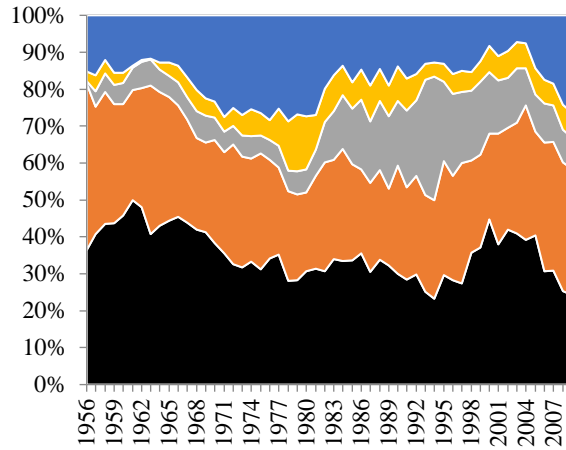
¹⁸⁶ Nancy Birdsall, John Williamson, and Brian Deese, *Delivering on Debt: From IMF Gold to a New Aid Architecture* (Washington D.C.: Center for Global Development, 2002), Appendix C.

¹⁸⁷ Gun Eriksson Skoog, *The Soft Budget Constraint: The Emergence, Persistence and Logic of an Institution* (Stockholm: Stockholm School of Economics, Economic Research Institute, 1998).

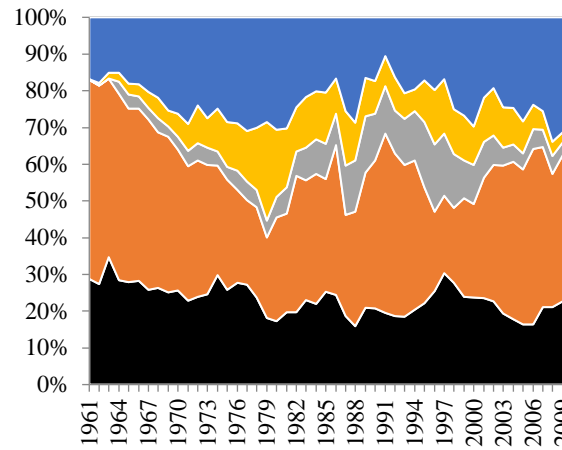
Figure 2.4. Government expenditure by economic classification

Composition of general government expenditure, % of total

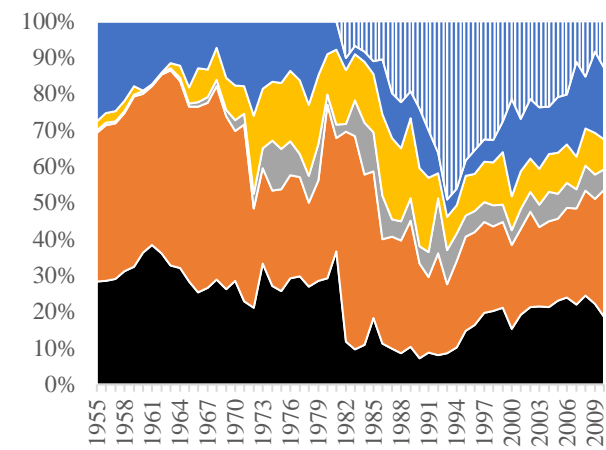
Kenya



Tanzania



Uganda



■ Development (externally financed) ■ Development ■ Defence ■ Interest payments ■ Goods, services and transfers ■ Personnel

Composition of general government expenditure, % of GDP

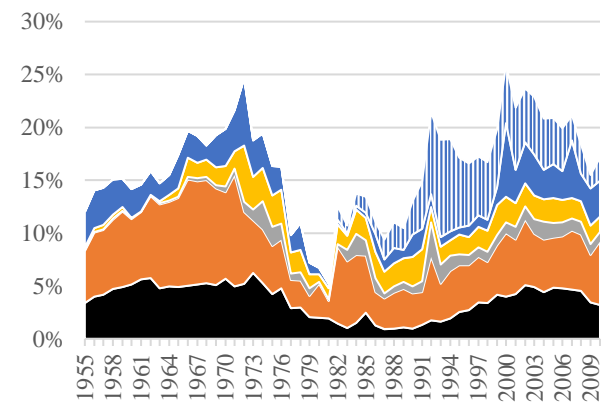
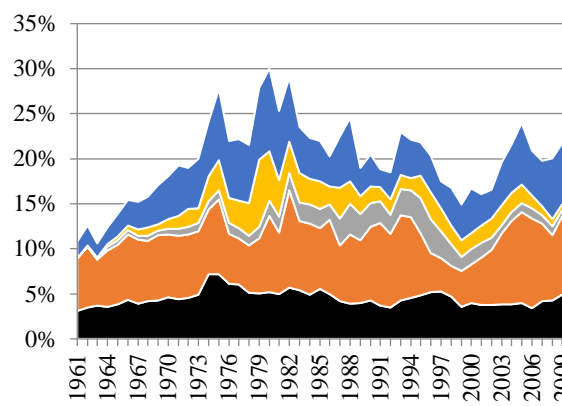
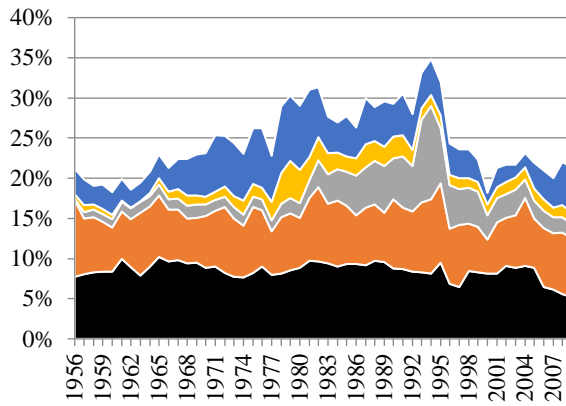
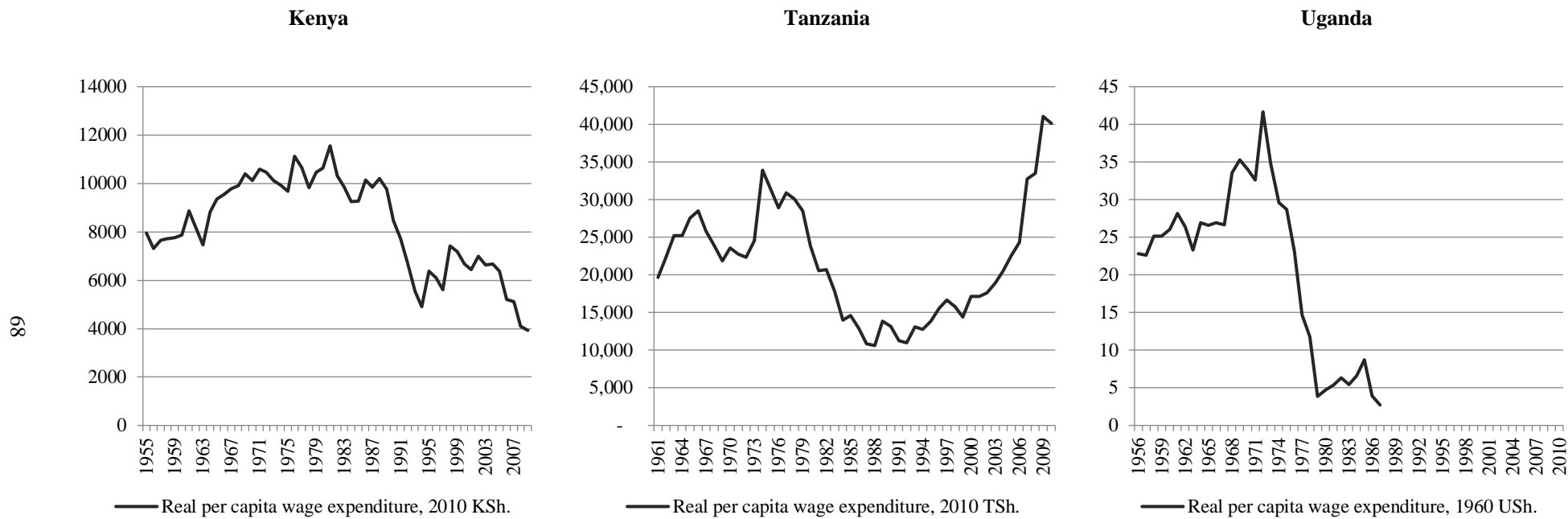


Figure 2.5. Real public sector wage spending per capita



Notes: Expenditure deflated by the consumer price index.

Sources: Statistical appendix 1

Another important postcolonial expenditure shift was the growth in military spending. Under colonial rule the metropolis had effectively subsidized much of the defence of the colonies, as foreign policy and defence was an imperial matter rather than a responsibility of individual colonies.¹⁸⁸ Domestic military spending began to grow in the independence period and escalated towards the end of the 1960s and 1970s in response to regional and domestic political instability. In Uganda the defence budget consumed almost a quarter of the government expenditure by the close of the civil conflict in 1986. Tanzania too, which fought a war against Uganda in 1978-79, saw its military spending spike and recurrent expenditure exceeded revenue for the first time in 1979.¹⁸⁹ Kenya also faced growing instability on its northern border, as conflict broke out in Ethiopia and between Ethiopia and Somalia, although a stronger military may well have served domestic political purposes too. Defence spending crowded out both recurrent and development spending.

Against a growing capital budget, growing military spending, and later a ballooning debt burden, the civilian wage budget fell as a share of total expenditure. Far from being a protected segment of the budget that drove up the deficit and crowded out more productive spending on public goods, in all three countries the wage bill contracted as a share of the budget. As a share of GDP the wage bill remained relatively constant in Kenya and Tanzania while it declined in Uganda during the crisis decades. This relative decline in wage spending started in the 1960s, well before the economic crisis. Deflated by consumer prices this wage bill decline was even more severe, owing to the rising cost of imported goods in the 1980s and 1990s. Figure 2.5 presents the wage bill in per capita terms deflated by the CPI. The real per capita value of the wage bill fell by over 50% over the course of the 1980s and early 1990s in Kenya and Tanzania, and by almost 90% in Uganda.

A point to note is that the wage bills of parastatals or public corporations are not included in Figure 2.4 (as it captures only the general government). Figure 2.6 therefore plots the wage bill to GDP for the entire public sector in Kenya and Tanzania, broken down by general government and parastatal sector. The Tanzanian data series ends around 1980 and the estimates from the 2000s are only indicative, constructed by multiplying the number of public sector employees by average earnings.¹⁹⁰ In both countries the parastatal wage bill increased in the 1960s and early 1970s, when industries were nationalised, and decreased starting in the 1980s with the plateauing and subsequent decline of the parastatal sector. Kenya also saw a decline in the size

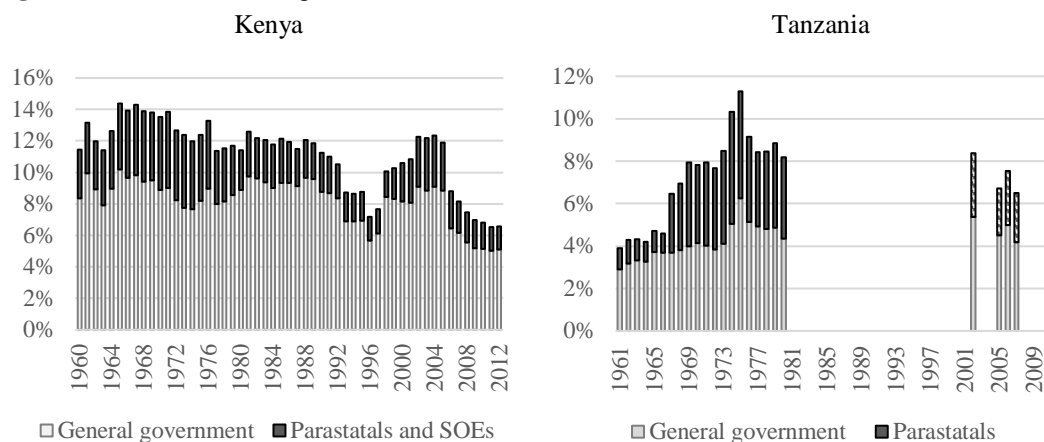
¹⁸⁸ Leigh A. Gardner, *Taxing Colonial Africa: The Political Economy of British Imperialism* (Oxford: Oxford University Press, 2012), chap. 9.

¹⁸⁹ World Bank, "Tanzania: Public Expenditure Review" (Washington D.C., 1989).

¹⁹⁰ Employment estimates from payroll sources and ave earnings taken from the EES, see Appendix II.

of the general government wage bill while Tanzania's has remained a relatively stable share of GDP. Wage bill estimates for Uganda's parastatal sector are not available, but given the privatization reforms of the 1990s and 2000s, it seems likely that it followed a similar trend.

Figure 2.6. Public sector wage bill as % of GDP



Sources: Statistical appendix 1.

Another important shift in expenditure policy, not captured in the economic classification, was the rise in education spending. Table 2.3 estimates education expenditure as a share of total central government primary expenditure in Kenya and Uganda. The education share rose from 12% in 1950 (recurrent spending only), to a peak of 33% of primary expenditure in 1999/2000 in Kenya, and from 9% in 1950 to 27% in 1999/2000 in Uganda. Literature on the colonial state has stressed the low priority given to African education in the first decades of colonial rule, which colonial governments (at least in British Africa) largely outsourced to religious missions.¹⁹¹ British colonial policy in Africa also discouraged the expansion of post-primary education, for fear that this would fuel nationalist sentiments and resistance to colonial rule.¹⁹² These policies began to change cautiously in the interwar period and more rapidly in the 1940s, and towards the end of the colonial era the East African governments began a rapid expansion of the education system which continued into the postcolonial era.

Table 2.3. Education expenditure as share of primary* central government expenditure, % of total

	1950					
	Recurrent only	1960/61	1969/70	1979/80	1989/90	1999/00
Kenya	10%	17%	25%	20%	26%	33%
Uganda	9%	22% ⁺	20%	27%	-	27%

*Total expenditure excluding interest payments; ⁺1961/62 for Uganda

Sources: Statistical Appendix 1.

¹⁹¹ Ewout Frankema, "The Origins of Formal Education in Sub-Saharan Africa : Was British Rule More Benign ?," *European Review of Economic History* 16 (2012): 335–55; Gardner, *Taxing Colonial Africa: The Political Economy of British Imperialism*.

¹⁹² Mamdani, *Define and Rule: Native as Political Identity*.

In summary, the rise and fall in government revenue and expenditure across all three countries roughly coincided with global peaks and troughs, reflecting changing economic pressures on the state and global ideas about the role and reach of governments. As in many parts of the world, postcolonial leaders initially placed strong emphasis on development outlays, both in infrastructure and efforts to spur industrialisation. The economic legacies of this short-lasting attempt to change the economic foundations of the former colonies proved disappointing, but not because it was crowded out by ballooning wage spending. The decline in the development budget in the late 1970s was due to rising military expenditures and a growing debt burden rather than a growing wage bill. Country context clearly mattered as well, but the most extreme case of state mismanaged and dysfunction - Uganda – was also the state with the greatest neglect of its public servants. On the basis of these three cases alone the correlation appears to run in the opposite direction of that proposed in the structural adjustment and patronage literature. It was in fact the country with the largest government wage bill - Kenya - that experienced the milder economic contraction.¹⁹³

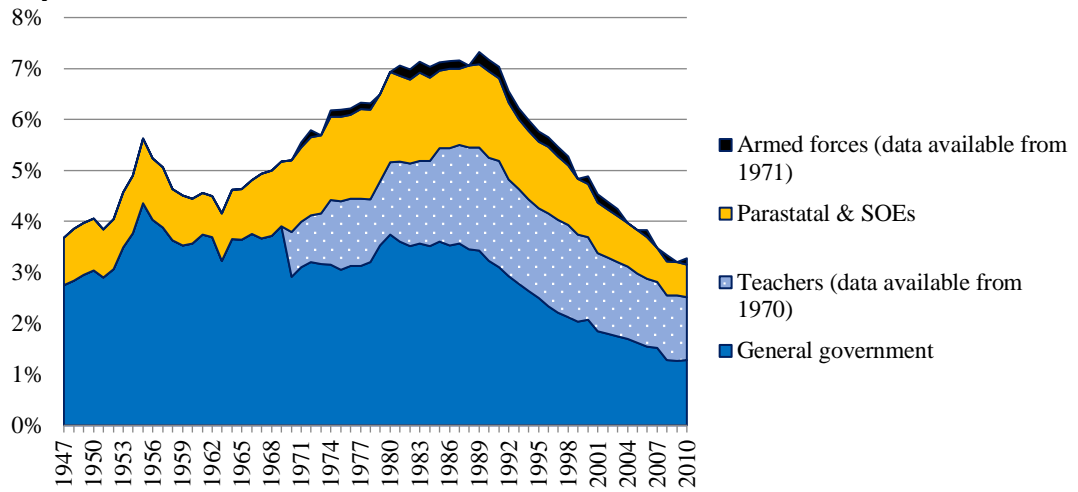
2.4. THE GROWTH AND DECLINE IN PUBLIC EMPLOYMENT

As public expenditure grew in the 1960s and 1970s, so too did the level of public employment. But with growing pressure on the budget in the 1980s public employment subsequently declined. Figure 2.7 provides time series data on the public sector share of the labour force, disaggregated into four broad categories: general government, parastatals and state-owned enterprises, defence and the teaching force. A full discussion of the sources of data and assumptions made in constructing these tables is provided in Appendix II. While there is some uncertainty around the Tanzanian and Ugandan totals in 1980s and 1990s, I have used a variety of different sources to validate the results. As the military was excluded from most surveys on public employment, estimates for total military personnel are taken from the International Institute for Strategic Studies annual bulletin instead. This data is only available from 1971 but suggest that the armed forces were a negligible share of public employment before the mid/late 1970s.

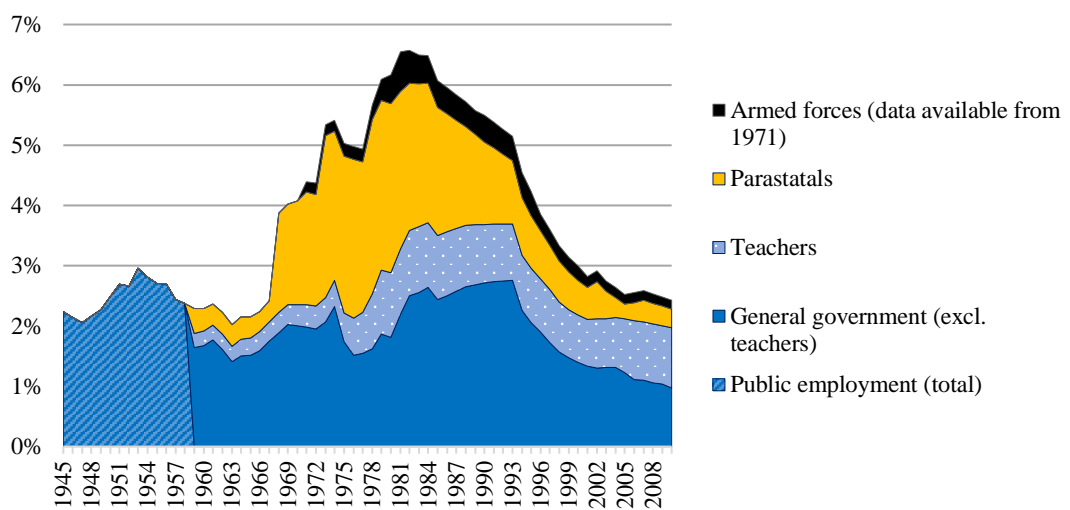
¹⁹³ See also Goldsmith, “Africa’s Overgrown State Reconsidered: Bureaucracy and Economic Growth”; Rodrik, “What Drives Public Employment in Developing Countries ?”

Figure 2.7. Public sector employment as % of labour force, late 1940s – 2010

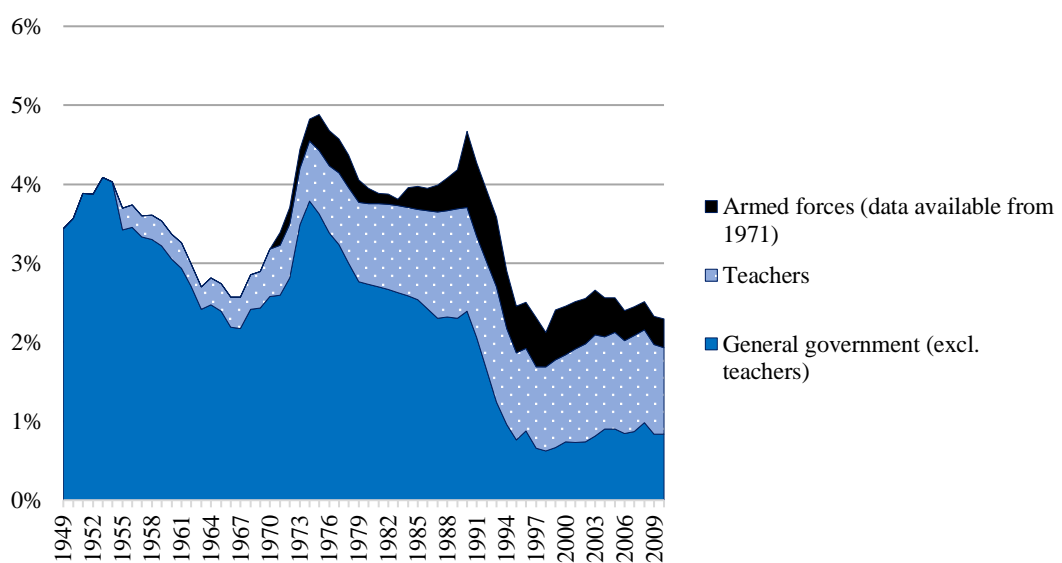
Kenya



Tanzania



Uganda



Sources: Statistical appendix 1

In all three countries employment grew rapidly after independence. In absolute terms the number of public sector employees tripled in Uganda, quadrupled in Kenya and increased by a factor of five in Tanzania between 1960 and 1990. However, all three countries experienced fast population growth over the same period and in relation to the size of the labour force the public employment growth was more modest, growing from roughly 4.5% to 7% in Kenya between 1960 and 1990, 2.5% to 6.5% in Tanzania, and 3.4% to 4.5% in Uganda. The Ugandan series exclude parastatal employment (due to the lack of long-run data), but ad hoc measures suggest that parastatal employment was lower than in the neighbouring countries, at 0.8% of the labour force in 1988.¹⁹⁴ Even at their peaks however, these levels of public employment were low by international standards (Table 2.2). The public employment share then fell significantly in the 1990s. By 2010 public sector employment in Kenya was 40% lower than at independence, in Uganda 30% lower, and in Tanzania on par with the level at independence.

Military personnel remained a small share of the total, at least in Kenya and Tanzania, rising to a high of 4% of all public employment in Kenya by the early 2000s, and peaking at 9% in Tanzania following the Uganda-Tanzania war in 1979. In Uganda the armed forces grew bigger, and reached a quarter of total public employment by the early 1990s.

The broad sectoral public service divisions also show that most of the public employment growth was due to two factors: nationalisation policies, which brought a large share of industrial employment under state direction, and the growth in the teaching force. Parastatal employment shot up in the 1960s in Kenya and Tanzania when firms were nationalised or created (many were thus existing employees who were reclassified from private to public sector). Parastatal growth then plateaued in the 1970s and dropped back down in the 1980s and 1990s as firms were privatized, shifting employees back from the public to the private sector.¹⁹⁵

The teacher share of employment in contrast continued to grow throughout the austerity period. Table 2.4 calculates teachers (or staff of the teacher's service commission) as a share of total general government employment, drawing on records from the ministry of education and employment survey data. The teacher share grew from between 12-16% of general government employment in 1960 to 50% or more by 2010. This is a considerably higher share than in the UK, where the 2005 labour force survey puts the teacher share of government employment at 21%. The growth in the 1960s and 1970s may be overstated by the incorporation of teachers in aided schools into the public sector (where previously they had been recorded as private), but even if the early estimates were raised, the growth since the 1980s alone has been significant.

¹⁹⁴ Estimated at 54,000 in 1988, see: UG WB PER 1993a, p.104.

¹⁹⁵ For a discussion of parastatal reform, see: Nord et al., "The Story of an African Transition."

Table 2.4. Share of teachers/teacher’s service commission employees in general government employment

	1960	1970	1980	1990	2000	2010
Kenya	16%	23%	28%	38%	44%	49%
Tanzania	12%	14%	37%	26%	36%	51%
Uganda	14%	19%	27%	36%	60%	57%
United Kingdom						21%*

* UK 2005. Calculated on the basis of occupational classification. General government includes central government, armed forces, local government, NHS trusts and universities.

Sources: Statistical Appendix 1 (East Africa); UK LFS 2005 (UK).

The rising share of teachers in government employment also contributed to a shift in public employment composition, away from low-skilled, contractual workers towards permanent employees in social service provision with a comparatively high level of education. This partly reflected growing demand for skilled personnel, but may have been hastened by the employment guarantees instituted for graduates around the time of independence. Because they feared losing qualified staff to the private sector, all three countries had introduced employment guarantees for graduates from government training institutions and some university courses, which obliged graduates to work for the government for a set number of years and compelled the state to hire them.¹⁹⁶ Kenya eventually abolished this guarantee in 1986 on the grounds that it was fiscally unsustainable,¹⁹⁷ while Tanzania retained the guarantee on paper, if less so in practice.

New hiring thus favoured comparatively highly educated East Africans, and the skills gap between the public service and rest of the labour force therefore expanded. In Kenya the share of public sector employees with at least four years of secondary education increased from 14% in 1972 to 79% in 2009; in Tanzania the share rose from 8% in 1962 to 58% in 2006; and in Uganda from 16% to 58% (2005/06).¹⁹⁸ In the labour force as a whole comparable shares were 26% in Kenya (2009), 8% in Tanzania (2006) and 10% in Uganda (2005/06).¹⁹⁹

The public services also grew more female. The share of women in public employment rose from 8% in 1965 to 37% in 2009 in Kenya, from 6% in 1965 to 40% in 2011/12 in Tanzania, and from 13% in 1965 to 30% in 2005/06 in Uganda.²⁰⁰

¹⁹⁶ K. Husbands, T. Konyango, and T Pinckney, “Education and Agricultural Productivity in Africa,” in *The Evaluation of Public Expenditure in Africa* (Washington D.C.: World Bank, 1996).

¹⁹⁷ Kenya. National Assembly., “Sessional Paper no.1 of 1986, Economic Management for Renewed Growth” (Nairobi, 1986).

¹⁹⁸ See Appendix IV for sources and calculation method.

¹⁹⁹ KE CENSUS 2009; TZ LFS 2006; UG NHS 2005/06.

²⁰⁰ KE EES 1963-67, Table A.10; KE CENSUS 2009; TZ EES 1965, Appendix I; TZ HBS 2011/12; UG EES 1965, Table 14; UG NHS 2005/06.

2.5. BUDGET PRIORITIES AND PUBLIC SECTOR PAY DETERMINATION

The fall and recovery in average public sector earnings

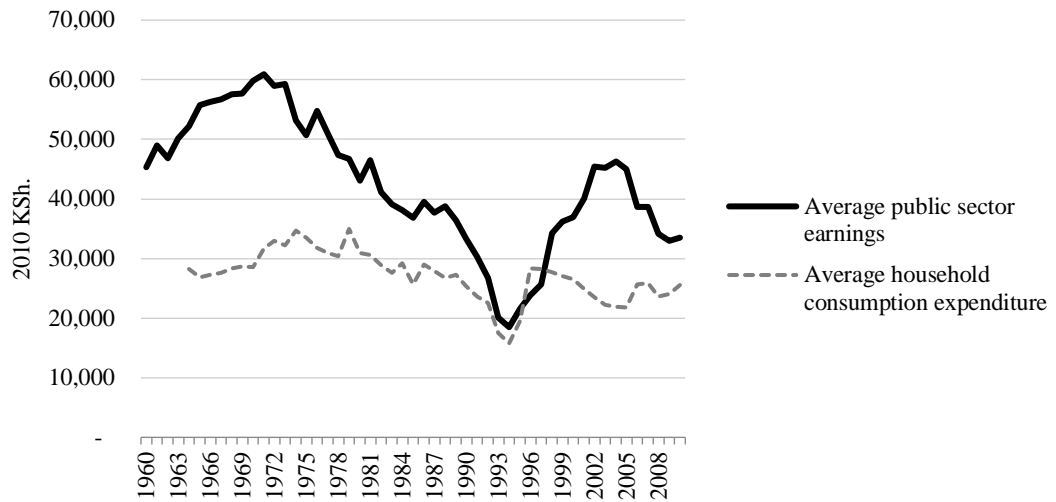
With government employment increasing and the wage bill remaining a constant or falling share of GDP, we would expect wages in the public sector to have fallen, and indeed they did. Figure 2.8 shows the rise and decline of average real earnings in the public sector between 1960 and the present. It shows that formal sector workers received a wage dividend in the early independence era as average earnings rose in the 1960s while prices remained stable. After this, however, public sector wages declined steadily between the early 1970s until the early 1990s, with a fall of almost 70% between peak and trough in Kenya, and almost 80% in Tanzania. The Ugandan wage trend is calculated as a multiple of GDP per capita rather than in constant terms due to the lack of a reliable consumer price index for the mid-1980s to 1990s. It suggests an even steeper decline in Uganda, with public sector earnings falling by 90% in relation to GDP per capita and 95% in real terms by the mid-1980s. Since the mid-1990s earnings have been recovering in all three countries.

Public sector employees were not the only ones to see falls in income during this period. But even relative to average household consumption the wage fall was significant (see orange dotted line in Figure 2.8). Average public sector earnings can be expressed as a multiple of average household consumption (total household consumption is extracted from the national accounts and normalised assuming a family size of five). In Kenya this ratio fell from a high of 1.8 to just below 1 in the mid-1990s, and in Tanzania from 1.8 in 1975 to under a half by the late 1980s. In Uganda it fell from 1.3 in 1967 to 0.1 in the late 1980s. At their lowest point, the average government pay check did not meet the expenses of an average household in any of the three countries.

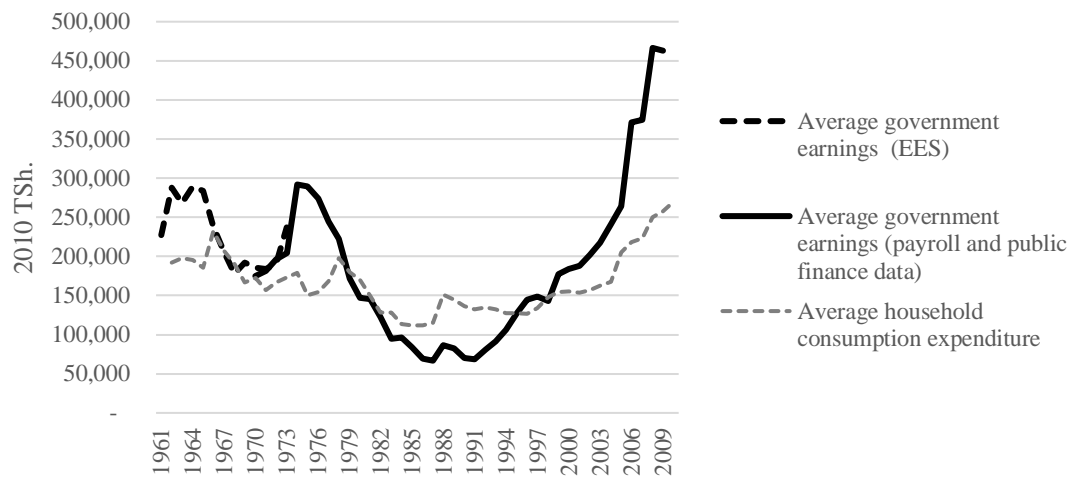
For Kenya, which also produced data on agricultural output and private (formal) sector incomes, it is possible to compare the average public sector earnings to agricultural output per worker and the private wage (Figure 2.10). This shows a pronounced downward trend in relation to both agricultural output per worker and private sector earnings up until the mid-1990s. After that, government earnings recovered relative to agricultural output per worker, but continued to decline against private sector earnings.

Figure 2.8. Average real monthly earnings in the public sector compared to average household consumption expenditure, 2010 prices

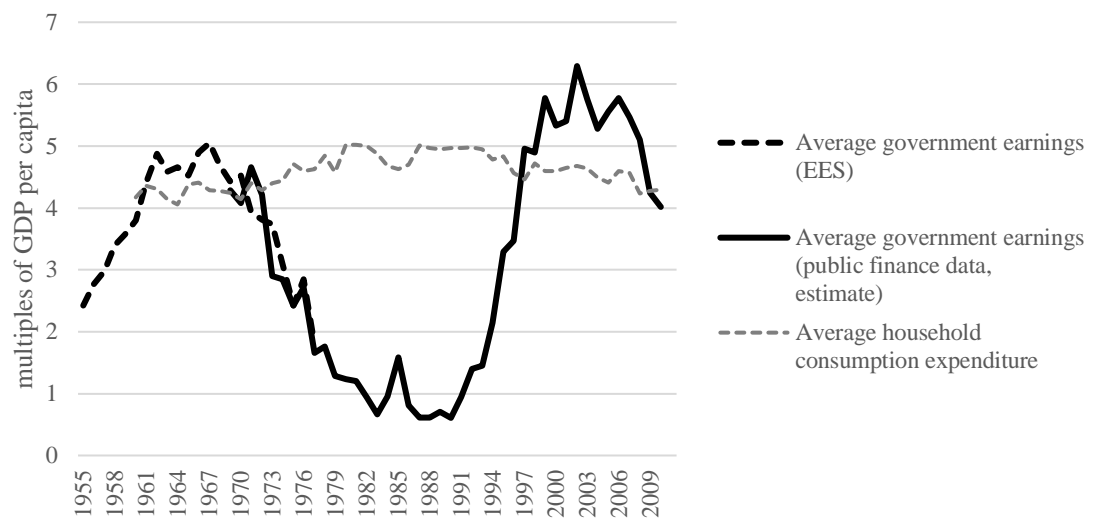
Kenya



Tanzania



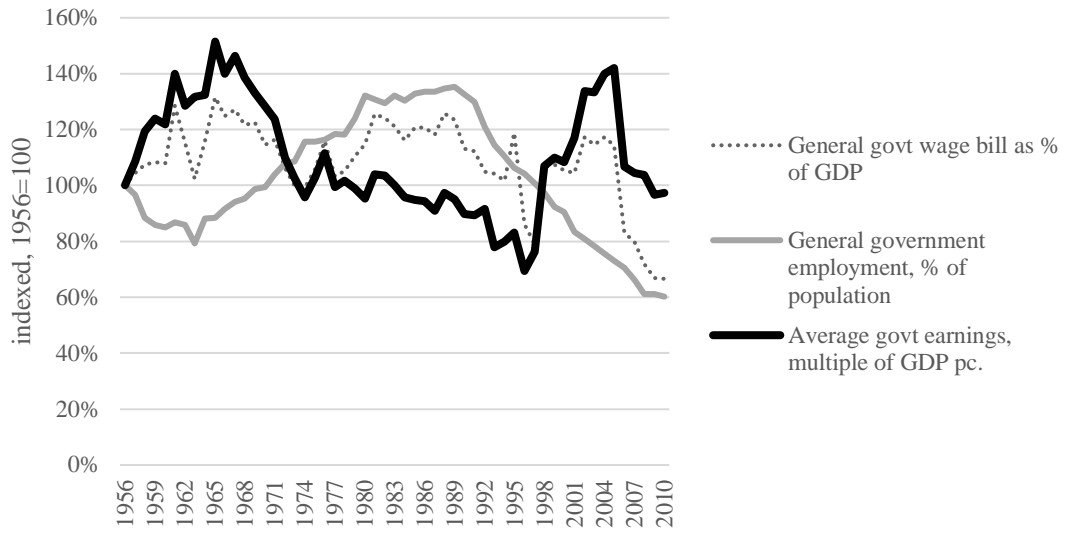
Uganda (Note: Average earnings as a multiple of GDP per capita)



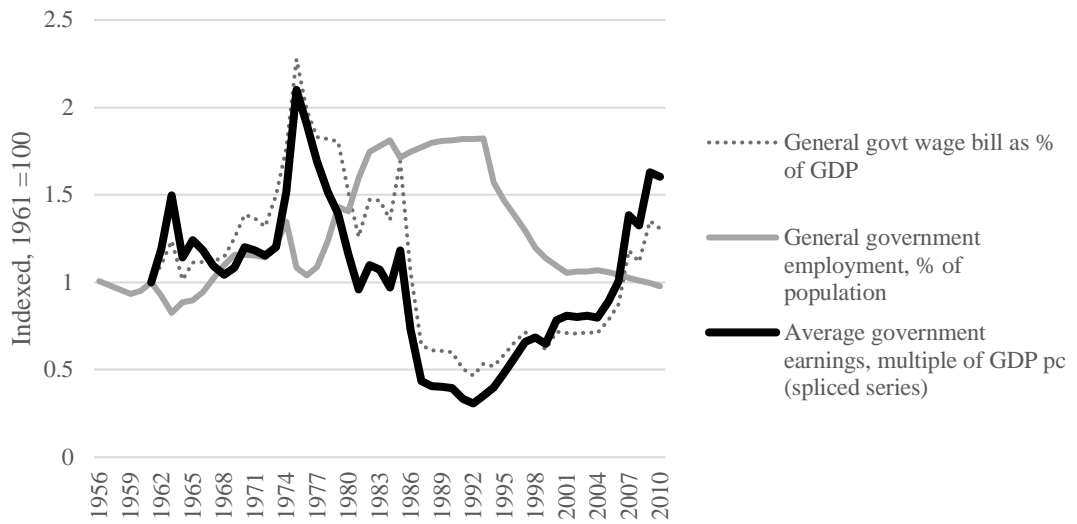
Sources: Statistical appendix 1.

Figure 2.9. Relationship between relative government wages, level of public employment and total wage bill

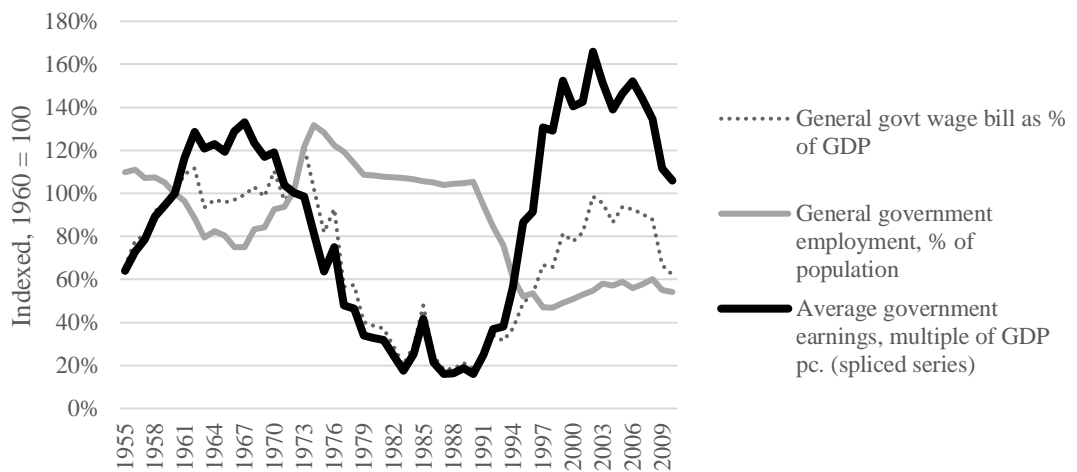
Kenya



Tanzania

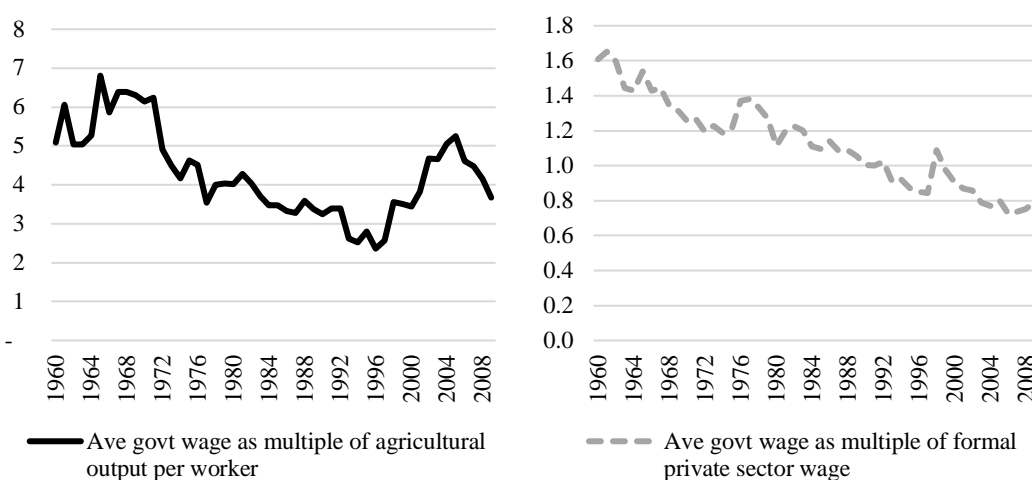


Uganda



Sources: Statistical appendix 1.

Figure 2.10. Kenya: average government earnings as a multiple of agricultural output per worker and average formal sector salaries, 1960-2009



Sources: Statistical appendix 1.

As just discussed, the educational level within the public service increased sharply over the postcolonial period, as new employment favoured teachers, nurses and other comparatively high skilled professionals. The average earning declines in Figure 2.8 therefore understates the true extent of the formal real wage falls. Table 2.5 gives real salaries for particular positions in the Kenyan government as an alternative to averages across the public sector. Because of changes in the grading and nomenclature it is hard to match roles precisely over time, but post titles have been selected where there is relatively little variation over time and from within the same or a related ministry. These trends mirror the declines already observed in real wages, but shows an even steeper decline in more senior roles. It is hard to fully account for allowances and benefits which may in part have dampened the severity of the decline (particularly benefits provided in-kind such as government housing). Allowances included here are averages for the department (except for 2011/12 when detailed by post). On the whole however, the decline was dramatic and it is hard to see how a more regressive allowance distribution would have been able to off-set these base salary falls. Combining the base salary and estimated allowances, a director’s salary in 1993/94 was a sixth of what it had been in 1971; it then roughly doubled between 1993/94 and 2011/12. Minimum wages declined by less than senior salaries, leading to a compression in the salary structure, with the ratio between a director’s salary and the minimum wage falling from 30:1 in 1961 to 10:1 by the 1990s. These findings are consistent with the literature on returns to education in Kenya, which found sharply falling private returns to secondary education between 1978 and 1995.²⁰¹

²⁰¹ Simon Appleton, Arne Bigsten, and Damiano Kulundu Manda, “Educational Expansion and Economic Decline : Returns to Education in Kenya,” WPS (Oxford, 1999).

Table 2.5. Kenya: Real budgeted salary and allowances for selection of positions, Annual 2010 KSh. ('000)

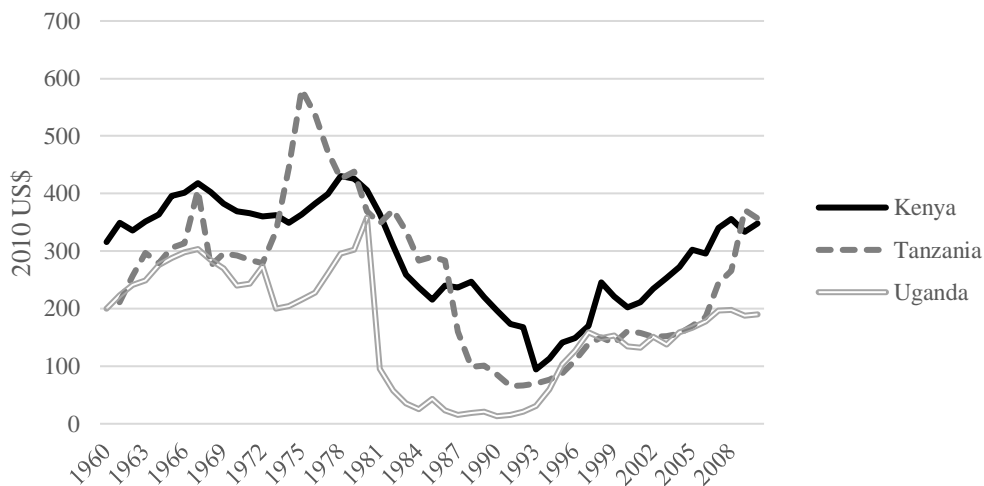
	1961/62	1971/72	1981/82	1993/94	2011/12
Director – base salary	6129	5099	2419	713	1138
Director – allowances*	447	372	556	185	860
Officer – Level I – base salary	2043	2086	786	294	272
Officer – Level I – allowances*	143	146	181	76	110
Minimum wage	204	214	147	68	116
Director:minimum wage	30:1	24:1	16:1	10:1	10:1

* Estimated as a share of total allowances for the department, except for 2011/12 where allowances are tabulated by post.

Sources: Kenya: Estimates of Recurrent Expenditure, 1961/62, 1971/72, 1981/82, 1993/94 and 2011/12. Taken from the budgets of Ministry of Commerce and Industry / Ministry of Commerce (1981)/ Ministry of Trade (2011/12). Minimum wages: statistical appendix 1.

To examine earnings differences across the three countries, Figure 2.11 convert the average government earnings into US dollars, at official exchange rates, deflated by the US consumer price index. The results are skewed by the overvalued exchange rates in the 1970s and 1980s and growing spread between the official and black market rate, particularly in Uganda and Tanzania. Moreover, the exact wage bill coverage differs slightly between the counties, and as a result we should take these results as rough estimates only. This exercise suggests that earnings have been highest in Kenya for most of the period, although the particularly large wage differential the 1960s is largely due to the larger share of expatriate officers in Kenya. Since the 1990s average earnings have converged across the region. In fact, in USD terms the Kenyan and Tanzanian average earnings are similar today, while earnings in Uganda lag behind those in the neighbouring countries. The sharp income spike in Tanzania in 1974 is related to the reorganisation of government, which saw the layoff of disproportionately lower skilled local government staff and thus a rise in average earnings.

Figure 2.11. Kenya, Tanzania and Uganda: Average government earnings in 2010 US\$, 1960-2010



Sources: statistical appendix 1.

The trade-off between employment and wages

By combining the data on total government employment and average earnings we can examine how the wage level responded to the growth in employment after independence. Expressed in relation to GDP per capita, average government wages are a direct function of the size of the wage bill (in relation to GDP) and the level of employment (in relation to the population). This relationship can be expressed as follows:

$$\text{Average govt wage/GDP per capita} = \text{govt wage bill/GDP} / \text{govt employment/population}$$

It follows that a relative rise in the average government wage will be due either to a rise in the size of the wage bill relative to GDP or a fall in government employment relative to the population. Examining how these three variables changed over time therefore gives insight into the relative priority afforded to wages or employment. Figure 2.9 plots these three variables, using indices to ease the comparison of change over time. These plots show an inverse relationship between relative government earnings and the level of employment and suggest that the period was characterised by three different policy phases. In the late 1950s and 1960s average government earnings rose while the level of public employment fell (albeit less so in Tanzania where employment stayed relatively flat). In the 1970s this relationship reversed and average earnings began to fall shortly after public sector employment shot up as a share of the labour force. In the 1990s the relationship reversed once more as governments restricted public employment growth in order to allow earnings to recover.

In Tanzania and Uganda the average wage path was also strongly influenced by the declining size of the overall wage bill in the 1970s and 1980s, but at the same total wage spend, earnings would have been considerably higher if the level of public employment to population had not also been growing. The next section discusses how the policy literature described the government's employment policies and the priority placed on job creation versus wage increases over these three different phases.

The labour stabilization era, 1950s- 1960s

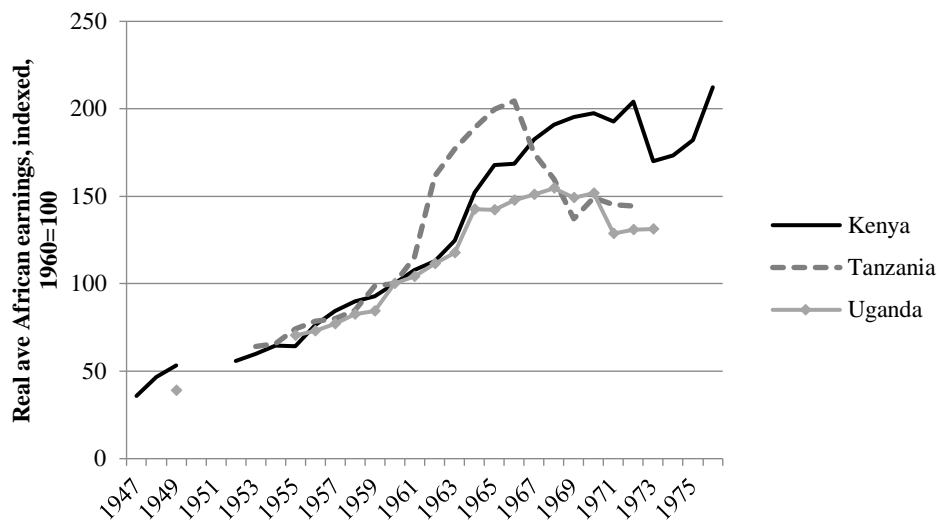
As discussed in Chapter 1, public sector employees saw their earnings rise substantially in the late colonial period. The average earnings in the colonial period mask extreme differences in pay across pay grades and racial groups; in 1947 for instance, the average European public sector employee in Kenya earned 30 times the average African wage.²⁰² These large earning differentials began to narrow in the 1950s as earnings rose across the board, but particularly

²⁰² Statistical Appendix 1.

sharply for the lowest earners. Real wages had fallen considerably during the Second World War and a series of strikes among dock workers, railway workers and other manual labourers in the second half of the 1940s and 1950s across cities in Africa threatened the colonial order. In response to this labour unrest and rising nationalist agitation, colonial governments sought to ‘stabilize’ the African formal labour force through the introduction of minimum wage legislation and responsible trade unionism.²⁰³

Government publications from the period speak to an explicit trade-off between employment and earnings. After the sharp rise in employment immediately after WWII, colonial governments curbed employment to make fiscal space for wage increases, to placate the increasingly militant urban working class.²⁰⁴ For Africans alone, real earnings rose almost four-fold in Kenya and Tanzania and three-fold in Uganda between the late 1940s and c.1970 as minimum wages were progressively raised (Figure 2.12). By independence the expatriate wage share in Kenya had fallen considerably and the European: African wage ratio fell to 12:1. By the early postcolonial era, a government job was an attractive prospect both for unskilled workers and the growing pool of Africans with formal education.²⁰⁵

Figure 2.12. Real average public sector earnings, African employees only, late 1940s – early 1970s



Note: Series switches from ‘African’ to ‘citizens’ after 1970 in Tanzania and 1974 in Kenya.
Sources: Statistical Appendix 1.

²⁰³ Cooper, *Decolonization and African Society: The Labor Question in French and British Africa*; Weeks, “Wage Policy and the Colonial Legacy - a Comparative Study”; Grillo, *Race, Class, and Militancy; an African Trade Union, 1939-1965*; Freund, *The African Worker*; John Iliffe, *The African Poor: A History* (Cambridge: Cambridge University Press, 1987).

²⁰⁴ Uganda. Ministry of Finance., “Background to the Budget 1963-64” (Entebbe: Government Printer, 1963).

²⁰⁵ Cooper, *Decolonization and African Society: The Labor Question in French and British Africa*; Freund, *The African Worker*.

These developments were the basis for Saul and Arrighi's 'labour aristocracy' thesis and Bates's urban bias theory, discussed in Chapter 1. These scholars argued that a disproportionately powerful urban African wage working class commanded wages well above the reservation price, financed through high taxation of the agricultural sector.²⁰⁶ They predicted that these formal wage earners would use their disproportionate political leverage to perpetuate their privileged status.

Employment growth and wage decline, 1970s – early 1990s

Yet counter to these predictions, average public sector earnings began to fall in the 1970s. In practical terms the wage adjustments took place almost entirely through inflation. Several of the big wage shocks coincided with the oil price shocks of the 1970s, early 1980s and 2000s. Because government wage setting is done sporadically, and usually in big, across the board wage awards, there was sometimes a partial compensation for inflation a few years after an inflationary spike as the government ratcheted average earnings back up again. But unlike in Europe in the 1970s when wage indexing ensured that salaries rose in line with inflation, in East Africa average wages grew considerably slower than the price index over the course of the 1970s and 1980s.

Although macroeconomic instability and weak budgetary control may have hastened the wage decline, government publications from the era also speak to an active attempt to limit wage growth in the interest of employment growth. After independence all three governments were quick to temper the demands of wage earners. All three had an institutional architecture in place for managing wage growth and made frequent policy pronouncements about the government's preferred wage path.²⁰⁷ Starting in the 1960s, union powers were successively curbed across the region. Tanzania abolished unions in 1964,²⁰⁸ Uganda restricted union activities in 1964 and outlawed strike action in 1970,²⁰⁹ while the Kenyan government made it virtually impossible for workers to strike in 1972.²¹⁰ The number of man-days lost annually to strikes fell considerably shortly before real earnings began to decline, see examples from Kenya and Tanzania below (Figure 2.13). Moreover, government salary scales were determined centrally

²⁰⁶ Arrighi and Saul, "Socialism and Economic Development in Tropical Africa"; Bates, *Markets and States in Tropical Africa: The Political Basis of Agricultural Policies*.

²⁰⁷ The Kenyan Industrial Court and the Tanzanian Permanent Labour Tribunal received guidelines on wage policy from the government and had the power to vet collective bargaining agreements, see: Richard H. Sabot and John B. Knight, *Education, Productivity, and Inequality: The East African Natural Experiment* (Oxford; New York: Published for the World Bank, Oxford University Press, 1990).

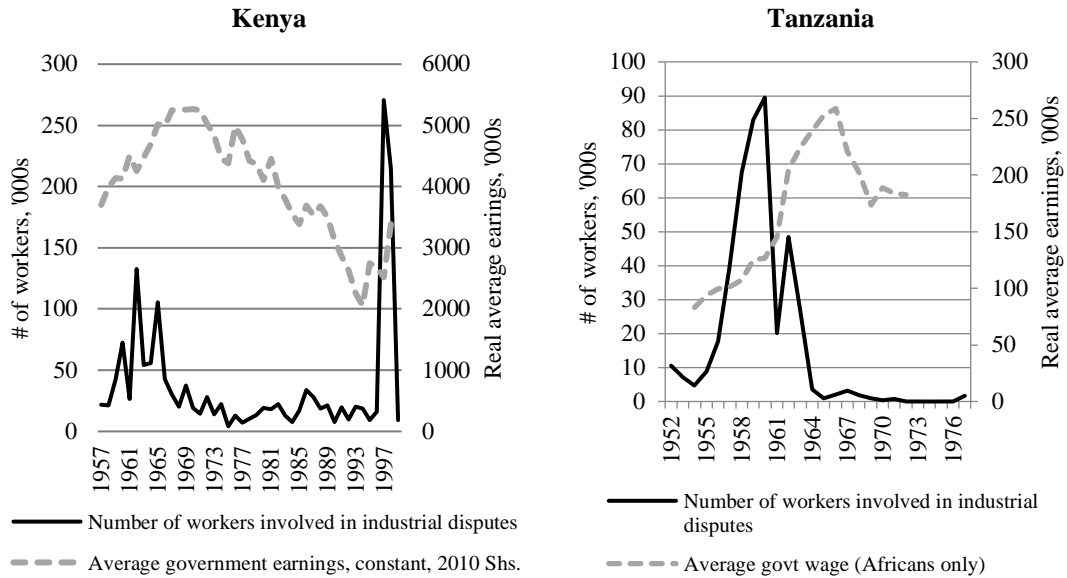
²⁰⁸ Shivji, *Class Struggles in Tanzania*.

²⁰⁹ Mamdani, *Politics and Class Formation in Uganda*.

²¹⁰ Arne Bigsten, *Education and Income Determination in Kenya* (Hampshire and Brookfield: Gower Publishing Company, 1984).

which weakened the bargaining power of any individual public sector cadre. In Tanzania wage setting in the country's bulging parastatal sector was also (at least formally) brought in line with regular governmental wage setting to avoid competition between the two sectors through the 1967 Standing Committee on Parastatal Organisations.²¹¹

Figure 2.13. Real earnings in the public sector compared to intensity of strike action



Sources: Data Appendix 1. **Note:** Kenya 1997 spike due to teachers strike.

Policy documents from this era speak to an active attempt to contain public sector salaries. Concerned that senior government wages were set too high on account of the colonial wage scale and that the public sector employment was contributing to urban-rural income differentials, governments sought to prevent further wage creep. ‘[C]reating more jobs for the unemployed must take precedence over increasing the incomes of those already employed’ was the official position of the Kenyan government in 1967.²¹² Julius Nyerere made a similar plea in his inaugural speech as President in 1962, emphasising the risk of tension between highly paid civil servants and the uneducated majority.²¹³ When it came to salary adjustments moreover, policies stated that wages of lower-paid employees were to be raised more than those at the top, in an effort to compress the large wage spread within the public service.

²¹¹ Although empirical studies suggest that the parastatals paid a wage premium, see: David L Lindauer and Richard H Sabot, “The Public/private Wage Differential in a Poor Urban Economy,” *Journal of Development Economics* 12 (1983): 137.

²¹² Government of Kenya, “Sessional Paper No. 10 of 1967, Proposals by the Government of Kenya for the Implementation of the Recommendations Contained in the Report of the Public Service Salaries Review Commission,” 1967.

²¹³ Julius K. Nyerere, *Freedom and Unity: A Selection from Writings and Speeches 1952-65* (London: Oxford University Press, 1967).

The Kenyan policy discourse from the early 1970s was strongly influenced by concerns about urban unemployment, particularly among secondary school leavers.²¹⁴ A series of tripartite agreements in Kenya (1964, 1970 and 1979) bound the government and private sector to increase the number of jobs by a set percentage in exchange for wage restraint on the part of trade unions, with the explicit aim of producing jobs for the unemployed.²¹⁵ While the actual impact of these agreements has been debated (some argue that it had little real effect on employment),²¹⁶ it is a testament to how politically important the government perceived the unemployment problem to be.

The wage adjustment processes differed in the three countries. Kenya's government adjusted civil services wages intermittently based on the recommendation of a series of Parliamentary-appointed commissions on public service remuneration. In 1963, at the recommendation of the Pratt Commission, the Kenyan government raised public sector wages at the top of the distribution with the explicit aim of attracting Kenyans from the private to the public sector in order to speed up the process of Kenyanization.²¹⁷ The following 1967 Millar-Craig Commission, however, argued for wage restraint at the higher levels of the civil service and modest wage increases only at the lower levels.²¹⁸ In 1971 the Ndegwa Commission introduced a new wage scale that raised salaries at all levels.²¹⁹ But with inflation rising following the oil shocks of the 1970s, real earnings eroded quickly in the mid-late 1970s. In line with government guidance, the subsequent 1979/80 Waruhiu Commission and 1985 Ramtu Commission both recommended that lower paid workers should receive wage awards that fully compensated them for the rising cost of living, while those at the middle and higher level would only be partially compensated.²²⁰ This compressed the wage scale and caused average earnings to fall.²²¹ Inflation spiked again in the early 1990s and rapidly drove down earnings as the

²¹⁴ Abernethy, "Bureaucratic Growth and Economic Stagnation in Sub-Saharan Africa"; Cohen, "Importance of Public Service Reform: The Case of Kenya."

²¹⁵ J. T. Mukui, "The Politics and Economics of the 1979 Tripartite Agreement in Kenya: A Note," *African Affairs* 82, no. 329 (1983): 559–63.

²¹⁶ Ibid.

²¹⁷ L. J. Pratt, "Report of the Commission on the Kenya Civil Service, the Kenya Teaching Services, the East African Posts and Telecommunications Administrations and the General Fund Services of the East African Common Services Organisation" (Nairobi, 1963).

²¹⁸ Government of Kenya, "Sessional Paper No. 10 of 1967, Proposals by the Government of Kenya for the Implementation of the Recommendations Contained in the Report of the Public Service Salaries Review Commission"; Kenya, "Kenya Civil Service Salaries Review Committee 1985 (Chairman: T.C. Ramtu)" (Nairobi, 1985).

²¹⁹ Ndegwa, "Report of the Commission of Inquiry: Public Service Structure and Remuneration Commission 1970-71."

²²⁰ Kenya. National Assembly., "Sessional Paper no.10 of 1980 on the Acceptance and Implementation of the Recommendations of the Civil Service Review Committee, 1979/80" (Nairobi, 1980).

²²¹ Thomas Piketty argues that this is a general phenomena; wage inequality rises in boom years but falls in downturns as those at the lower end of the spectrum are compensated more fully for inflation, see: Thomas Piketty, *Capital in the Twenty-First Century* (Cambridge, Mass.: Belknap Press, 2014), 287.

structural adjustment negotiations with Kenya's donors broke down. Only in 1994, as the structural adjustment programme got back on track and the government began implementing a civil service reform programme did Kenyan formal sector salaries begin to recover.²²²

In Tanzania the wage awards continued for a few years after independence, with new minimum wage awards in 1963 and 1965 that drove up average earnings in both the public and private sectors.²²³ But average earnings then plateaued with the introduction of the Arusha Declaration in 1967, which heralded Tanzania's move to the left. The government explicitly sought a solidaristic incomes policy that would reduce social inequality, and even reduced nominal salaries of high paid civil servants by 10-15% in 1967. The 1967 Permanent Labour Tribunal Act and new incomes policy limited wage and benefits increases to a maximum of 5% in any year, in an effort to reduce a perceived urban bias.²²⁴ The government issued a further large wage award that came into effect in 1974, again targeting workers at the lower end of the distribution (see spike in earnings and the wage bill in Figures 2.5 and 2.9).²²⁵ But high inflation in the following years quickly eroded this boon. Between 1975 and 1980 the government froze wages in the public sector (to counter the perceived urban-bias) which resulted in a rapid decline in earnings. High inflation continued to eat into real earnings into the 1980s and it was only after the structural adjustment reforms began in earnest in the late 1980s, including a long-running pay reform programme with donor support, that average wages began to recover while the level of employment ceased to grow.

In Uganda in contrast there were fewer adjustments to the public sector salary structure after independence. Uganda experienced a terms of trade decline in the 1960s which raised the deficit, and already in this period the budget efforts focused on restraining recurrent spending. In 1963 the government appointed the Ani Commission, with the aim of reducing the wage bill and reducing extreme disparities in pay.²²⁶ However, the commission concluded that salaries could not be reduced without losing scarce, skilled manpower, and recommended modest increases instead. After that no new commission was appointed until 1973 (the Bikangaga Commission), by which time real earnings had fallen considerably, as they had only been

²²² Damiano Kulundu Manda, "Incentive Structure and Efficiency in the Kenyan Civil Service," Discussion Paper, 2001, 12.

²²³ This section on Tanzania draws on: Valentine, "Government Wage Policy, Wage and Employment Trends, and Economic Instability in Tanzania since Independence"; Vali Jamal, "Chasing the Elusive Rural-Urban Gap in Tanzania," *Journal of Contemporary African Studies* 19, no. 1 (2001): 25–38.

²²⁴ Jackson, "The Disappearance of Strikes in Tanzania: Incomes Policy and Industrial Democracy."

²²⁵ It raised wages by Shs.100 or 15%, whichever was bigger, provided the maximum did not exceed TSh.300, see: Tanzania. Bureau of Statistics, *Survey of Employment and Earnings, 1969 - 1976* (Dar es Salaam, 1969), no. 1975/76.

²²⁶ Michael O. Ani, "Report of the Uganda Civil Service Salaries Commission" (Entebbe: Government Printer, 1963).

adjusted through allowable annual increments and increases in the minimum wage over the preceding decade.²²⁷ The 1973 commission recommended a reduction in the size of the public service and an increase in taxes in order to generate the fiscal space for wage increases, but its recommendations were never implemented and real earnings continued to decline. Under Obote's second Presidency in the 1980s salaries and allowances were raised across the board, but as inflation spiked again in the 1980s, this did little to reverse the decline. A government study reported that by 1990 the base pay for an entry-level degree-holder was \$7 per month, and a Permanent Secretary officially earned \$23, although a complicated structure of allowances and benefits raised effective pay somewhat.²²⁸

Structural adjustment and public service reform, 1990s – 2000s

Already by the 1980s, the policy discourse in East Africa started to emphasise the unsustainable rate of employment expansion and negative effects of the public sector wage decline. The Kenyan Minister of Finance stressed in his 1985 budget speech that '[t]here is evidence that Government employment has expanded excessively. (...) if we want to avoid landing in the predicament where much of the Civil Service sits around drawing its salaries, unable to perform economically meaningful services for the population, we must take forceful action.'²²⁹ Reforms started cautiously in the 1980s with employment freezes and other means of curbing new hires. From the late 1980s and on IMF and World Bank programmes across the region commonly included structural benchmarks related to restraining the wage bill and size of the civil service.

Uganda initiated a donor-supported civil service reform programmes in 1990 and Kenya and Tanzania followed in 1993.²³⁰ These programmes were explicitly designed to reduce staffing numbers to finance increases in salaries, which both governments and donors agreed had fallen too low. In Uganda the government established a minimum living wage based on a 1989-90 living cost survey, and sought to raise the government minimum wage to this level. Staff numbers were reduced by almost half through a combination of employment freezes, payroll cleaning and removal of inactive workers, voluntary early retirement schemes and

²²⁷ John Bikangaga, "Uganda: Report of the Public Service Salaries Commission 1973-74" (Kampala: Uganda. Public Service Salaries Commission., 1974).

²²⁸ Mary Goretti Sendyona, "Public Service Restructuring and Pay Reform," in *Uganda's Economic Reforms: Insider Accounts*, ed. Florence Kuteesa et al. (Oxford: Oxford University Press, 2010), 90.

²²⁹ Government of Kenya, "Kenya: Budget Speech 1984/85" (Nairobi, 1984), 5.

²³⁰ Petter Langseth, "Civil Service Reform in Uganda: Lessons Learned," *Public Administration and Development* 15, no. 1 (1995): 365–90; Graham Teskey and Richard Hooper, "Tanzania Civil Service Reform Programme: Case Study," 1999; Stephen Mworsho Lorete, "The Kenya Civil Service Reform Programme: Analysis of the Design and Implementation of Retrenchment Policy" (The Hague, 2002).

redundancies. In tandem all three governments initiated programmes to reform the parastatal sector, with long-running privatization programmes that reduced the number of parastatal staff.

Although these reform programmes have been criticised for failing to bring about a meaningful change in staff capacity and civil service effectiveness,²³¹ in pure numerical terms they largely achieved their objectives. The number of staff fell across the civil services in all three countries, which set against continued rapid population growth resulted in a sharp reduction in the public service share of the labour force. Salaries were successively increased over the course of the 1990s and 2000s, resulting in improvements in real earnings, although some of the increase in average earnings was also due to the disproportionate number of retrenchments in the lower cadres. Adjusting for skill, base wages for senior staff remain well below the levels of the 1960s (see Kenya example in Table 2.5), although various evaluation studies have found them to be roughly commensurate with pay levels in the private sector.²³²

The rationalisation of the public service also coincided with the HIV/AIDS crisis, which hit East Africa hard with adult prevalence rates between 7-13% in the late 1990s.²³³ AIDS-related deaths peaked in 2002 in Kenya, 2004 in Tanzania and 1998 in Uganda.²³⁴ Literature from the early 2000s predicted a considerable impact on the public sector work force,²³⁵ but more recent estimates suggest that the effect may have been more muted than originally feared. A 1998 study from Uganda found teacher mortality of just below 1%, declining to 0.72% by 2003, which represented around 20% of the overall teacher attrition (and of which only a share can be attributed to AIDS).²³⁶ Tanzania reported an increase in teacher mortality from 0.37% to 0.75% between 1991 and 2003,²³⁷ and in Kenya the teacher death toll reportedly rose from 450 in 1995 to 1500 in 1999, a rise in rate from 0.2% to 0.6%.²³⁸ These scattered estimates suggest an increase in the public sector mortality rate during the late 1990s, which, all else being equal, would have increased the pace of public service decline. Yet other reasons for leaving (retirement, voluntary departure, other morbidities), remained the bigger drivers of attrition.

²³¹ Ibid.

²³² See for instance: Kenya Institute for Public Policy Research and Analysis, "A Comparative Study on Public-Private Sector Wage Differentials in Kenya," KIPPRA Policy Paper, 2013.

²³³ % of people living with HIV, 15-49. UNAIDS, Aidsinfo, <http://aidsinfo.unaids.org/> [accessed 3/5/2017]

²³⁴ Ibid.

²³⁵ Dominique Moran, "HIV/AIDS, Governance and Development: The Public Administration Factor," *Public Administration and Development* 24, no. 1 (2004): 7-18, doi:10.1002/pad.302; Desmond Cohen, "Human Capital and the HIV Epidemic in Sub-Saharan Africa" (Geneva, 2002).

²³⁶ Paul Bennell, "Teacher Mortality in Sub-Saharan Africa: An Update" (Brighton, 2005).

²³⁷ Ibid.

²³⁸ United Nations Economic Commission for Africa, "HIV/AIDS and Education in Eastern and Southern Africa: The Leadership Challenge and the Way Forward" (Addis Ababa, 2000), <http://www.uneca.org/ADF2000/educ0.htm>.

This review of the process of salary revisions reinforces the earlier findings: for much of the postcolonial era, protecting high public sector salaries was not a key budget priority. The wage budget remained a constant or falling share of spending across the period, and during the first decades of independence all three governments explicitly prioritized employment growth over the protection of the wages of those already in employment. Policy documents from the era show that governments were aware of this trade-off, and acknowledged that they were unable to raise salaries in line with inflation. This trend was only reversed with the advent of structural adjustment, when, with donor encouragement, all three governments rationalised or froze public employment appointments in order to raise pay.

2.6. THE GEOGRAPHIC DISTRIBUTION OF PUBLIC EMPLOYMENT

One further important postcolonial public expenditure shift was the changing geographic distribution of public sector spending. The colonial era had saddled postcolonial states with a geographically skewed pattern of public spending, particularly so is in settler colonies such as Kenya. European and Asian state and private sector employees were disproportionately based in Nairobi, Mombasa, Dar es Salaam and Kampala and Entebbe.²³⁹ In Kenya moreover, a system of pass laws had limited the free internal movement of Africans within the country and prevented Africans from settling in Nairobi. Uganda also contended with the special status of Buganda, governed from Mengo on the outskirts of today's Kampala, which was richer and had greater political autonomy than the other kingdoms within the colonial state.

In Kenya in 1956, 56% of all formal sector salaries and wages were earned in Nairobi or Mombasa.²⁴⁰ In 1972, the first year for which sectorally disaggregated data is available, 23% of all public sector employees were found in Nairobi, although the city was home to 5% of the nation's population.²⁴¹ In Tanzania in 1965, 19% of public sector employees were based in Dar es Salaam which was home to only 3% of the population, and in Uganda 20% of public sector employees were based in Kampala, which contained 4% of the country's population.²⁴² Even outside the main cities, colonial government spending had been influenced by the uneven

²³⁹ Although this dualism was less pronounced than in Francophone Africa, see: Thomas Bossuroy and Denis Cogneau, "Social Mobility in Five African Countries," *The Review of Income and Wealth* 59 (2013): 84–110.

²⁴⁰ 42% of total formal earnings accrued to employees in Nairobi and 14% in Mombasa. Statistical abstract 1956.

²⁴¹ Earliest year for which data is available. KE EES 1972.

²⁴² TZ EES 1965; UG EES 1965.

penetration of missionaries and an uneven distribution of colonial investments, which skewed the distribution of the public sector jobs.²⁴³

Since the colonial period, as rural-urban migration increased and social services were expanded across each respective country, public employment has grown more geographically equitable. Geographic inequality in public sector employment can be measured by calculating the number of public sector employees per capita by district or region and examining the coefficient of variation across them. For Kenya a geographic breakdown of formal sector employment and pay by Kenya's 32 districts is available from 1972, although a disaggregation by sector (public/private) and district is only available for a smaller subset of years. The Kenyan data from the employment and earnings surveys is complemented with data from the 1994 household survey and 2009 census. For Tanzania, data for the private and government sector²⁴⁴ broken down by mainland Tanzania's 20 regions, is available from the employment and earnings surveys between 1965-1980, and from the 1993, 2000/01 and 2011/12 household surveys. For Uganda there are fewer data points, and we are limited to comparing the EES data for 1965 – 1970, to the results from the 1987 census of civil servants and 1992 integrated household survey, using the 1960 district divisions. Note that district and regional divisions have undergone changes in all three countries. The method for harmonizing geographic areas and detailed source information is provided in Appendix III.

As shown in Figure 2.14, in all three countries public employment became more equitably distributed on a geographic basis over time. In Kenya the coefficient of variation of the public employment share across districts fell from close to 1 to 0.4 between 1972 and 1994 and in Tanzania from 1.1 to 0.4 (albeit with some fluctuations that may reflect data quality problems). It fell in Uganda too, although with only four data points these results should be treated as tentative. In Kenya, where we distinguish between public sector jobs and all formal sector jobs (public and private), shows that public sector jobs are much more evenly distributed than those in the private sector, with a public sector coefficient of variation roughly half as large as that for the formal sector overall.

For Kenya and Tanzania it is also possible to measure the inequality in the distribution of formal sector pay (Figure 2.15). In Kenya the regional distribution of the public sector wage

²⁴³ There is a large literature on the economic geography of colonialism, for instance that by Nathan Nunn on the links between missionary penetration and schooling: Nathan Nunn, "Religious Conversion in Colonial Africa," *American Economic Review* 100, no. 2 (2010): 147–52; Nathan Nunn, "Gender and Missionary Influence in Colonial Africa," *Africa's Development in Historical Perspective*, no. February (2014): 489–512.

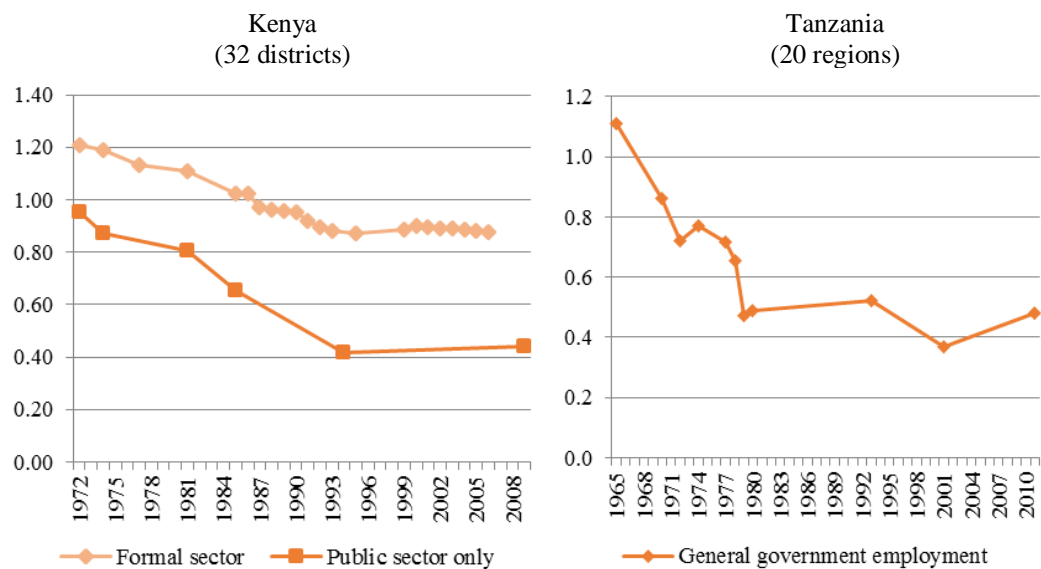
²⁴⁴ The early surveys count parastatal employment (excl. EAC parastatals) as part of the 'enterprise' sector. The government sector denotes the central and local government and former EAC functions.

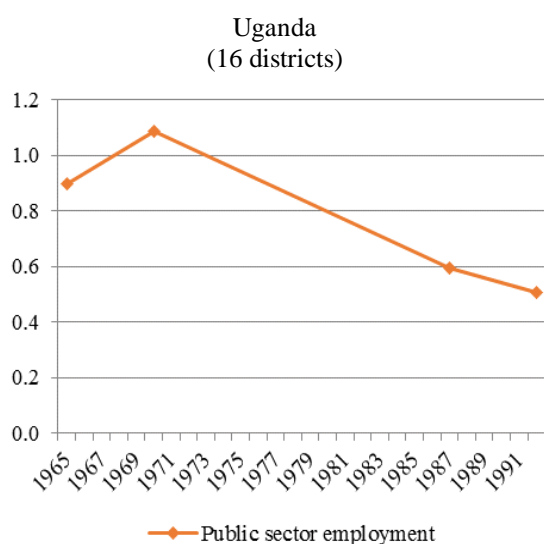
bill is available for a subset of years, while for Tanzania we can only measure the distribution of the formal sector wage bill in aggregate (of which the public sector constituted 55-75%). For each district/region I calculate the formal sector earnings per capita and then measure the coefficient of variation across districts or regions. Although the distribution of earnings remained more unequal than the distribution of jobs (given the continued concentration of high skilled jobs in the urban centres), the fall in the coefficient of variation was also substantial on a wage bill basis. In Kenya the coefficient of variation fell even more steeply on a wage bill than employment basis, reflecting the added effect of the compression in earnings over the same era and creation of higher skilled jobs in more peripheral regions.

This dynamic was heavily influenced by the declining exceptionalism of the capital cities. As Table 2.6 shows, public employment growth was more rapid outside the capital city than inside it, reflected in the falling share of public sector employees resident in the capital. At the same time rapid migration into the capital cities (evidenced by the rising capital city population share), raised the share of the population served by the capital cities' public sector employees.

As a result of these two dynamics, today's public sector employees in Kenya, Tanzania and Uganda are more evenly distributed across their respective countries than in the 1960s and 1970s. The implications of this will be explored further in Chapter 4.

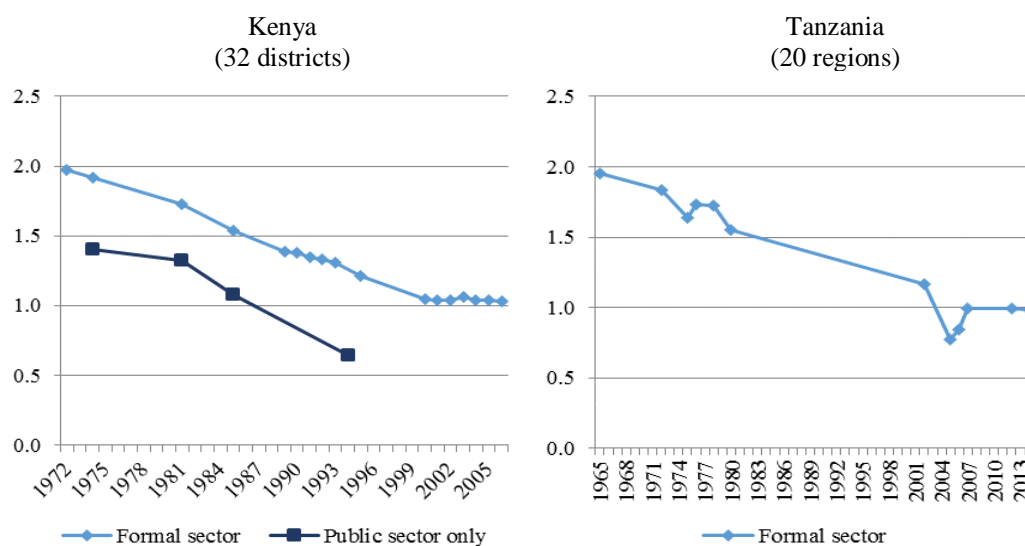
Figure 2.14. Coefficient of variation for district/regional public/govt employment to population ratio





Sources: Appendix III.

Figure 2.15. Coefficient of variation for district/regional formal sector earnings per capita



Sources: Appendix III.

Table 2.6. Share of government/public sector employees resident in the capital cities (closest year available to benchmark year)

		c.1970	c.1980	c.1990	c.2000
Nairobi (Kenya)	Population share	5%	6%	7%	8%
	Public employment share	23%	24%	15%	17%
Dar es Salaam (Tanzania)	Population share	4%	5%	7%	7%
	Government employment share	18%	16%	10%	13%
Kampala (Uganda)	Population share	4%		5%	
	Government employment share	20%		14%	

Sources: Kenya: KE EES 1972 and 1982, KE WMS 1994, KE CENSUS 2009; Tanzania: TZ EES 1970 and 1980, TZ HRDS 1992, TZ HBS 2000/01; Uganda: UG SA 1970, UG IHS 1992.

2.7. CONCLUSION

Various emotive claims have been made about the development of the African state after independence. While some regarded the public service as a narrow, highly paid exclusive club, others criticised governments for excessive employment growth at the expense of more socially productive spending. These arguments have implications for how we understand the politics of employment in postcolonial Africa.

To test these claims, this chapter has sought to unpack the broader budget priorities in postcolonial Kenya, Tanzania and Uganda by starting from the aggregate resource envelope and examining how the distribution of resources within this envelope changed over time. Drawing from a range of statistical publications, it collates data on government revenue and expenditure, employment and average earnings over a 50-year time horizon.

This perspective reveals how strongly the availability of budget resources dictated employment and wage dynamics. Economic historians of African colonialism have long stressed that colonial policy was intimately tied to resource constraints;²⁴⁵ unsurprisingly these constraints continued to shape the policy space after independence. As in other regions of the world, the Kenyan, Tanzanian and Ugandan state expenditure and deficits expanded in the 1960s and 1970s during a period of high economic growth, then plateaued or fell in the 1980s as growth slowed (albeit with an earlier decline in Uganda owing to Idi Amin's 1971 coup). The level of public employment responded with a lag to these changing economic conditions, with continued employment growth into the early 1980s followed by a sharp decline in the 1990s.

The changing composition of government expenditure shows that it was not the expansion of the wage bill that generated these budget imbalances; the wage bill remained a constant or falling share of GDP and total expenditure for all but a few years. Compositional changes to the budget were at first driven by the development budget, which consumed the lion's share of the budgetary increment in the 1960s and early 1970s. In the late 1970s military spending began to eclipse the development budget, as political instability in the region escalated. This was followed by a growing share of spending on debt service in the 1980s.

A long-run perspective also tempers the assessment of public employment growth. Set against rapid population growth, public sector employment grew rapidly for roughly a decade and a half, from the mid-1960s until the early 1980s. After that public employment levels plateaued or fell as governments instituted employment freezes and redundancy programmes. In

²⁴⁵ Gardner, *Taxing Colonial Africa: The Political Economy of British Imperialism*.

proportion to the labour force, the public services of Kenya, Tanzania and Uganda are on par or smaller today than in the mid-1960s.

As a result of prioritizing the development budget, military expenditure and debt service over growth of the wage bill, and prioritizing the expansion of the public service over wage growth for existing employees, real earnings in the public sector fell significantly between the 1970s and 1990s. As deficits widened, the wage bill was effectively held in check through high inflation which eroded real earnings. This decline in earnings was partly a result of growing employment, which spread the shrinking wage bill ever more thinly among an increasing number of staff. Another reason for the earning declines was the falling value of the wage bill in aggregate; as the terms of trade and exchange rates declined, the import-dependent urban wage class faced sharply rising commodity prices.

Inflationary pressures in the 1970s and 1980s were not unique to East Africa, although the levels of inflation in Kenya, Tanzania and Uganda were high by global standards. An important difference between these East African cases and Western European and North American economies during this same period, however, was the extent to which workers were able to incorporate compensation for inflation into their wage demands. In the 1970s many governments in industrialized countries allowed wage indexation, which pegged wages to the rate of inflation.²⁴⁶ As a result, high inflation had an immediate effect on budgets, forcing up the deficit further. This vicious inflationary spiral has been blamed for runaway inflation, but an alternative interpretation is that the strong bargaining power of workers forced governments to abandon this inflationary adjustment method relatively quickly. In Kenya, Tanzania and Uganda in contrast, workers were less successful in protecting real earnings, which allowed wage declines and deficit financing to continue for longer and presumably had serious consequences for worker motivation. Whether active or passive, the decision on the part of East Africa's governments to allow wages to decline over a 20 year period while employment expanded lowered the average official earnings of public sector employees by between 70-95%. Other researchers have calculated that the base wages of senior Tanzanian officials had by 1986 declined to one-twentieth of their value in 1969.²⁴⁷ In Uganda in 1990, an entry-level university graduate earned a base wage of US\$7 per month. Earnings recovered considerably

²⁴⁶ An overview of the literature for and against wage indexation is provided in: Esteban Jadresic, "Wage Indexation and the Cost of Disinflation," *Staff Papers - International Monetary Fund* 43, no. 4 (1996): 796-825.

²⁴⁷ Mike Stevens, "Public Expenditure and Civil Service Reform in Tanzania," in *Rehabilitating Government: Pay and Employment Reform in Africa*, ed. David L. Lindauer and Barbara Nunberg (Washington D.C.: World Bank, 1994), 68.

following the reforms of the 1990s, but comparing wage levels by grade or qualification shows that by 2010 they still remained well below their levels at independence.

As briefly mentioned in Chapter 1, these wage developments explain why class analyses of African societies waned in the 1980s and dependency theory lost some of its credibility. The supposed protectors of the neo-colonial order, Africa's privileged public servants, proved to be among the first to be sacrificed in the economic downturn.²⁴⁸ While there may have been pockets or individuals within the public service who continued to profit from their positions, the living standard of the average public sector employee must have declined. Informal rents and other means of compensating staff for falling wages may have off-set some of the decline in wages, but such compensation could only have been partial. Back-of-the-envelope calculations for Kenya and Tanzania suggests that in order to maintain constant average earnings over this period, the informal component of the public sector wage bill would have had to be three or four times as large as the official wage bill by the early 1990s, and the 'true' public sector wage bill would have consumed 30-40% of GDP. This is clearly an unrealistic scenario. In the coming chapter the consequences of these earning declines will be explored further by examining how they influenced the relative economic standing of public sector-headed households.

This begs the question why employees remained in public employment, despite what appears to be a (partially) policy-induced relative income decline. Although real incomes fell in the private sector too in the 1980s and 1990s (as indicated in Figure 2.8), the declines were particularly severe in the public sector. That said, the assumption that governments remained a competitive employer needs to be nuanced. Policy literature shows that East African governments did in fact lose manpower and faced vacancies in the more senior grades and in specific technical cadres.²⁴⁹ Across the larger public service however, there was no dramatic manpower loss.

Some have suggested that the relative decline in formal sector earnings reflected changes in the labour supply. Civil servant salaries were high in the early colonial era because skills were in short supply, consequently salaries fell as educational attainment rose. Several papers on Kenya have explored this argument, showing that the returns to education fell among secondary

²⁴⁸ This argument has previously been made by: Nicolas van de Walle, *African Economies and the Politics of Permanent Crisis, 1979-1999* (New York: Cambridge University Press, 2001); Thandika Mkandawire, "Thinking about Developmental States in Africa," *Cambridge Journal of Economics* 25, no. 3 (2001): 289-314, <http://eprints.lse.ac.uk/38967/>.

²⁴⁹ World Bank, "Kenya: Re-Investing in Stabilization and Growth through Public Sector Adjustment" (Washington D.C., 1992).

school leavers as their share of the labour market grew.²⁵⁰ With respect to Tanzania and Uganda, Terkildsen and Tidemand have similarly argued that the growing number of university graduates since the 1990s have made labour markets more competitive and held public sector salaries in check.²⁵¹ But while this may be a factor in the equation, it fails to explain why salaries fell so low that both governments and their international partners felt it necessary to raise earnings sharply again. At least by the early 1990s, the market for skills seemed to be failing both the workers and the employers. Furthermore, salaries declined more in Tanzania and Uganda than in Kenya, despite their slower expansion of secondary and tertiary education in those two countries, which suggests that other factors were also at play.

Many have also argued that workers responded by shirking. As earnings declined so did effort. The opportunity cost of holding a public sector job was low as it could be combined with other forms of income generating activities.²⁵² Furthermore a monopsony argument may hold some explanatory power in this context. As will be shown in Chapter 4, the government was the main employer of tertiary graduates, particularly for specific cadres such as teachers and nurses. In the short-run it may have been able to retain staff, despite falling earnings, because few other employment opportunities existed locally for employees with those specific skill sets.²⁵³

The clientelist frameworks, at least in some of their iterations, also at first glance provide a plausible explanation for some of the public finance outcomes of the 1970s and 1980s. Some scholars have argued that power in Africa is brokered between political patrons, usually ethnic leaders, who vie for control over public sector resources. Because each individual patron benefits from having as many jobs as possible to distribute to his or her supporters, a tragedy of the commons may emerge. Each patron benefits fully from every additional job he or she can distribute, but bears only a portion of its cost. It may thus be individually rational to advocate for continued employment expansion, even when this drives down wages.

Yet the nature of employment growth during this period is not what the clientelist theory would predict. Despite rising levels of employment, the wage bill in aggregate did not rise, suggesting central control over budget aggregates. Given the falling share of spending on wages between

²⁵⁰ Collier and Lal, *Labour and Poverty in Kenya, 1900-1980*; Appleton, Bigsten, and Manda, "Educational Expansion and Economic Decline: Returns to Education in Kenya."

²⁵¹ Ole Terkildsen and Per Tidemand, "Staff Management and Organisational Performance in Tanzania and Uganda: Public Servant Perspectives" (Copenhagen, 2007).

²⁵² See for instance: Lindauer, Meesook, and Suebseng, "Government Wage Policy in Africa: Some Findings and Policy Issues"; Terkildsen and Tidemand, "Staff Management and Organisational Performance in Tanzania and Uganda: Public Servant Perspectives."

²⁵³ For a general discussion of public sector monopsony powers see: Robert G. Gregory and Jeff Borland, "Recent Developments in Public Sector Labor Markets," in *Handbook in Labor Economics*, ed. O. O. Ashenfelter and D. Card, 1st ed. (Elsevier, 1999), 3573–3630.

the 1960s and 1990s, the claim that patronage pressures raised wage spending to unsustainable heights is not supported by the evidence. Furthermore, rather than low skilled generalist positions that could be distributed discretionarily to politically important constituencies, the Kenyan, Tanzanian and Ugandan states primarily hired skilled employees, particularly teachers graduating from teacher training colleges. By the end of the 20th century roughly half the central government wage bill went to pay teachers, presumably in response to strong popular demand for schooling and possibly on account of a strong teacher's lobby. But given that they would have been filtered into teaching careers at reasonably young ages and based at least in part on their exam results, it seems unlikely that these teachers were individually-rewarded clients of particular political power brokers. This argument will be explored further in Chapter 4.

As a consequence of these employment and earning dynamics, some of the colonial budget legacies proved short-lived. The duality of the racially segmented public sector salary structure disappeared as the salary scale was compressed, urban low-skilled wage premiums declined,²⁵⁴ educational supply quickly outstripped public sector demand, and public employment was shifted out of the capital cities and closer to the citizens. African economic historians have focused considerable attention on colonial legacies, seeking to explain differences in contemporary economic performance by studying the colonial institutional inheritance. Yet the policy literature reveals that postcolonial leaders and politicians were often well aware of these colonial legacies and sought, in various ways, to correct them. Many academics have been quick to dismiss these deliberate attempts to break with the past as smokescreens for the opaque political bargaining that informally dictated resource distribution. Yet a closer look at public expenditure patterns shows them to be quite consistent with official policy. They testify to the importance given to industrial development and educational expansion in the early independence period; they show the emphasis placed on expanding public employment and expanding service delivery rather than protecting those already in employment; and they suggest a considerable ambivalence towards the high-wage legacy of the late colonial era. In this case then, it may well be the actions aimed to correct the inequities of the past that caused the predicaments of the present. Over the coming two chapters the consequences of some of these changes will be explored further.

²⁵⁴ For a detailed analysis, see: Jamal, "Chasing the Elusive Rural-Urban Gap in Tanzania"; Jamal and Weeks, "The Vanishing Rural-Urban Gap In Sub-Saharan Africa."

Chapter 3.

The rise and fall of the bureaucratic bourgeoisie

3.1. INTRODUCTION

Whereas the previous chapter examined the evolution of public employment and wages in relation to public expenditure and national income, this chapter considers how public servants fared relative to other households. It studies how the government's role as an employer influenced the national income distribution by creating a large share of the high income employment opportunities, and how these shares changed following the shocks to income and public employment over the course of the 1980s and 1990s. This engages directly with an important question in the African political economy literature: have public servants remained a disproportionately large share of the postcolonial elite?

Concerns about Africa's beholden bourgeoisie date back to the decolonisation era. As discussed in Chapter 1, many of Africa's early independence scholars feared that a large and highly paid public service would crowd out the continent's under-developed private sector and make the upper and middle classes too indebted to the state to act as an independent economic interest group and counterweight to the political class. While dependency theory lost influence in the 1980s, the idea that the African state had undue influence over household social standing did not. The clientelist literature emphasised ethnicity rather than class, but it similarly understood African elites as a creation of the state: high income earners owed their status to their relations to politicians.

This debate has recently been revived in the context of renewed economic growth in Africa but today offer a more optimistic outlook. A flurry of recent papers have speculated that Africa's middle class may finally be coming into its own, embodied by a young, assertive, urban and private sector-oriented elite.²⁵⁵ Other scholars, however, have treaded more cautiously, questioning the relevance of class analysis in the African context and cautioning that the same political power dynamics as in earlier periods may have determined who has gained during this latest growth episode.²⁵⁶

²⁵⁵ Mubila and Ben Aissa, "The Middle of the Pyramid: Dynamics of the Middle Class in Africa"; Ncube and Lufumpa, *The Emerging Middle Class in Africa*.

²⁵⁶ For a discussion of this debate, see: Antoinette Handley, "Varieties of Capitalists? The Middle-Class, Private Sector and Economic Outcomes in Africa," *Journal of International Development* 27 (2015):

Several recent papers have examined whether the role of the state has declined since independence and discussed its political consequences, but their findings are inconclusive. Lofchie has argued that Africa has indeed seen a shift from an old middle class of the 1960s – 1980s dominated by public servants, to a new middle class solidly rooted in the private sector, but provides only descriptive accounts from Ghana to support this assertion.²⁵⁷ Antoinette Handley has discussed the extent to which an independent private sector is emerging in Africa, cautiously concluding that the private sector is playing a larger role in African economies today than in the past.²⁵⁸ Leonardo Arriola's recent work on financial liberalisation in Africa argues that some of the structural adjustment reforms of the 1980s and 1990s have reduced the state's control over the credit market and helped to empower a new business elite that is better placed to challenge the political status quo through support to opposition parties.²⁵⁹ This chapter furthers the debate by examining where East Africa's 'privileged' public sector employees fell within their respective national income distributions. Did state employment create the postcolonial elite and middle class? Has its importance withered with time?

The chapter finds that public sector employees formed a considerable share of the top 1% - 0.1% at independence, while their share of the broader middle class was lower to begin with and fell considerably over the course of the postcolonial era. In 1975 Kenyan public sector employees comprised roughly 36% of the top income or consumption decile; by 1994 this ratio had dropped to 30% and by 2005/06 to 17%. In Tanzania the public sector share of the top decile fell from an estimated 25% in 1969 to 14% in 2011/12. While the estimates are less reliable, these same sources also suggest a decline in the public sector share of the top 1%. No Ugandan estimates are available prior to the 1990s, but by the 2000s the levels are comparable to those of Kenya and Tanzania, at 16% in 2005/06. These levels are lower than comparable estimates for the United Kingdom today. In all three countries moreover, public sector-headed households have relied on multiple income sources to meet household consumption needs, particularly during the economic crises of the 1980s and early 1990s. Without recourse to secondary incomes from farming, businesses or other employment, public sector-headed households would have seen considerably larger relative income declines. The corollary to this declining share of public sector employees among high income earners is an increase in the

609–27; Scott D. Taylor, *Globalization and the Cultures of Business in Africa: From Patrimonialism to Profit* (Bloomington: Indiana University Press, 2012); Melber, *The Rise of Africa's Middle Class: Myths, Realities and Critical Engagements*.

²⁵⁷ Michael Lofchie, "The Political Economy of the African Middle Class," in *The Emerging Middle Class in Africa*, ed. Mthuli Ncube and Charles Leyeka Lufumpa (New York: Routledge, 2015), 42.

²⁵⁸ Handley, "Varieties of Capitalists? The Middle-Class, Private Sector and Economic Outcomes in Africa."

²⁵⁹ Leonardo R. Arriola, "Capital and Opposition in Africa: Coalition Building in Multiethnic Societies," *World Politics* 65, no. 2 (2013): 233–72.

share of private sector employees and business owners at the top of the income distribution, providing some cautious support for notion of a rising private sector elite.

Before describing these trends and the data underlying them, this chapter first reviews some definitional issues and provides a short discussion of the relative standing of public sector employees in Europe, as a point of reference for the East African case studies. This is followed by an empirical analysis of the socioeconomic standing of public sector employees, using a variety of measures to stratify the population, including educational status, income data from tax records, household consumption and asset wealth. The fourth section discusses geographic differences and compares public sector elite shares in urban and rural areas. The last section concludes.

3.2. DEFINING AND MEASURING THE UPPER AND MIDDLE ‘CLASSES’

This chapter builds on the assumption that relatively wealthier social strata wield disproportionate political influence, and that the sources of income of the wealthier classes are a clue to their economic and political interests. Examining how the professions and income sources of the elite changed over time may therefore shed light on the changing expectations and political pressures placed on the government. This assumption, however, raises practical questions. How should this wealthy strata be defined? At what levels of income, wealth or occupational status do interest groups form and gain significant political leverage? Such questions are implicit in the class studies of African societies carried out in the 1970s and in today’s middle class debate, yet many of these studies are imprecise about the contours of the privileged public sector elite or middle class that they describe. While some conceptualize power in Africa as dominated by a small clique of politicians with little co-optation of the middle class,²⁶⁰ others assume that political power rests with a relatively broad group of middle class denizens.

Among those studies of social stratification in Africa that do give precise definitions, there are a wide range of alternative approaches. A landmark study on Africa’s new elites from 1966 defined this elite as those earning at least £250 per year and with a western education, which put the Kenyan African elite at a bit below 1% of the labour force.²⁶¹ Issa Shivji’s study of Tanzania, which coined the term ‘bureaucratic bourgeoisie’ similarly gave it a narrow definition.²⁶² Shivji’s bureaucratic bourgeoisie comprised political heads of government

²⁶⁰ van de Walle, “Patrons, Clients, and Policies”; Melber, *The Rise of Africa’s Middle Class: Myths, Realities and Critical Engagements*.

²⁶¹ Based on the EES wage group data and assuming that wage employees were the only Kenyans fitting this description.

²⁶² Shivji, *Class Struggles in Tanzania*.

ministries and departments, top civil servants, top positions in the judiciary, military and party, in combination with economic functionaries in senior roles in the parastatals and public corporations. This description of the bourgeoisie probably puts it a few thousand people, or in the order of 0.1% of the labour force at the time of the book's writing. Shivji contrasts the bureaucratic bourgeoisie with a wider petty bourgeoisie comprising an upper strata of intellectuals, professionals, businessmen, private sector officials and wealthy farmers, and a middle and lower strata comprising the salariat, teachers, petty traders, shopkeepers, craftsmen and urbanised farmers. He anticipated growing conflict between these groups.

At the other extreme the African Development Bank chose to characterise Africa's middle class as individuals with a daily consumption of between US\$2-20 (in PPP terms), subdivided into a floating class (US\$2-4), lower middle class (\$4-10), and upper middle class (\$10-20).²⁶³ While this broader definition put the continent's middle class at 34%, restricting it to the lower and upper middle class reduced the share to 13%. This approach follows Banerjee and Duflo's work on the global middle class which used similarly low thresholds.²⁶⁴ Implicit in these middle class definitions is the assumption that a larger pool of people with incomes just a little above subsistence give more people an incentive and ability to engage in political matters beyond those of immediate survival concern.

Whether such strata have any analytical content, however, remains an open question. The language of class invokes Marx and Weber, who conceptualised classes as distinct interest groups in conflict with each other.²⁶⁵ Marx defined class in relation to its ownership of the means of production, with a working class that sells its labour while the bourgeoisie owns capital and employs labour; in between them is a petty bourgeois middle tier of small shop and business owners who sometimes ally with the bourgeoisie and other times with the working class. The Marxist literature recognizes these groups as classes only once its members become aware of their common economic interests ('class in itself') and organise collectively to defend said interests ('class for itself').

Many academics have contended that class in the Marxist or Weberian sense does not describe the African reality, where social stratification remained fluid and ethnic allegiances often trump economic interests. With reference to Kenya specifically, two recent articles have addressed this question empirically, by testing whether social strata based on income, consumption or

²⁶³ Mubila and Ben Aissa, "The Middle of the Pyramid: Dynamics of the Middle Class in Africa."

²⁶⁴ Abhijit V Banerjee and Esther Duflo, "What Is Middle Class about the Middle Classes around the World?," *Journal of Economic Perspectives* 22, no. 2 (2008): 3–28.

²⁶⁵ For a discussion, see: Roger Southall, *The New Black Middle Class in South Africa* (Johannesburg: Jacana Media, 2016).

analogous measures predict political and economic behaviour. Nic Cheeseman finds some signs that middle class Kenyans exhibit stronger support for traditional middle class values, while Dieter Neubert finds little evidence of a distinctly middle class politics.²⁶⁶

This study, however, does not directly address the question of class formation or identity. Instead it starts from an empirical angle: are there signs of change to the composition of the elite that would signal the rise of new, or emboldened economic interest groups? Whether these groups represent classes in a Marxist or Weberian sense is a second-order question, but it cannot be answered without an understanding of the economic structure of society, and thus the ability to make predictions about interests and behaviour.

Because of the focus on the relative power of different interest groups, this chapter uses relative wealth or income rather than absolute measures. It seeks to rank households in Kenya and Tanzania from poor to wealthy and locate where those headed by public sector employees fell in this rank order at different points in time. It will primarily use the top 1% and top 10% of the income or consumption distribution as proxies for the upper and middle class respectively, allowing us to study the elite composition at two different levels relative privilege. These are arbitrary cut-offs, but have the advantage of simplicity and a precedence in other academic research.²⁶⁷ While the top 1% is roughly in keeping with Lloyd's 1966 elite measure, the top 10% is a large enough group to be representative of something broader than the ruling clique, yet capturing a stratum of households living above subsistence. It is roughly in line with the AfDB's definition of the stable middle class (per capita consumption of \$4-20), but a far cry from the middle of the income distribution proper.

Despite focusing on a comparatively high strata of society, the top 10% of East African households is not a wealthy group by international standards. Using the most recent estimates available based on household budget surveys, the average household in the top 10% of consumers lived on roughly US\$13,000 per year in Kenya (2005/06), US\$7,500 in Tanzania (2011/12) and US\$7,000 Uganda (2006) (2010 dollars), equal to roughly US\$7 per person per day in Kenya, and roughly US\$4 per person and day in Tanzania and Uganda.²⁶⁸ The share of households in this top decile living in homes with piped, indoor water and electricity was 70%

²⁶⁶ Nic Cheeseman, "No Bourgeoisie, No democracy? The Political Attitudes of the Kenyan Middle Class," *Journal of International Development* 27 (2015): 647–64; Dieter Neubert, "Kenya - an Unconscious Middle Class?: Between Regional-Ethnic Political Mobilisation and Middle Class Lifestyles," in *The Rise of Africa's Middle Class: Myths, Realities and Critical Engagements*, ed. Henning Melber (London: Zed Books, 2016).

²⁶⁷ Thomas Piketty uses the top 10% and top 1% cut-off in his study of top incomes, see: Piketty, *Capital in the Twenty-First Century*, chap. 8.

²⁶⁸ Calculated using the consumption shares from POVCALNET and WDI total household consumption estimates in US\$ 2010; assuming an average family size of five.

in Kenya in 2005/06 and 56% in Uganda in 2006, while the share who reported owning a refrigerator was 25% in Kenya in 2005/06 and 28% in Tanzania in 2011.²⁶⁹ With the caveat that household budget surveys are imperfect instruments for measuring the very top of the income distributions and most likely underestimate top income levels, the same surveys suggest that the average annual household consumption in the top 1% was US\$40,000 in Kenya (2005/06), US\$19,000 in Tanzania (2011/12), and US\$17,000 in Uganda (2006). Taking these estimates at face value suggests that only the top 1-0.5% of East African households would scrape into a British middle class definition.²⁷⁰

A remaining question and weakness therefore, is whether the top 10%, or even the top 1%, are in fact too broad to capture elite dynamics. Perhaps an even narrower 0.1% strata would nuance the story further. Unfortunately there are few sources that allow income disaggregation at such a high level of granularity and it is only possible to make speculative statements about income or consumption shares above the 1% mark.

3.3. AFRICA'S PUBLIC SECTOR ELITE AND THE EUROPEAN POINT OF REFERENCE

Class or social group dynamics in Africa are typically defined in reference to class dynamics in the West, not least because Marxist and Weberian analyses and predictions were premised on the 19th century European experience. As discussed in Chapter 1, academics have speculated about how conditions particular to Sub-Saharan Africa, or former colonies in general, would generate a postcolonial bourgeoisie with a different set of interests and characteristics to that which emerged in Europe a century or more earlier.²⁷¹ This dichotomy between middle class development in the Global North versus Global South, however, has probably been overstated. Studies on the origins of the British middle class have stressed the importance of the state both as an employer and regulator of professional labour as early as the 18th century.²⁷² While it is beyond the scope of this study to quantify the composition of Europe's 18th and 19th century bourgeoisies for comparative purposes, it is possible to say what the contemporary literature and economic data has to say about the social position of public sector employees in advanced economies, and therefore, at least for the most recent period, provide some benchmarks for the three African country cases.

²⁶⁹ Calculated from: KE IHBS 2005/06; TZ HBS 2011/12; UG NHS 2006.

²⁷⁰ Comparing it, roughly, to the Great British Class Survey stratifications, see: Mike Savage et al., "A New Model of Social Class? Findings from the BBC's Great British Class Survey Experiment," *Sociology* 47, no. 2 (2013): 219–50., Table 6.

²⁷¹ See: van de Walle, "Barrington Moore in the Tropics: Democracy and the African Middle Class."

²⁷² Mike Savage et al., *Property, Bureaucracy and Culture: Middle-Class Formation in Contemporary Britain* (London: Routledge, 1992), chap. 3.

As shown in Chapter 2, public services in wealthier economies tend to be considerably larger than in developing countries, with the United Kingdom public sector employing roughly 18% of the working population today compared to roughly 3% in the three East African cases.²⁷³ The European public sector workforce has higher educational attainment than that of the private sector, with a disproportionately large share of college and university graduates in public sector employment (given the comparatively high educational attainment of teachers, nurses and doctors). This skew is more accentuated among women than men. In the United Kingdom in 1995 for instance, public sector employees constituted 27% of economically active workers, but 41% of all economically active degree holders, and 50% of all workers with other forms of higher education, according to the 1995 labour force survey (Table 3.1). Women formed a much larger share public sector employees overall, but particularly so amongst the highly educated, with over 60% of university or higher educated women in state employment. The same pattern is evident in France, where the 1999 census provides data on employment by sector. It showed that 38% of university degree holders worked for the state, compared to 28% of workers overall, with higher shares among women (Table 3.2).

Table 3.1. United Kingdom 1995: Share of economically active people in public employment by educational attainment (ages 30-60) (n=46,040)

Highest level of education	% in public employment ALL	% in public employment MEN	% in public employment WOMEN	Total number (million)
degree or equivalent	41%	34%	56%	2.5
higher education	50%	28%	67%	1.8
gce a level or equiv.	19%	15%	30%	4.1
gcse grade a-c or equiv.	26%	20%	30%	2.8
other qualification	22%	15%	29%	2.6
no qualification	20%	13%	25%	3.2
Total	27%	20%	36%	17.1

Source: UK LSF 1995 [Q2 April – June]

Table 3.2. France 1999: Share of economically active people in public employment by educational attainment (ages 30-60) (n=882,530)

Highest level of education	% in public employment ALL	% in public employment MEN	% in public employment WOMEN	Total number (million)
University	38%	30%	46%	4.1
Secondary	27%	21%	34%	8.0
Primary	28%	25%	31%	3.3
Less than primary	17%	14%	23%	2.2
Total	28%	23%	35%	17.7

Source: FRA CENSUS 1999

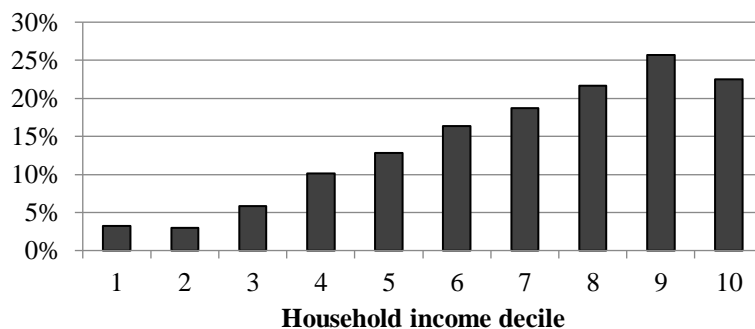
²⁷³ Kenya, Tanzania and Uganda: statistical appendix 1; UK: UK BoE 2015.

Wage setting in the public sector also differs from that in the private sector, as discussed briefly in the introductory chapter. While many studies of pay find a premium for public sector workers compared to those in the private sector,²⁷⁴ this premium tends to be largest among low-skilled workers, while salaries are often quite compressed among senior civil servants. Studies have found that institutionalised salary scales rather than individual bargaining tend to reduce wage spread and thus wage inequality within the public, relative to the private, sector.²⁷⁵

Thus while the public sector’s high educational attainment and the possible pay premium for the lower skilled suggests that public sector employees will be skewed towards the top of the distribution, greater wage compression may limit their shares among the very top earners. This is illustrated in Figure 3.1 which calculates the public sector-headed household share of each income decile using data from the 2014/15 United Kingdom family resources survey (the head is defined as the household member with the highest income). Public sector-headed households are concentrated at the top of the wage distribution, peaking in the 9th decile at 26%, compared to 3% in the bottom decile. At the top of the distribution, however, the public sector share declines, falling to 23% in the top decile and 22% in the top percentile, reflecting greater wage compression in the public sector. Note, moreover, that because of the large share of women in public employment, who are less likely to be the highest household earner, public sector shares at the top would be larger on a worker basis.

While the United Kingdom and East African contexts differ in many ways, these data points provide a useful reminder that public sector employees tend to be a comparatively high-skilled and high earning segment of the labour force the world over.

Figure 3.1. United Kingdom 2014/15: Public sector-headed households as a share of each household income decile



Source: UK FRS 2014/15

²⁷⁴ Gregory and Borland, “Recent Developments in Public Sector Labor Markets.”

²⁷⁵ See for instance: Anthony B. Atkinson, *Inequality: What Can Be Done?* (Cambridge and London: Harvard University Press, 2015); Richard Disney and Jelena Lausev, “Pay Compression : The Role of Public Sector Monopsony,” n.d.; J. Fournier and I. Koske, “The Drivers of Labour Earnings Inequality: An Analysis Based on Conditional and Unconditional Quantile Regressions,” *Less Income Inequality and More Growth – Are They Compatible?*, OECD Economics Department Working Papers (Paris, 2012).

3.4. THE RELATIVE SOCIAL STANDING OF EAST AFRICA'S PUBLIC SECTOR EMPLOYEES

Predicting the wage and employment effects on the relative standing of public sector employees

As in the example from the United Kingdom above, the coming sections will measure the relative economic standing of Kenyan, Tanzanian and Ugandan public sector employees by establishing the share of public sector-headed households in the top 10% or 1% of the income or consumption distribution and how these shares changed over time. While Chapter 2 showed that there have been big shifts in public employment and the distribution of public sector earnings in these countries, the effect of these economic changes on the relative social position of public sector employees are is not obvious *a priori*. The share of public sector employees by income decile or percentile are a function of several factors, including the size of the wage bill relative to total household income; the share households that this wage bill is shared amongst; the income distribution within the public sector; and the overall household income distribution in the country. It follows that a fall/rise in the share of public sector households in the top decile or percentile could be driven by changes to any of these variables.

Other intra-household changes may also affect change. Given that our measure classifies households based on the employment of the household head, the public sector shares may also fall as the public service grows more female, and if these women are less likely to be classified as household heads. Changes in the relative size of households in the public/private sectors may also influence these ratios.

Chapter 2 provided data about how some of these variables have changed since the 1960s. As shows in Figures 2.4 and 2.6, the public sector wage bill, including the parastatal sector, increased as a share of GDP until the mid-1970s and then decreased, primarily on account of the decline in parastatal employment. The general government wage bill fell in Kenya and Uganda between the 1970s and 1990s and then partially recovered, while it stayed relatively steady in Tanzania. In all three countries household consumption increased as a share of GDP between the 1960s and 1990s. All else being equal, these dynamics should result in a decline in the relative standing of public sector headed households in the 1970s through 1990s.

Furthermore, between the 1970s and late 1980s total employment increased and the wage bill was therefore spread between an increasing number of households while the earnings differentials within the public service declined. This ought to reduce the public sector shares at the very top further, although its exact effect will also depend on the original income distribution.

Between the mid-1990s and 2000s earnings recovered while the level of public employment fell, which should have the reverse effect, concentrating earnings towards the top once more, albeit amongst a smaller number of households. Working against this dynamic however, income inequality in society at large appears to have increased since the mid-1990s in Kenya and Tanzania,²⁷⁶ while the public service has grown more female and a smaller share of its employees are therefore classified as household heads. Because of the shift in public employment and pay policies in the 1990s, I therefore seek to understand relative income standing across two periods: the 1960s-1970s through early 1990s, and 1990s to the present.

A further complexity is that official salaries may be a poor guide to the actual earnings of public sector employees. Many have observed that African public sector households augmented low salaries with less transparent forms of rents, such as non-monetary benefits, opportunities for shirking, preferential access to goods and services, or outright corruption.²⁷⁷ While it is hard to see how such non-wage compensation could have fully compensated for the severe wage declines of the 1970s and 1980s (see discussion in Section 2.7), they may have influenced the public service income distribution. Some of the subsequent sections will therefore move beyond reported income, by looking at the consumption and asset wealth of public sector-headed households as an alternative lens on their relative privilege or deprivation, which should be less sensitive to the possible underreporting of income.

Public employment and educational attainment

First, however, I examine educational attainment, which is often used as a proxy for social status and can therefore be used as a rough means of stratifying the population. As in Europe, East Africa's public sector employees are a comparatively highly educated segment of the labour force (as discussed in Chapter 2) and its educational attainment has been growing over time. In the 1960s-early 1970s, roughly 15% of Kenya's public sector employees had four years of secondary schooling, a similar share to that in formal private sector. By the 2000s secondary educated public sector employees constituted 79%, compared to 26% within the labour force overall (see Table 3.3). In Tanzania the share rose from roughly 6% in the 1960s to 77% in 2011/12, and in Uganda from 16% to 58% in 2006. As in Europe therefore, we should expect the public service income distribution to be skewed to the right, with higher shares in the top income brackets.

²⁷⁶ The trend in Uganda is more ambiguous see: POVCALNET 2017.

²⁷⁷ E. A. Brett, "Rebuilding Organisation Capacity in Uganda Under the National Resistance Movement," *The Journal of Modern African Studies* 32, no. 1 (1994): 62–63; Therkildsen and Tidemand, "Staff Management and Organisational Performance in Tanzania and Uganda: Public Servant Perspectives."

Table 3.3. Secondary school completers as a share of public and total employment, 1960-70s and 2000s

	All formal employment*	Public employment	All employment	Public employment
	1972	1972	2009	2009
Kenya	15%	15%	26%	79%
	1964	1964	2011/12	2011/12
Tanzania	4%	6% **	12%	77%
	1967	1967	2005/06	2005/06
Uganda	11%	16% **	9%	58%

* Levels would be considerably lower for the labour force as a whole.

** General government only, excludes parastatal sector.

Sources: method and source given in Appendix IV.

This data can also be used to examine the share of all second and tertiary educated labour force participants that worked in the public sector (Table 3.4 – 3.6). In the early postcolonial period the public sector dominated the skilled labour market. Among employees with a secondary school degree, roughly 41% worked for the public sector in Kenya in 1972 and 69% in Uganda in 1967 and 90% in Tanzania in 1980. Over time these shares have declined. Estimates using recent household surveys suggests that the share fell to 17% in Kenya by 2009, 22% in Tanzania (2011/12) and 9% in Uganda (2005/06). From the 1990s and on we can use the same household surveys to measure the shares for tertiary graduates (Kenya and Uganda only), which also suggests a fall in the share of tertiary graduates employed by the government.

However, the level of educational attainment has increased considerably over the same period and the returns to education have declined; holding a university degree today is not as rare an event as in the 1960s and possibly less strongly correlated with income.²⁷⁸ This measure alone does not tell us about the changing relative social position of public servants. For this we turn to income-based stratifications of society.

Table 3.4. Kenya: % of all working secondary and tertiary completers employed in the public sector

	Share of all working graduates in public employment		
	1972	1994	2009
Secondary completer (Form IV) or above	~41%	26%	17%
Tertiary education (uni or college)		44%	32%

Sources: method and source given in Appendix IV.

Table 3.5. Tanzania: % of working secondary and tertiary completers employed in the public sector

	Share of all working graduates in public employment		
	1980	1993	2011/12
Secondary completer (Form IV) or above	~90%	46%	22%

Sources: method and source given in Appendix IV.

²⁷⁸ See for instance: Appleton, Bigsten, and Manda, “Educational Expansion and Economic Decline: Returns to Education in Kenya.”

Table 3.6. Uganda: % of all working secondary and tertiary completers employed in the public sector

	Share of all working graduates in public employment		
	1967	1992	2005/06
Secondary completer (Form IV) or above	~69%	24%	9%
Tertiary education (uni or college)	~75%	55%	39%

Sources: method and source given in Appendix IV.

Who constituted the taxpaying income elite at independence?

For the early independence period income tax statistics provide valuable insight into the incomes at the very top of the East African income distribution. Detailed tax schedules are only available up until the mid-1960s, prior to the introduction of pay-as-you-earn tax (PAYE), and can therefore give insight into conditions around the time of independence but are of little help in tracking change over time. This income tax data from the 1950s and 1960s was recently used by Tony Atkinson in a study on inequality in East Africa.²⁷⁹ Although only around 1% of households were liable to pay income tax, by assuming that these taxpayers constituted the top 1% of all earners, he could estimate their shares of total income.

These same tax records also provide information on the sources of income within this taxpaying elite. The tax schedules disaggregate between employees and individual tax payers (primarily the self-employed), and further between government and ‘other’ employees (Table 3.7). Taxes were levied on earners above £200 per year,²⁸⁰ although the tax schedules include few earners reporting earnings of less than £500 per year. These schedules show that government employees constituted roughly a quarter to a third of all taxpayers, and by extension of the top 1% income earners in Tanganyika and Uganda, and top 3% in Kenya. These shares are significant, but probably not exceptionally high compared to other regions of the world and in no case did public servants constitute a majority of taxpayers.²⁸¹ In Kenya and Tanganyika the government share fell over time as highly paid European colonial officers left the countries and positions were Africanized.

²⁷⁹ Atkinson, “Top Incomes in East Africa before and after Independence.”

²⁸⁰ *Ibid.*, 10.

²⁸¹ See discussion about the UK in Section 3.3.

Table 3.7. Income tax payers by source of income in Kenya, Tanganyika and Uganda, 1959-1964

	1959	1960	1961	1962	1963	1964
KENYA						
Total tax payers	52,922	57,442	52,119	51,739	51,679	52,703
Government employees, % of total	31%	30%	27%	28%	27%	24%
Other employees, % of total	44%	42%	45%	45%	46%	46%
Individual tax payers, % of total	24%	27%	28%	27%	27%	30%
TANGANYIKA						
Total tax payers	18,099	18,797	18,069	18,803	18,873	21,036
Government employees, % of total	32%	25%	24%	27%	24%	24%
Other employees, % of total	40%	41%	41%	41%	41%	41%
Individual tax payers, % of total	27%	35%	34%	33%	35%	35%
UGANDA						
Total tax payers	18,099	12,841	12,397	12,427	12,896	14,508
Government employees, % of total	23%	26%	30%	31%	27%	28%
Other employees, % of total	29%	40%	40%	42%	43%	39%
Individual tax payers, % of total	48%	34%	31%	27%	30%	33%

Sources: EA TAX 1960/61 - 1965/66, Schedule No.3

This income elite was heavily dominated by Europeans and Asians, however, and therefore gives limited insight into the African income distribution. An alternative source from the same period, the employment and earnings survey, does provide income distributions by racial group, albeit for formal sector employees only. In combination with the income tax data these can be used to establish a rough estimate of the public sector share among high-earning Africans alone. For practical purposes, this analysis is limited to one year, 1964, at the dawn of the independence era.

In 1964, Africans constituted 15% of salaried employees earning above £600 per year in Kenya, 21% in Tanganyika, and 26% in Uganda.²⁸² This African taxpaying elite was therefore a much smaller share of all African households, constituting roughly the top 0.3% of households in Kenya, 0.2% in Uganda and 0.1% in Tanganyika. Importantly, however, among Africans alone, public sector employees significantly out-number private sector employees, in contrast to Europeans and Asians among whom private employees and business owners dominated.

I have no way of estimating the African share of self-employed tax payers, however, and can only set very rough upper and lower bounds. The literature on Africanisation suggests that the public sector led the way in Africanizing senior positions, while firms Africanized in the late 1960s with the introduction of rules on firm ownership, board memberships and such.²⁸³ It thus

²⁸² The income tax tables are given in £/annum and the EES ones in Shs./month. To simplify the calculations I compare those earning above £600 with taxpayers with income above £500 (this simplification has only a minor impact on the results).

²⁸³ Rothchild, "Kenya's Africanization Program: Priorities of Development and Equity."

seems reasonable to assume that the African share of high-earning self-employed taxpayers would be lower than their share of high earning employees.²⁸⁴ I therefore estimate a lower bound scenario, assuming that there were no African self-employed (i.e. individual) taxpayers earning above £500, and an upper bound where the African individual taxpayer share was the same as their share of taxpayers in employment.

On the basis of these assumptions, public sector employees constituted between 50-75% of all high-income taxpayers, who constituted roughly the top 0.1-0.3% of all households. This gives some quantitative support for the notion of a bureaucratic bourgeoisie – within the very top of the African income distribution public servants were indeed dominant. Interestingly, despite Uganda’s larger indigenous landowning elite, it’s public sector share is only marginally lower than in Kenya and Tanzania, although landowners are most likely underrepresented in these tax records.

Table 3.8. African share of taxpayers and by source of income, Kenya, Tanganyika and Uganda, 1964

	Kenya	Tanganyika	Uganda
<i>Total employees with 'actual' income above £500</i>	30,487	10,824	8,297
African* employees with salary above £600	4,600	2,246	2,166
o/w public sector	3,500	1,717	1,579
o/w private sector	1,100	529	586
<i>Total individual taxpayers with 'actual' income above £500</i>	11,721	4,945	3,294
African individual taxpayers - lower bound	0	0	0
African individual taxpayers - upper bound	1,769	1,026	860
Public sector % of earners >£600 - UPPER BOUND	76%	76%	73%
Public sector % of earners >£600 - LOWER BOUND	55%	52%	52%
<i>African high income earners as % of total households</i>	0.3%	0.1%	0.2%
<i>African high income earners as % of all high income earners</i>	15%	21%	26%

* for Tanganyika and Uganda this covers men only.

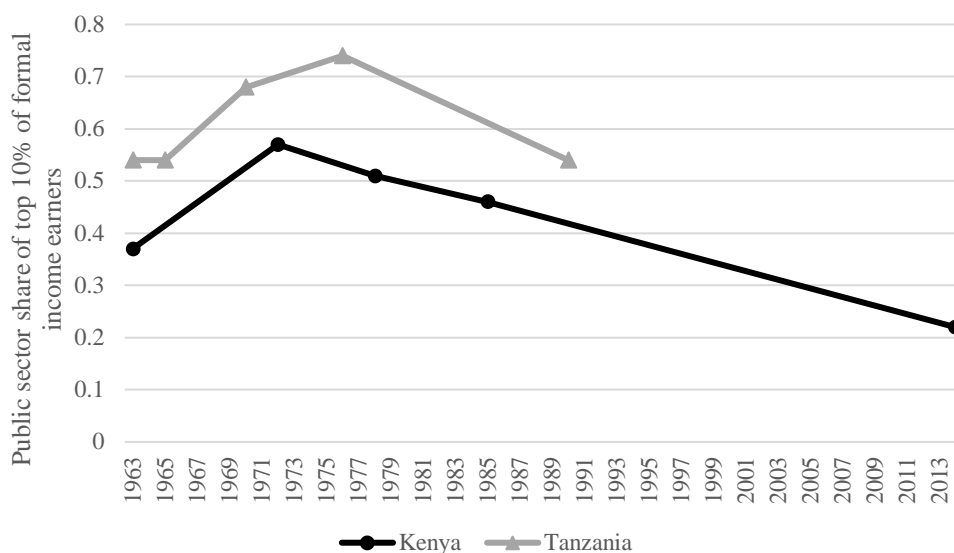
Sources: Calculated from: EA TAX 1965/66, Schedule No.3 & No.5; KE EES 1963-67, Table A.25; TZ EES 1964 Appendix III; UG EES 1964 Table.

Since independence these shares appear to have fallen. Using available data from the earning and employment survey on the wage distribution, Figure 3.2 calculates the public sector share of the top 10% of formal employees (which corresponds roughly to the top 1-2% of income earners overall). Uganda is excluded from this chart due to lack of consistent data. In Kenya and Tanzania the public sector share rose briefly in the late 1960s, peaking at 57% in Kenya and 74% in Tanzania in the early to mid-1970s, as many Europeans and Asians, who dominated the high income private sector ranks, left East Africa and as industries were nationalised.

²⁸⁴ In agriculture the situation may be different, but individual taxpayers were concentrated in the trade and services sectors rather than agriculture (the tax tables also include separate industrial distributions of earnings), which suggests that wealthy farmers were a relatively small share of the income elite.

Starting in the early-mid 1970s however, the public sector share of high income earning employees began to fall and declined to roughly 46% in Kenya by 1985 and 22% by 2014, while in Tanzania it had fallen to 54% by 1990. While these estimates only cover formal sector employees, it seems likely that the number of wealthy African business and farm-owners also rose in proportion to public sector employees over the same period, at least in Kenya where indigenization of the private sector was actively pursued.

Figure 3.2. Kenya and Tanzania: public sector share of top 10% of formal sector employees



Sources: Kenya: KE EES 1963-67, Table A.25; KE SA 1976, Table 255; KE EES 1985; KE SA 2015, Table 186. Tanzania: TZ EES 1963-76; TZ LFS 1990/91 Table Y5.

Note: Tanzanian measures for 1963 and 1965 based on adult African male employees only, 1970 estimate based on all adult male citizens. 1990 data for male and female employees.

Yet these top slivers of the income distribution reflect only the formal sector and capture a small share of public sector employees overall. Perhaps of even greater political significance is the degree to which the broader, nascent middle class was dominated by public servants. In the following analysis I therefore estimate the public sector-headed household share within the top income or consumption decile and percentile, using data from household budget surveys.

Establishing public sector position within the national income distribution: method and data

Household budget surveys provide a valuable source of information about social stratification across the labour force. This analysis draws on Kenyan surveys from 1975, 1994 and 2005/06, Tanzanian surveys from 1969, 1993, 2000/01 and 2011/12 (for the mainland only), and Ugandan surveys from 1992 and 2006. With the exception of the Kenyan 1975 estimates, all are nationally representative surveys of private households.

Table 3.9. Description of surveys used in analysis

	Source	Abbreviation	Data access	Sample size (# hhs)	Likely direction of bias
Kenya					
1974/75	Integrated Rural Survey (in addition to other sources)	IRS 1974/75	Published tables	IRS: 2,300	Under-estimate
1994	Welfare monitoring survey, second round	WMS 1994	Microdata	11,000	Over-estimate
2005/06	Integrated household budget survey	IHBS 2005/06	Microdata	13,000	Small under-estimate
Tanzania					
1969	Household budget survey	HBS 1969	Published tables	2,800	Under-estimate
1993	Human Resource Development Survey	HRDS 1993	Microdata	5,000	Over-estimate
2000/01	Household budget survey	HBS 2000/01	Microdata	22,000	-
2011/12	Household budget survey	HBS 2011/12	Microdata	10,000	-
Uganda					
1992	Integrated Household Survey	HIS 1992	Microdata	10,000	-
2006	National Household Survey	NHS 2006	Microdata	7,500	-

The surveys from the 1990s and 2000s are available in microdata form and include variables capturing the respondent's sector of employment. In these surveys households are ranked on the basis of consumption per adult household member rather than income, as consumption is regarded as a superior measure of living standards in low-income contexts.²⁸⁵ This has the further advantage that it captures the 'output' of all household income, and is thus less sensitive to potential underreporting of informal earnings and benefits. I choose to normalize household consumption by adult household members (15 and above) rather than per capita or using an adult equivalency scale as the focus of this paper is on the ability of different types of households to generate income rather than living standards per se. Household size may well be endogenous to earnings if wealthier households have more dependents.²⁸⁶ Further discussion on the construction of variables and various sensitivity tests to gauge possible biases in the data are discussed in Appendix V. Note that across the surveys the percentile measures are quite volatile due to the restricted sample sizes. As discussed in the appendix, these 1% samples may also be biased by the under-sampling of high income households.

²⁸⁵ See discussion by: James Galbraith, *Inequality and Instability: A Study of the World Economy Just before the Great Crisis* (New York: Oxford University Press, 2012).

²⁸⁶ Normalizing consumption by adult equivalents places a high share of single person households in the top decile.

The weakest part of this analysis are the Kenyan and Tanzanian results from the 1960s and 1970s, which are derived from printed tables that tabulate the number of households by household income groups. The Kenyan 1975 analysis moreover, builds on several sources, including the integrated rural survey (which covered roughly 75% of the population), the large farm survey, the enumeration of employees, the informal sector survey, income tax statistics reports and estimates of the pastoral population by Collier and Lal, to arrive at a national income distribution (see Appendix V.1).

As these printed income distribution tables do not disaggregate the distribution by sector of employment, I estimate the public sector share by comparing the national income distribution with data on the wage distribution in the public sector from the employment and earnings surveys. The data on public sector wage distribution, however, is presented on an individual worker basis rather than a household basis. I therefore remove women from the distribution and make the assumption that each male public sector employee is the head of a household and his public sector earnings is the household's only source of income.

This last assumption is particularly problematic as other surveys from the same period show that many public sector households had more than one source of income. In Kenya the government relaxed the colonial-era rules on ownership of firms and property by civil servants in 1971.²⁸⁷ It was argued that public servants were well placed to raise capital and possessed the necessary skills to replace foreign business owners, thereby aiding the pace of Africanisation of the private sector. By the mid-1970 critics were already complaining that this reform created a conflict of interest, as civil servants now served 'two masters.'²⁸⁸ By 1980 another public service commission concluded that many civil servants had multiple income sources.²⁸⁹ In Tanzania in contrast the 1967 Arusha Declaration included a leadership code that prevented senior and mid-level civil servants from owning companies, real estate or holding more than one salary, but these rules were limited to relatively senior posts, and did not prevent land ownership or other household members from working. It is therefore likely that the Tanzanian 1969 and Kenyan 1975 results are lower-bound estimates.

Adding a further downward bias, moreover, is the inclusion of Europeans and Asians in the top income brackets. This has only a marginal impact on the public sector shares of the top decile, as non-Africans were a small share of the overall population. The public sector share of the top

²⁸⁷ On the basis of the recommendations of the Ndegwa Commission on the Public Service Structure and Remuneration, see: Ndegwa, "Report of the Commission of Inquiry: Public Service Structure and Remuneration Commission 1970-71."

²⁸⁸ H. J. Nyamu, "The State of the Civil Service Today: A Critical Appraisal" (Nairobi, 1974).

²⁸⁹ S. N. Waruhiu, "Report of the Civil Service Review Committee 1979/80" (Nairobi, 1980).

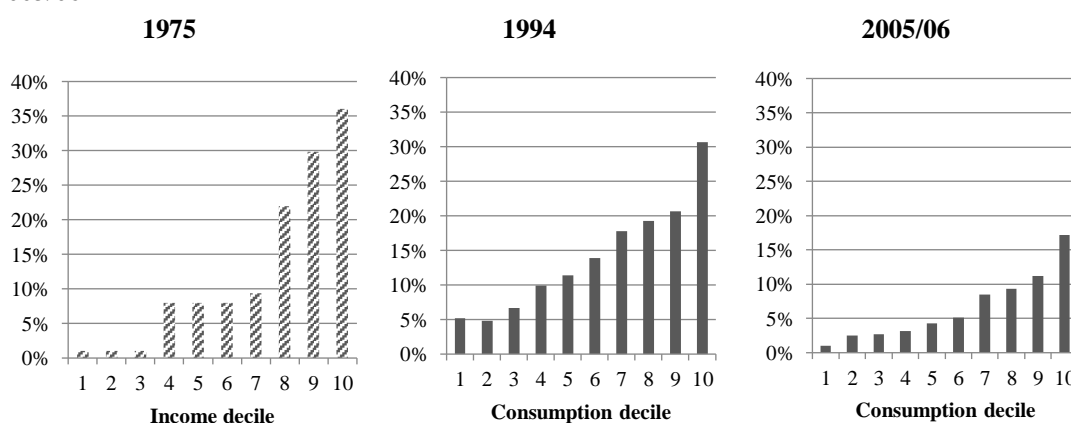
1% however, would be higher if limited to Africans alone as the European and Asian minorities held a disproportionate share of senior private sector roles. This effect will be strongest in the earlier periods when the European and Asian population shares were higher, compounding the likely underestimation of the 1975 and 1969 public sector share estimates.

Kenyan results

With these caveats Figure 3.3 presents the Kenyan results, showing the share of all households in each income or consumption decile headed by a public sector employee in each year.²⁹⁰ While public sector-headed households comprised 7-14% of all households,²⁹¹ they are strongly skewed towards the top of the distribution and peak in the top income or consumption decile in all years. Even with a likely underestimation of the 1975 measures however, the Kenyan results show a significant decline in the share of high earning households headed by public sector employees. As a share of the top decile, public sector-headed households fell from roughly 36% in 1975 to 30% in 1994 and 17% in 2005/06. By the 2000s the Kenyan public sector-headed household share of the top decile was lower than in the United Kingdom.

The public sector-headed household distribution also grew more progressive over time. While 32% of public sector-headed households were found in the top decile in 1975, in 1994 the share was only 22%; it then rose again to 26% in 2005/06 as the public sector pay scale was decompressed. In both 1994 and 2005/06 roughly half of all public sector-headed households were in the bottom three-quarters of the consumption distribution, which can hardly be considered an especially privileged social strata.

Figure 3.3. Kenya: public sector-headed households as percentage of consumption decile, 1994 and 2005/06



Notes: Distributions normalized by adults in household except for 1975. **Sources:** Appendix V.I.

²⁹⁰ Note that the data for 1975 is a rough recalculation as it builds on underlying wage group data divided into six rather than ten bins. I simply assume a linear distribution of incomes within each wage group, resulting in a flat distribution across deciles 1-3 and 4-6.

²⁹¹ As public sector employees tend to be the heads of their households they comprise a larger share of household heads than of the labour force.

Table 3.10 examines the composition of the top 10% and top 1%, disaggregated by the economic sector of the household head. These decompositions based on economic sector should be treated as rough estimates as some of the categories are difficult to distinguish in certain of the surveys (the distinction between private sector employees and informal/self-employment is particularly tricky). Furthermore, the growing share of retirees, homemakers and students in the top income shares may be distorting the picture as some retirees are presumably former public sector employees, while some students may be supported by their public sector-employed parents. However, assuming that these inactive households are in fact supported by sectoral earnings that match the broader composition of earnings in the income bracket as a whole would only raise the public sector shares by 1-2%.

With these qualifiers, the data confirms that while the public sector share of the top decile fell, the share of high earning households in the private sector increased, in particular those headed by self-employed business owners, many of whom operated businesses in the informal sector. Agricultural-based households in contrast, fell significantly in share of the top decile (although the mid-1970s was also a period of relatively high agricultural prices).²⁹²

At the very top of the distribution, among the top 1% instead of the top 10%, the pattern of change was similar, although the estimates at the 1% level are less reliable. While there is no obvious change in the public sector share of the top 1% between 1975 and 1994, the share then fell from 31% to 13% between 1994 and 2005/06. The formal private sector share, meanwhile, dropped between 1975 and 1994 and then almost doubled again between 1994 and 2005/06. These formal private sector employees were primarily managers or professionals in the service sector, including many in the financial sector. A large share of households in the top 1% were also found in the 'other' category, which comprised retirees and other unclassifiable households. Agricultural households also fell as a share of the 1%.

Table 3.10. Kenya: composition of the top income/consumption decile and percentile, by economic sector of the household head

Household head sector of employment	Top 10%			Top 1%		
	1975	1994	2005/06	1975	1994	2005/06
Public	36%	30%	17%	30%	31%	13%
Private employment*	23%	27%	33%	47%	18%	32%
Own business / enterprise	9%	23%	26%	}23%	42%	31%
Agriculture	32%	19%	12%		9%	5%
Other (retirees, students etc.)		1%	12%			19%

*Not necessarily in 'formal' sector; all who report themselves as employees.

Sources: see Appendix V.I.

²⁹² See Statistical Appendix 1, series on agricultural output per worker.

As an alternative to consumption-based measures of socioeconomic standing, it is also possible to use asset ownership and housing characteristics to stratify the population. A potential weakness of consumption-based means of stratifying the population is that they are sensitive to price differences across the country, as well as survey quality and sampling issues (discussed further in Appendix V). Although less granular than consumption, asset-based measures of living standards therefore have several advantages. Firstly, they are easier to measure accurately. Asking a household member if they own a car or refrigerator gives a result less prone to error than computations of their full consumption patterns over a month or year. Secondly, they are less sensitive to differences in price level across a country (rural-urban), and may say more about actual social status than consumption, particularly where consumption measures are strongly shaped by own-production of food. Lastly, in the Kenyan case, it allows us to make use of the 2009 census, which contains measures of employment sector and asset ownership, but not of income or consumption. The census provides a much larger sample of households and a detailed breakdown of the labour force by sector of work. This is particularly useful for understanding differentiation at the very top of the distribution for which the relatively small 1994 and 2005/06 samples are less well suited. One drawback of asset and housing quality measures, however, is that they are likely to react with a lag to changes in income. Households who have already made said investments may be able to retain a house with piped water or tiled floors, even if their income falls.

I construct an asset index comprising items or housing characteristics that signify a high standard of living, such as ownership of a car, computer, refrigerator, modern stove, TV, and living in a home with electricity, flush toilet, piped water and modern flooring (cement or tiles) (see Appendix V.I for further details). For Kenya in 1994 this index relies only on household characteristics – electricity, piped water, flush toilet, flooring and wall materials and cooking fuel/method - as the survey questionnaire did not include questions on asset ownership. Note that roughly half or more of all Kenyan households have none of these characteristics (in any of the years). While this index is a useful way of measuring differences at the top of the distribution, it is unhelpful for distinguishing the poor from the slightly better off. I therefore use this measure solely to examine the composition of the top 10% and 1%.

I construct both a ‘naïve’ index, which simply sums the number of wealth characteristics that each household has, as well as using factor analysis to estimate variable weights following the approach used by Sahn and Stifel and Ncube and Shimles.²⁹³ This technique allows the data

²⁹³ David Sahn and David Stifel, “Poverty Comparisons over Time and across Countries in Africa,” *World Development* 28, no. 12 (2000): 2123–55; Mthuli Ncube and Abebe Shimeles, “The Making of

itself to determine the relative importance of each asset in contributing to some unspecified underlying factor (presumed to be wealth in this case). The two alternative index construction methods give very similar results (correlations of between 0.97 and 0.99), and following the more recent literature I choose to report findings using the factor analysis technique. The index is then divided into deciles and percentiles to give a relative wealth measures. Only the 2009 percentile measures are reported, as the results for 1994 and 2005/06 showed considerable volatility in the top percentiles suggesting that the indicators were insufficiently granular to capture differences at the very top of the distribution.

In Table 3.11 I replicate the disaggregation from Table 3.10 using asset wealth rather than consumption per adult to identify the top 10% and top 1% of households. This shows that public sector-headed household and private employee-headed households are a higher share of the top decile when measured on an asset wealth rather than consumption basis, while the share of self-employed stays roughly the same. The share of agricultural households in contrast, is considerably smaller. This may reflect the fact that consumption measures are sensitive to the pricing of consumption of own-produced food, and may be inflating the observed consumption levels in agricultural households through the pricing of own-production (this technique assumes that this food could be sold and converted into other forms of household spending, which may not be the case). Some of the asset or housing characteristic measures may also be partial to urban households. A rural, agrarian household is presumably less likely to have piped water, flush toilets or be connected to an electricity grid than an urban dweller with the same level of income.

While this alternative method of stratifying the population suggests a slower rate of change than the consumption method, it does not alter the overall trajectory. While the public sector share of the elite remained relatively steady between 1975 and 1994 (assuming that the 1975 income-based measure is an accurate reflection of asset wealth), it then dropped considerably to 21% in 2005/06 and 18% in 2009. The 2009 census results, which are based on a far larger sample (10% of the population) add further confidence to these findings, showing a continued fall in the public sector share of the top decile.

Middle Class in Africa : Evidence from DHS Data,” *The Journal of Development Studies* 51, no. 2 (2015): 178–93.

Table 3.11. Kenya: composition of the top **asset wealth** decile and percentile, by economic sector of the household head

Household head sector of employment	Top 10%				Top 1%			
	1975*	1994	2005/06	2009	1975*	1994	2005/06	2009
Public	36%	36%	21%	18%	30%			19%
Private employment**	23%	38%	36%	36%	47%			44%
Own business / enterprise	9%	22%	26%	33%	123%			30%
Agriculture	32%	3%	4%	2%				0.5%
Other (retirees, students etc.)		1%	13%	10%				7%

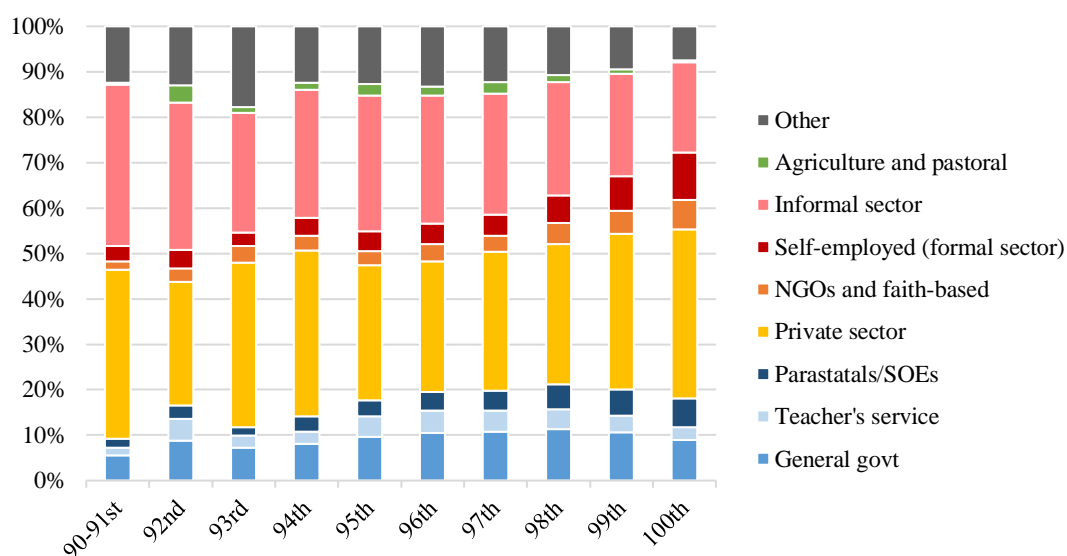
* 1975 measure based on income, see Table 3.10

**Not necessarily in 'formal' sector; all who report themselves as employees.

Sources: see Appendix V.I.

The 2009 results do, however, modify the assumption that public sector shares fall further within the 10%. On an asset wealth basis the public sector share of the top 1% is higher than the 10% average. Given the richness of the 2009 census sample, it is worth examining this intra-elite asset wealth distribution in greater detail. Figure 3.4 provides a sectoral distribution of the top ten percentiles using the 2009 detailed sectoral breakdown. Public sector employees peak in the 98th percentile, and within the public sector the parastatal employees gain the most as we move up the distribution. As autonomous government agencies set salary scales independently of the general government, this result is unsurprising. Across the top percentiles in general, employees in the private sector, NGOs and in self-employment (in the formal sector) gain in share at the very top of the distribution. Although the public sector is clearly over-represented in the top percentiles, the private sector dominates this wealth elite in absolute terms.

Figure 3.4. Kenya 2009: Sector of employment distribution by asset wealth percentile



Source: KE CENSUS 2009.

Given the significant decline in public sector salaries in the 1990s, it is perhaps surprising that most of the decline in the public sector elite shares has taken place since the 1990s rather than during the crisis of the 1980s. In 1994 the Kenyan economy had been performing poorly for several years with inflation in double digits; formal sector wages were at their nadir while the level of public employment was close to its peak.²⁹⁴ Part of the answer to the relative resilience of public sector-headed households appears to lie in income diversification. As already mentioned, public sector headed households often had more than one source of income.²⁹⁵ While the earlier surveys provided only indirect evidence of this, the surveys from the 1990s and 2000s allow us to quantify the effects of secondary income sources. In 1994 the median public sector-headed household earned 57% of household income from its public sector salary and the other 43% from farming, business profits or the salaries of other household members.²⁹⁶ Although the 2005/06 income data is less reliable, it appears that these levels rose again as salaries recovered (and agricultural prices slumped) in the mid-2000s. In 2005/06 the median public sector-headed household earned 80% from the household head's primary salary and 20% from other sources.²⁹⁷

Table 3.12 examines these secondary income sources. It measures the share of public sector-headed households that report additional incomes by income stream. As a control group, these shares are also reported for households headed by a private (formal) sector employee. Close to 60% of public sector headed households in 1994 had either a business or farm that generated income beyond their salaries or wages, and 49% had at least one additional wage income earner. These shares were higher among public sector-headed households than among private sector-headed households, although this may be an artefact of more urban-based households in the private sector, which limited agricultural opportunities. Either way, it appears that formal sector households were able to augment their salaries by straddling different economic sectors, including employment, farming and business.

In 2005/06 the share of households with a farm or enterprise income had fallen to just below 50% among public sector-headed households and 24% among private sector-headed households (although the formal private sector measure may not be entirely consistent across

²⁹⁴ International Monetary Fund, "Kenya: Recent Economic Developments" (Washington D.C., 1995).

²⁹⁵ Also discussed by: Waruhiu, "Report of the Civil Service Review Committee 1979/80"; Mwangi wa Githinji, *Ten Millionaires and Ten Million Beggars: A Study of Income Distribution and Development in Kenya* (Hampshire and Burlington: Ashgate Publishing Limited, 2000); Neubert, "Kenya - an Unconscious Middle Class?: Between Regional-Ethnic Political Mobilisation and Middle Class Lifestyles."

²⁹⁶ Author's calculations based on WMS 1994.

²⁹⁷ Author's calculations based on KIHBS 2005/06. However, the agricultural and business income data appears to be underreported.

surveys). The share of households with a second salary or wage earner had also fallen quite considerably. While not conclusive evidence as we have no data points for the pre-crisis era, the higher reliance on secondary income sources in the 1990s compared to the 2000s is consistent with the idea that households diversified incomes in response to the economic crisis of the 1980s and 1990s, and concentrated their efforts again once salaries began to recover.

Table 3.12. Kenya: Percentage of public and private sector-headed households who have secondary incomes, by source

Sources of secondary income	1994		2005/06	
	Public	Private	Public	Private
Operate business	31%	27%	19%	13%
Agriculture or livestock income	40%	28%	39%	17%
Spouse/other family member in employment	49%	45%	32%	25%
<i>Have either business, farm or livestock that is earning income</i>	<i>58%</i>	<i>46%</i>	<i>49%</i>	<i>24%</i>

Sources: Calculated from KE WMS 1994 and KE IHBS 2005/06.

Tanzanian results

The Tanzanian results tell a similar story of change to that of Kenya. Figure 3.5 shows where public sector employees fell within the entire Tanzanian income or consumption distribution in each year.²⁹⁸ Because of Tanzania's large parastatal sector, public employment shares are shown separately for the general government and parastatal sectors in these charts. The results show that public sector-headed households fell from roughly a quarter of the top decile in 1969 to 16% in 2011/12. As in the Kenyan case, most of the reduction took place after structural adjustment, when the number of public sector jobs fell. In the 2000s the government's divestures from the comparatively high-paying parastatal sector explain most of the reduction.

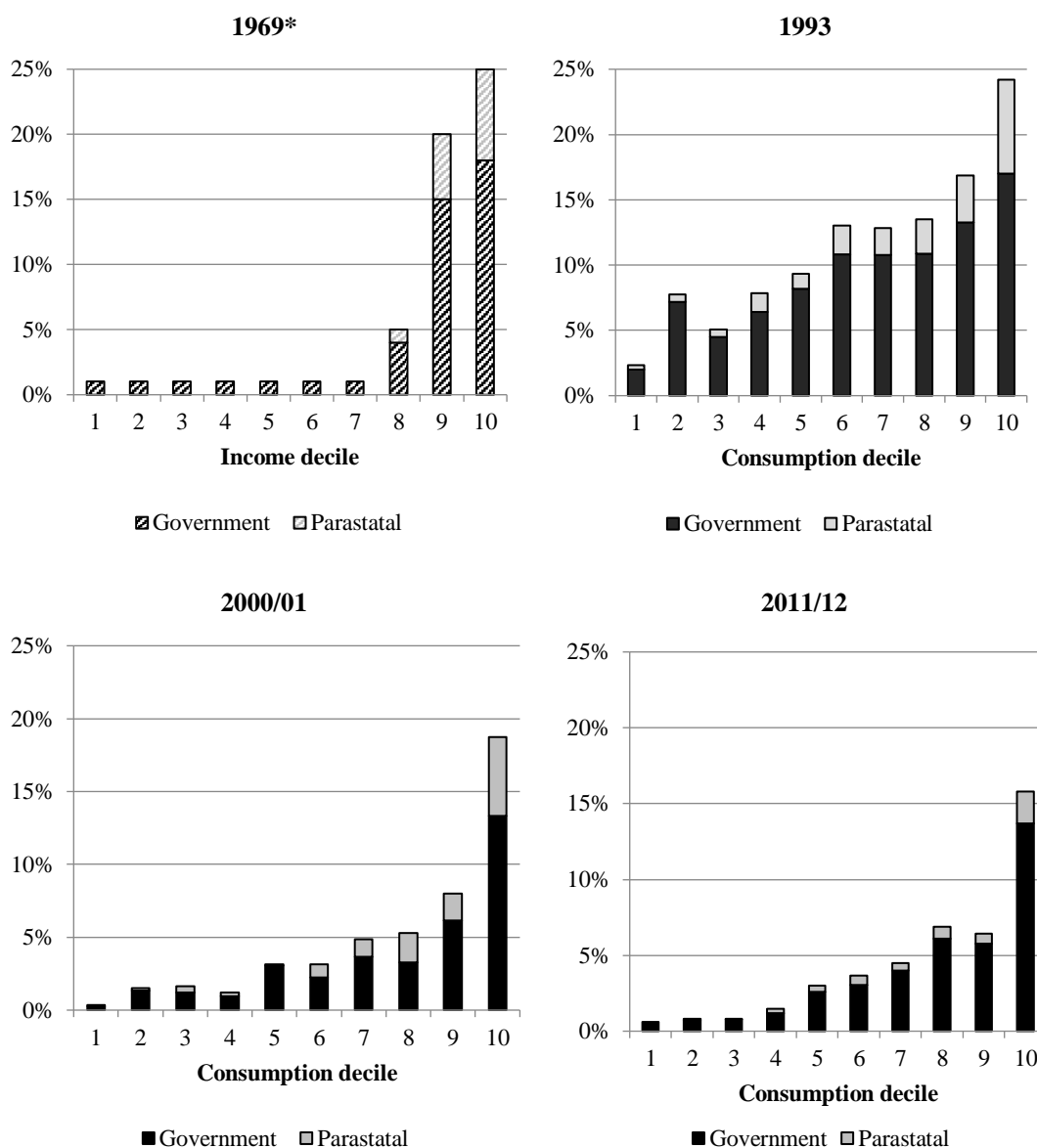
The broader distribution of public sector-headed households also shows considerable change. In 1969 nearly all public sector-headed households had incomes that put them in the top two deciles of income earners. By 1993 a larger share of all public sector-headed households were found towards the middle of the consumption distribution, particularly within the general government, while parastatal sector employees continued to be clustered towards the top.²⁹⁹ Public sector employees in the top decile as a share of all public sector employees fell from 44% in 1969 to 21% in 1993.

²⁹⁸ Note that the 1969 distribution is estimated on the basis of five uneven income brackets and I therefore simply assume an even distribution across the bottom 7 deciles.

²⁹⁹ For support for idea that parastatal employees were better protected, see: Lindauer and Sabot, "The Public/private Wage Differential in a Poor Urban Economy."

By the 2000s Tanzanian public sector salaries had increased significantly and by the end of the decade were close to their 1960s level, while the level of employment had fallen as the government instituted hiring freezes and divested from the parastatal sector (see Chapter 2). Public sector-headed households became more concentrated at the top of the distribution once more, with the public sector share in the top 10% relative to total public sector-headed households rising to 39% by 2000/01.

Figure 3.5. Tanzania: Share of public sector headed households by income/consumption decile



* All distributions normalized by adults in household with the exception of the 1969 measures.
Sources: see Appendix V.II.

Table 3.13 examines the composition of the top 10% and 1% on the basis of the household head's stated sector of work.³⁰⁰ As the public sector share of the top decile fell over the 1990s and 2000s the private sector appears to have gained in size, both among employees and business-owners. As in Kenya, agricultural households fell in share, at least over the course of the 2000s.

In the top 1%, as opposed to the top 10%, public sector-headed households were a larger share throughout the period, but fell from roughly 42% in 1969 to 21% in 2001, before recovering to 25% in 2011/12, presumably on account of rising public sector salaries. Business owners constitute the largest and most rapidly growing share of the top 1%, while agriculturalists fell in share. Private formal sector employee households remained a relatively steady 20% of the top 1% throughout the postcolonial era.

Table 3.13. Tanzania: composition of the top income/consumption decile and percentile, by economic sector of the household head

Main activity of household head	Top 10%				Top 1%			
	1969	1993	2001	2011/12	1969	1993	2001	2011/12
Public	25%	24%	17%	14%	42%	36%	21%	25%
<i>Government</i>	18%	17%	13%	12%	28%	21%	8%	16%
<i>Parastatal</i>	7%	7%	5%	2%	14%	15%	13%	9%
Private employment*	14%	13%	19%	27%	24%	21%	20%	22%
Informal sector / business	}61%	30%	24%	36%	}34%	30%	35%	42%
Agriculture (or fishing)		30%	33%	21%		13%	19%	9%
Other (retirees, students etc.)		3%	5%	3%		4%	3%	

Sources: see Appendix V.II.

Using the same methods as in the Kenyan analysis, asset ownership and housing characteristics are used as an alternative means of ranking households (Table 3.14). Using an asset index rather than household consumption to stratify households raises the share of public sector-headed households in both the top 10% and top 1%, but does not alter the broader story of change. Between 1993 and 2011/12 the public sector share of the top decile fell considerably, while the share of the top 1% shows a more modest reduction. As in Kenya, stratifying households by asset wealth significantly reduces the number of agricultural households in the top strata.

³⁰⁰ As in the Kenyan case, these categories are quite roughly defined and various judgement calls had to be made in order to harmonize categories across surveys.

Table 3.14. Tanzania: composition of the top **asset wealth** decile and percentile, by economic sector of the household head

Main activity of household head	Top 10%				Top 1%			
	1969	1993	2001	2011/12	1969	1993	2001	2011/12
Public	25%	31%	19%	19%	42%	43%	37%	37%
<i>Government</i>	18%	20%	12%	16%	28%	22%	16%	26%
<i>Parastatal</i>	7%	11%	7%	3%	14%	21%	21%	11%
Private employment*	14%	18%	28%	25%	24%	19%	32%	22%
Informal sector / business		32%	33%	43%		29%	24%	34%
Agriculture (or fishing)	}61%	13%	13%	6%	}34%	1%	3%	2%
Other (retirees, students etc.)		6%	7%	7%		9%	4%	6%

Sources: see Appendix V.II.

As in Kenya, the formal sector income declines in Tanzania during the 1970s through early 1990s were partially off-set by household diversification of incomes. In 1993 the vast majority (67%) of Tanzanian public sector-headed households also had some income or own-production of food from farming, livestock or fishing (although this high share may also reflect a large share of casual workers in the public sector sample). Very few, however, reported income from a business. Secondary income sources remained important in the 2000s, although the share with agricultural incomes dropped significantly. In 2000/01 roughly 53% of public sector-headed households had additional income from farming or business activities and 27% had a spouse or child in paid employment. Somewhat unexpectedly the share of public sector-headed households with secondary incomes rose modestly between 2000/01 and 2011/12 despite the continued recovery in public sector earnings. This may be a result of the falling share of parastatal employees in public employment, who were less likely to own farms than their general government counterparts. Unlike in Kenya therefore, there is no suggestion that public sector household concentrated their efforts once earnings in the public sector began to recover.

Table 3.15. Tanzania: Public and private sector-headed household shares with secondary incomes, by income source, 1993, 2000/01 and 2011/12

Additional income source beyond primary employment earnings	1993		2000/01		2011/12	
	Public	Private	Public	Private	Public	Private
Business/self-employment income	4%	4%	26%	33%	26%	22%
Agricultural or fishing income	67%	52%	39%	24%	44%	20%
Spouse/other family member has employment income	N/A	N/A	27%	23%	27%	22%
<i>Have either business or farm that is generating income</i>	69%	55%	53%	46%	58%	38%

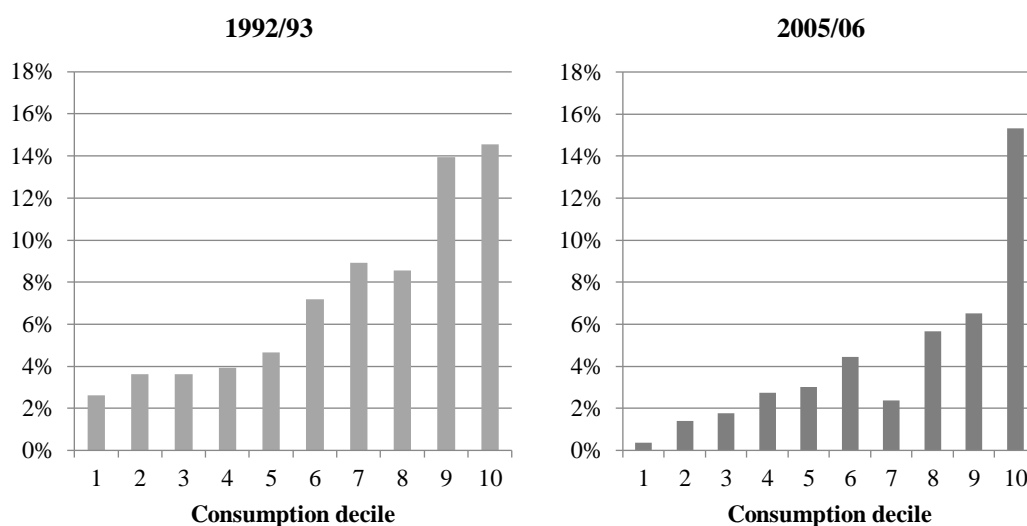
Sources: TZ HRDS 1993; TZ HBS 2000/01; TZ HBS 2011/12.

Ugandan results

The earliest Ugandan survey that includes variables on sector of employment is the 1992/93 integrated household survey, which reflects conditions shortly after the end of the civil war and Yoweri Museveni's rise to power in 1986. Since then Uganda has undertaken regular household surveys, which underlay the country's poverty monitoring systems. I chose to use the 2006 survey as a second point of observation as it is the most recent survey with a sizable sample. Because it has not been possible to locate any household budget surveys for Uganda for the 1960s through 1980s, this analysis is limited to the post-conflict phase.

Uganda's public sector-headed households were a smaller share of all households than in Kenya and Tanzania and the public wage bill was a lower share of GDP (see Chapter 2). Correspondingly, their share of the top consumption decile was lower in the 1990s, at 15%. Between 1992 and 2006 the share of public sector-headed households fell, but improved earnings in the public sector changed the earnings distribution, concentrating a bigger share of all public sector-headed households in the top decile. In contrast to Kenya and Tanzania therefore, the public sector share of the top decile stayed constant between 1992 and 2006. Public sector-headed households in the bottom 90% of the distribution, on the other hand, fell sharply as many casual and unskilled jobs were shed and earnings improved.

Figure 3.6. Uganda: Public sector headed household share of consumption decile



Note: Normalized by adults in household.

Sources: see Appendix V.III.

Table 3.16 details the composition of the top consumption decile and percentile by economic activity of the household head. The trends are similar to those in Kenya and Tanzania, with a fall in the share of households in the top decile relying on agriculture, the share in business rising in the top decile but falling in the top percentile, while the private formal sector

employees increased in both the top decile and percentile. The percentile measures are far from precise, but suggest a higher public employment share at the very top of the distribution in 1992, which fell over the 1990s and early 2000s as the economy recovered.

Table 3.16. Uganda: top **consumption** decile and percentile by main activity of the household head, 1992 and 2006

Main activity of household head	Top 10%		Top 1%	
	1992	2006	1992	2006
Public employment	14%	15%	24%	14%
Private (formal) employment	18%	25%	20%	26%
Farming / agriculture	29%	15%	3%	6%
Self-employed / business	29%	38%	47%	40%
Other (retired, housemaker, student etc.)	10%	6%	6%	15%

Sources: see Appendix V.III.

In Table 3.17 households are stratified based on asset wealth rather than consumption. As in the Kenyan and Tanzanian cases, the asset index is constructed using factor analysis to derive weights for each asset/characteristic. The assets used for the 1992/93 analysis include ownership of a car, telephone, TV and camera, while the housing characteristics include piped indoor water, electric lighting, flush toilet, modern flooring materials, and ‘modern’ cooking fuels (in this case electricity, gas or paraffin). For the 2006 analysis the asset variables were more restricted, and did not include the TV or camera variables (see Appendix V.III).

As in the other two country cases, using asset wealth indices raises the share of wage employees in the top decile, including public sector employees, relative to farming households. Overall however, the trend remains similar, with a relatively steady share of public sector employees in the top decile, and falling share in the top percentile (although the percentile shares are based on a very small sample). Private sector employees and business owners increased in share over the same period.

Table 3.17. Uganda: top **asset wealth** decile and percentile by main activity of the household head, 1992 and 2006

Main activity of household head	Top 10%		Top 1%	
	1992	2006	1992	2006
Public employment	20%	16%	45%	18%
Private employment	22%	30%	20%	35%
Farming / agriculture	18%	11%	1%	2%
Self-employed / business	29%	37%	29%	30%
Other (retired, housemaker, student etc.)	11%	7%	5%	15%

Sources: see Appendix V.III.

As in Kenya and Tanzania, a large share of public sector-headed households relied on more than one income. Over 70% of Ugandan public sector-headed households engaged in agriculture, a family business, or had a second family member in paid employment. These shares did not fall between 1992 and 2006 and a growing share of households in fact started businesses or saw a second household member entering paid employment. As in Kenya and Uganda, a public sector-headed households in 2006 were more likely to have a diversified household income portfolio than households headed by permanent private sector employees. Other studies confirm this importance of alternative income sources. A 2003 tracer survey of Ugandan university graduates, of whom 66% were found to be working in the public sector, found that 55% reported a secondary job or business activity (not counting the activities of other household members).³⁰¹

Table 3.18. Share of public sector-headed households that have at least one household member engaged in a secondary activity, by sector, 1992 and 2006

	1992	2006	
	Public	Public	Private
Farming / agriculture	56%	53%	27%
Business or informal sector	10%	27%	16%
Second family member in paid employment	20%	25%	20%
<i>Household has any secondary activity</i>	<i>72%</i>	<i>74%</i>	<i>49%</i>

Sources: UG HIS 1992; UG NHS 2005/06.

In sum, Uganda’s tumultuous postcolonial history has left its imprint on the income distribution. In comparison to Kenya and Tanzania the public sector share of top income earners was already very low in 1992 (at 15%), likely reflecting the fact that Uganda’s public service never grew as large as its neighbours and average salaries fell further during Uganda’s fiscal collapse of the 1970s and 1980s. Public sector salaries recovered substantially in the 2000s as the economy rebounded, but so did opportunities in the private sector and Uganda’s public service thus remained a constant share of the top 10% of households.

The regional distribution of public sector employment

Across all three countries these wealthy strata of society are concentrated in the urban areas, and particularly in the capital cities. The data suggests that 66% of the Kenyan top 1% of asset wealthy households live in Nairobi (and another 7% in Mombasa) in 2009, 59% of the Tanzanian top 1% in Dar es Salaam (2011/12), and 61% of the Ugandan top 1% in Kampala

³⁰¹ Edward Kirumira and Fred Bateganya, “Where Has All the Education Gone in Uganda? Employment Outcomes Among Secondary School and University Leavers” (Brighton, 2003), 24.

(2006). The declining public sector share in the top percentile is thus largely a function of more comparatively wealthy private sector-headed households in the capital cities. This begs a further question: does the declining share of public sector employment have a distinct geographic pattern? Does the public sector's relative importance differ in rural versus urban areas?

As described in Chapter 2, since the 1960s the geographic distribution of public sector in East Africa has grown more equitable. A larger share of public sector jobs are today found outside the capital cities, in smaller towns and rural areas, compared to the early independence era. As a result, the public employment share of the labour force fell in all three capital cities. A rough estimate of the share of Nairobi households headed by a public sector employee suggests a fall from roughly 35-40% in the 1970s,³⁰² to 23% by 1994, and 8% by 2009.³⁰³ In Dar es Salaam the public sector share fell from roughly 20% in 1970 to 13% in 2000/01,³⁰⁴ and in Kampala from roughly 30% in 1970 to 19% in 1992.³⁰⁵ The fall in public sector-headed households in the urban areas was also accentuated by the growing share of women in public employment, who are more likely to be classified as the spouse rather than head of the household. In Nairobi for instance, the share of public sector employees who were the heads of their household fell from 77% in 1992 to 62% in 2009.³⁰⁶

Given the declining importance of public sector employment in the capital cities relative to the more peripheral parts of the country, has the declining public sector elite share varied by locality? Using the asset wealth index rather than consumption measures (as it allows us to make use of the Kenyan 2009 census), the tables below calculate the public sector share of the top wealth decile for rural and urban areas separately, and the capital city alone. Note that these results will not tally with the earlier decile shares, as the decile thresholds vary across these localities (the cut-off into the top decile among Nairobi residents is far higher than in the rural areas).

The Kenyan results show the steepest decline in the public sector share of the top wealth decile in the capital city, where it fell from roughly 40% in 1994 to 17% in 2009, compared to a fall from 26% to 15% in the rural areas, and 41% to 20% in the urban areas overall. The Tanzanian trends are more ambiguous, and the 1993 results should be treated with caution given the small samples, but suggest extremely high public sector employment levels in Dar es Salaam's

³⁰² Calculated by comparing public sector employment in Nairobi (from KE EES) with total population (KE SA), assuming a household size of four.

³⁰³ KE WMS 1994; KE CENSUS 2009.

³⁰⁴ TZ EES 1971; TZ HBS 2000/01.

³⁰⁵ UG EES 1970; UG IHS 1992.

³⁰⁶ Calculated from KE WMS 1992; KE CENSUS 2009.

highest wealth bracket in 1993, and a sizeable fall since. The decline in the urban areas excluding Dar es Salaam however, was lower than in the rural areas. The Ugandan urban-rural disaggregation mirrors the Kenyan trajectory, with a much steeper decline in the public sector elite shares in the urban than rural areas (the Kampala sample was too small to analyse separately from the urban areas in aggregate). Uganda's rural areas have seen no decline in the public sector share of the elite, while in urban areas the share has halved over a 14 year period.

This disaggregation sheds further light on the reconfiguration of East Africa's elites. Within the capital cities public servants were a larger share of the middle and upper strata in the first decades of independence than in the countries at large. In these localities the public sector share of the top decile has declined more rapidly than in the smaller towns and rural areas. Thus in the capital cities and larger metropolises, if less so in the more peripheral parts of each country, the elite reliance on public employment has fallen markedly.

Table 3.19. Kenya: public sector share of the top decile by asset wealth, by urban/rural locality

	Rural		Urban		Nairobi	
	1994	2009	1994	2009	1994	2009
Public sector share of top decile (asset wealth)	26%	15%	41%	20%	40%	17%
<i>Percentage decline</i>	42%		51%		58%	

Sources: Calculated from the Kenya 1994 WMS and 2009 Housing and population census

Table 3.20. Tanzania: public sector share of the top decile by asset wealth, by urban/rural locality

	Rural			Urban			Dar es Salaam		
	1993	2000	2011	1993	2000	2011	1993	2000	2011
Public sector share of top decile (asset wealth)	19%	16%	12%	37%	39%	30%	57%	40%	33%
<i>Percentage decline (1993-2011)</i>	36%			19%			42%		

Sources: Calculated from Tanzania 1993 HRDS and 2000 and 2011/12 Household Budget Surveys

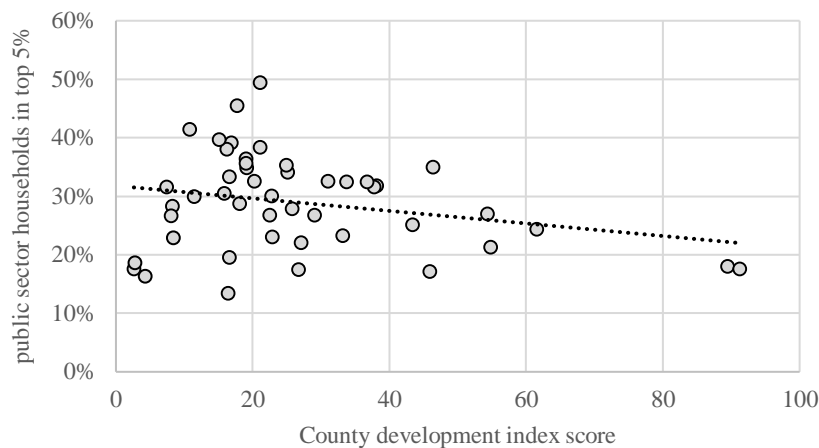
Table 3.21. Uganda: public sector share of the top decile by asset wealth, by urban/rural locality

	Rural		Urban	
	1992	2006	1992	2006
Public sector share of top decile (asset wealth)	16%	15%	41%	20%
<i>Percentage decline</i>	6%		51%	

Sources: Calculated from the Uganda 1992 IHS and 2006 NBS

The large 2009 Kenyan census sample also makes it possible to examine public sector employment shares on a county by county basis. Figure 3.7 calculates the public sector share of the top 5%³⁰⁷ of asset wealthy households by county using the 2009 census, and relates this to the level of development in each county.³⁰⁸ This shows a negative correlation between the public sector share of the wealth elite and the level of economic development in the county. On average, less developed counties have a larger share of the local asset wealth elite work for the public sector.

Figure 3.7. Kenya 2009: percentage of employees in top 5% of asset wealthy households by county



Source: KE CENSUS 2009

3.5. CONCLUSION

The big shifts in public employment and pay over the course of the postcolonial period described in Chapter 2 affected the relative economic standing as well as the absolute level of earnings of public sector-headed households. This chapter has argued that Kenya, Tanzania and Uganda’s educational and income elites are less dominated by public servants today than in the first decades of independence.

Establishing the public sector share of top income, consumption or wealth brackets over time is no simple exercise, and all the available data sources suffer from drawbacks and limitations. The approach in this chapter has been to compile as many of the available sources and measures as possible, providing social stratifications based on education, income tax reports, wage earnings in the formal employment sector, consumption-based measures using household surveys, and asset-based measures using censuses and other surveys. While point estimates

³⁰⁷ Top 5% was the smallest bracket that could be used without losing observations.

³⁰⁸ See Chapter 4 for details on the construction of this development index.

will differ depending on the method used to stratify the population, these sources are broadly in agreement on the direction of change. Whether measured on an educational, income and consumption, or asset wealth basis, the public sector share of the more privileged strata of society has fallen over time.

An analysis of the income tax records from the early 1960s and available household survey data from the 1960s and 1970s show that Africans public servants were indeed a large share of top income earners. Within roughly the top 0.1% they comprised between a half and three-quarters of all income earners. Within the broader distribution 'middle class' their shares were considerably lower yet still reasonably large, comprising roughly a quarter of households in the top decile in Tanzania in 1969 and just over a third in Kenya in 1975 (no Ugandan estimates are available for this period).

Between the 1970s and 2000s, the share of public sector employees in the top income or consumption decile roughly halved in Kenya and Tanzania. While public sector-headed households constituted in the order of 36% of households in the top income decile in Kenya in 1975, this share had dropped to 30% by 1994 and 17% by 2005/06. The Tanzanian public sector share of the top 10% of income earners started lower, falling from an estimated 25% in 1969 to 14% in 2011/12. For Uganda there are no early estimates with which to compare the shares in the 1990s and 2000s, and no fall in top decile share in the 1990s, but the levels were probably lower to begin with and by the 2000s they were comparable to those in Kenya and Tanzania. In the top percentile, as opposed to the top decile, there also appears to have been some decline, although the Tanzanian public sector share of the top percentile rebounded slightly between 2000/01 and 2011/12 while the Kenyan 2009 census data suggests a more modest percentile fall than that given budget household budget surveys. These declines were sharper in the capital cities than in rural and smaller urban centres, suggesting that the growing urban metropolises have undergone the most extensive structural change. Interestingly, despite the differences in economic legacies between Kenya's pro-capitalist orientation and Tanzania's statist one, the results are not too dissimilar, although Tanzania's public servants probably remain a larger share of the top 1% than in the neighbouring countries.

Despite the large fall in public sector salaries in the 1970s and 1980s these results suggest that in Kenya and Tanzania, albeit not in Uganda, the structural adjustment reforms of the 1990s had the bigger impact on the public sector share of top incomes, with most of the decline in both the top decile and percentile happening between the early 1990s and late 2000s. This is somewhat surprising as average public sector earnings were rising in relation to GDP per capita over this period, which ought to have shifted public sector employees higher up in the distribution. There are several possible reasons for this. In Tanzania in particular, the public

sector decline in the top decile was primarily driven by divestures from the high paying parastatal sector. In both Kenya and Tanzania it also appears that income inequality increased over this period, possibly shifting a greater share of household earnings into private sector-headed households at the top of the distribution. Kenyan public sector-headed households also reduced the extent to which they complemented their public sector earnings with earnings from family farms, businesses or other employment. Furthermore the growing share of women in the public sector has reduced the share of public sector-headed households relative to total public sector labour force participants. Public sector earnings are more often complementing the earnings of a private sector-employed spouse or that of another public sector worker. In Kenya for instance, 40% of spouses working for the public sector are married to another public sector employee.³⁰⁹

Relative to other regions of the world, the share of public sector headed-households in the top 10% or top 1% are not exceptionally high today. In all three countries the share of public sector-headed households in the top 10% is lower than in the United Kingdom. In the United Kingdom the public sector shares taper off more strongly in the top percentiles, a pattern that is less obvious in the three East African cases. However, the educational attainment gap between the public and private sector employees in East Africa is also higher than in the United Kingdom, which may explain this difference.

This story of change provides a cautiously optimistic tale. Both at the very top and among the broader middle class, those households at the fore of the income distribution during East Africa's economic recovery in the 2000s are primarily households in the private sector. Compared to the first two decades of independence, a larger share of the relatively prosperous Kenyan and Tanzanians, and presumably also Ugandans, are today business owners and employees at banks and in other service jobs, suggesting that Frantz Fanon's derided 'bourgeoisie of the civil service' may no longer be as important a social force. This analysis is of course limited to employment to the government's employment role, and does not rule out the possibility that the state's influence and control over the private sector may have increased over the same period, through for instance outsourcing and contracting with private contractors. However, other recent work by Arriola and Handley suggests that this is probably not the case, given that government involvement in the financial and productive sectors have been declined over the same period.³¹⁰

³⁰⁹ Calculated from KE CENSUS 2009.

³¹⁰ Arriola, "Capital and Opposition in Africa: Coalition Building in Multiethnic Societies"; Handley, "Varieties of Capitalists? The Middle-Class, Private Sector and Economic Outcomes in Africa."

How these trends will play out in the future, however, are far from certain. Kenya's 2010 decision to devolve power to county governments for instance, has raised concerns that local governments are beginning to expand the level of public employment again, as well as creating a new tier of high-paying political posts at local level.³¹¹ This may boost the importance of public sector jobs in county capitals, but could also trigger future wage deciles. It may also lead to a continued divergence between the employment distribution in Nairobi and Mombasa and those in the peripheral towns. Economic setbacks could also slow the ongoing transition, if falling demand reduced the growth of high-paying private sector jobs.

Nonetheless, just as the last chapter did, this chapter underscores that African economies have been far from static over the past half-century and are unlikely to become so in the future. Political economy interpretations of the continent's postcolonial performance need to take greater cognizance of the changes to the structure of household earnings in the decades since independence, and identify the winners and losers of these shifts in different eras. Public sector employment was an important source of income for comparatively well-off Kenyans, Tanzanians and Ugandans at independence, but the political and social status of public sector employees ebbed and flowed over the subsequent decades and their relative importance in the social hierarchy is by all accounts at its lowest today.

³¹¹ Michelle D'Arcy and Agnes Cornell, "Devolution and Corruption in Kenya: Everyone's Turn to Eat?," *African Affairs* 115, no. 459 (2016): 246–73.

Chapter 4.

Public servant, who art thou? Inequalities in public sector employment

4.1. INTRODUCTION

Despite their declining share of the labour force, public sector wages still constitute an important source of income for 5-10% of all Kenyan, Tanzanian and Ugandan households and touch an even larger share indirectly. And although their earnings may have declined since the 1960s, the previous chapter shows that public servants remain concentrated towards the top of the income distribution. Given this, what types of people benefit from these comparative privileged public sector salaries? What horizontal inequalities (regional and ethnic) has the public sector's hiring strategies given rise to? Have some social groups benefitted disproportionately from government jobs?

The previous two chapters have considered the evolution of public employment and pay and its effect on the social stratification. This chapter instead examines the composition of the public sector labour force in relation to theories about unequal access to state resources in Africa. It uses recent census data to construct a logistic model that examines the influence of education, age, gender, ethnicity, social background and place of birth on a person's likelihood of holding a public sector job, and how these characteristics have changed over successive cohorts. This sheds light on vertical and horizontal inequalities in access to state jobs and thereby, indirectly, on the politics of public employment.

This chapter argues that inequalities in access to public employment are less pronounced than much of the secondary literature would have us believe. In all three countries high educational attainment sharply increases the probability of working for the state. Graduates from colleges and universities have historically faced relatively little competition for jobs, which by extension constrained political influence over hiring decisions. Moreover, among the educated in Kenya and Uganda, if less so in Tanzania, women and candidates from less developed parts of their respective country are more likely to work for the government. This has the effect of making the public service more socially, regionally and ethnically equitable than educational attainment alone would predict. As a result, ethnic inequalities in public sector job access are not enormous, and with one exception, the Presidency of Daniel Arap Moi in Kenya, there is little sign of an employment advantage for coethnics of past or current presidents.

I argue that formal policies provide plausible explanations for this pattern. A comparatively equitable geographic spread of public sector employment opportunities in combination with quotas and other forms of affirmative action in educational institutions and employment, as well as the falling attractiveness of public employment in an era of growing private sector demand for skilled labour, have the effect of privileging candidates from less developed regions and contributes to a comparatively inclusive public service.

These conclusions apply to Kenya and Uganda but less so to Tanzania. Interestingly, despite Tanzania's government's greater commitment to social justice under Julius Nyerere, its public service is less of an aid to social mobility than in its neighbouring countries. This throws doubt on any simple causal relationship between ethnic polarization and inequality.

This chapter starts with a short summary of the theoretical predictions about inequalities in public sector job access. This is followed by a discussion of the relationship between educational policies and public employment. After that I proceed with the data description and analysis, examining, in turn, the effect of education, place of birth, ethnicity and parental characteristics on the probability of working for the state. The conclusion discusses the implications of these results for theories about public employment access.

4.2. PREDICTIONS ABOUT INEQUALITIES IN AFRICAN PUBLIC SERVICES

Since independence many different theories have been put forward to explain who and how people came to work for the public sector in postcolonial Africa and the types of inequalities this gave rise to. Literature from the early independence period framed this debate in class terms, asking whether high-earning public sector employees formed a nascent, exploitative class. The more optimistic observers, eschewing class frameworks, highlighted the meritocratic nature of Africa's public services and speculated that in the absence of strong social stratification under colonialism, mid- and senior-level positions in the public service were open to aspirants from a relatively broad cross-section of society.³¹²

Others, however, painted the emerging African educational elite as a class in the making. They assumed that the institutional structures in postcolonial states would be shaped to suit the interests of its incumbents. Several articles from the 1970s and 1980s, from Kenya in particular, showed that parental income strongly influenced the likelihood of educational progression.³¹³

³¹² P.C. Lloyd, *The New Elite of Tropical Africa* (Oxford: International Africa Institute, 1966).

³¹³ For instance: Kabiru Kinyanjui, "Education and Inequality in Kenya: Some Research Experience and Issues" (Nairobi, 1981); Kilemi Mwiria, "Kenya's Harambee Secondary School Movement: The Contradictions of Public Policy," *Comparative Education Review* 34, no. 3 (1990): 350–68; Kirumira

This effect was expected to get worse as economic growth slowed and the state's ability to employ a large share of graduates declined.³¹⁴ This literature therefore predicted that today's public services will predominantly be staffed by children of a pre-existing elite.

In more recent decades, however, researchers have moved away from this class-based lens and instead characterised African bureaucracies as clientelist or patronage-based, focusing on horizontal inequalities between ethnic groups or regions rather than vertical inequalities between individuals. Kitschelt and Wilkinson and Hicken's definition of clientelism as a 'contingent exchange' would imply that public sector jobs are given to specific individuals or narrowly defined groups in exchange for votes or other political favours.³¹⁵ If either party reneges this deal can be reversed.³¹⁶ This understanding of clientelism or patronage implies that the political patron has direct control over public sector jobs and the power to allocate and withdraw them. This is expected to lead to a public service staffed by people ill-suited to their official responsibilities and in excess of actual staffing needs.

A related literature considers ethnic favouritism. To the extent that they invoke patronage, these writers use the concept in a looser sense to refer to the targeting of state resources towards favoured ethnic, religious or regional groups, without necessarily requiring a formal quid pro quo. Several recent papers have examined whether coethnics of past or present Presidents in Africa have received a disproportionate share of public sector resources, and many find that indeed they do.³¹⁷ In Kenya there has even been a special investigation into ethnic equity in state employment. Since 2011 the National Cohesion and Integration Commission has undertaken a series of ethnic audits of different public sector institutions, in order to determine whether jobs are distributed fairly.³¹⁸ It has found that the ethnic groups of past or present presidents (the Kikuyu and Kalenjin), are overrepresented compared to their population share, although this analysis compared employment shares to aggregate population shares without

and Bateganya, "Where Has All the Education Gone in Uganda? Employment Outcomes Among Secondary School and University Leavers."

³¹⁴ Lloyd, *The New Elite of Tropical Africa*.

³¹⁵ Herbert Kitschelt and Steven I. Wilkinson, 'Citizen–Politician Linkages: An Introduction,' in *Patrons, Clients, and Policies: Patterns of Democratic Accountability and Political Competition*, ed. Herbert Kitschelt and Steven I. Wilkinson (Cambridge: Cambridge University Press, 2007); Allen Hicken, 'Clientelism,' *Annual Review of Political Science* 14, no. 1 (2011).

³¹⁶ See also: Robinson and Verdier, "The Political Economy of Clientelism."

³¹⁷ Raphael Franck and Ilia Rainer, 'Does the Leader's Ethnicity Matter? Ethnic Favoritism, Education, and Health in Sub-Saharan Africa,' *American Political Science Review* 106, no. 02 (2012); Robin Burgess et al., 'The Value of Democracy: Evidence from Road Building in Kenya,' *American Economic Review* 105, no. 6 (2015); Eric Kramon and Daniel N. Posner, 'Ethnic Favoritism in Primary Education in Kenya,' *Quarterly Journal of Political Science* 11, no. 1 (2016).

³¹⁸ Government of Kenya. National Cohesion and Integration Commission, 'Towards National Cohesion and Unity in Kenya: Ethnic Diversity and Audit of the Civil Service,' (Nairobi 2011).

regard for ethnic group differences in demographic structure, labour force participation or educational attainment.

While the ethnic favouritism literature focuses on the redistributive actions of politicians and the inequalities this gives rise to, others literature has highlighted the persistence of structural inequalities between regions, religious or ethnic groups and its potential to inflame ethnic conflict. It predicts that long-run geographic inequalities in educational attainment will leave their mark on the composition of public employment. In Kenya, for instance, the Africanisation process of the 1960s was derogatorily referred to as ‘Kikuyisation’ on account of the high share of Kikuyus in the civil service.³¹⁹ In 1968 there was even a debate in the Kenyan Parliament about the merits of establishing a Select Committee to investigate evidence of ethnic favouritism in the civil service. The debate pitted those Parliamentarians who accused the government of ‘tribalism’ against those that viewed such inequalities as a consequence of uneven educational attainment during the colonial era.³²⁰ President Nyerere of Tanzania raised similar concerns in his 1962 inaugural speech stressing that ethnic tensions surrounding employment and education had resulted from uneven missionary penetration:

‘You will discover that the missionaries did not build their schools all over Tanganyika, but only in certain areas. And as a result of this not only are the majority of educated Africans today likely to be Christians, but a very large proportion of them are drawn from the Wahaya, Wanyakyusa, and Wachagga peoples. So those who would strike at our unity could equally well exploit this situation to stir up animosity between the tribes. (...)’³²¹

Yet some scholars have argued that precisely because of the explosive nature of horizontal inequalities in multi-ethnic settings, such societies often go to greater lengths than others to promote horizontal equity in access to state resources. Azam argued that to reduce the risk of active conflict, leaders in Africa can either deter potential rebels by investing in their security services, or co-opt dissenters by redistributing to them.³²² He suggests that when leaders redistribute, the redistribution is often mediated through formal sector labour markets and the education system. Communities will invest in- and send their most educationally promising youth into the urban labour market, and they in turn will remit some of their earnings and use their positions of power to ensure that public resources reach their communities of origin.

³¹⁹ Donald Rothchild, “Ethnic Inequalities in Kenya,” *The Journal of Modern African Studies* 7, no. 4 (1969): 689–711, doi:10.2307/159158.

³²⁰ Ibid.

³²¹ Nyerere, *Freedom and Unity: A Selection from Writings and Speeches 1952-65*.

³²² Azam, “The Political Geography of Redistribution.”

Along the same lines, a recent paper by Francois, Rainer and Trebbi (FTR) studied the ethnic composition of cabinets in Africa and found them to be surprisingly inclusive, with ministerial appointments allocated proportionately to the ethnic composition of the population.³²³ FTR suggest that the members of these ethnically-inclusive cabinets will use the ministries over which they preside to extend the flows of patronage to their respective ethnic groups, ensuring a relatively equitable ethnic distribution of spending and employment in aggregate.³²⁴

While Azam and FTR invoke patronage to explain this relatively even pattern of spending, the same distributional results could have been achieved through affirmative action and regional policies. While their efficacy may be subject to debate, many African states have used formal affirmative action policies, often aimed to improve the regional distribution of educational opportunities and jobs, and in some cases explicitly motivated by a desire to reduce ethnic conflict.³²⁵ Tanzania accepted the need for regional quotas for entry into secondary school in the 1960s and adopted a formal quota system in 1972.³²⁶ Kenya introduced a district quota system in its national secondary schools in the 1980s, as well as requiring that provincial secondary schools to admit most of its candidates from the local area, which had the effect of reducing competition from higher performing ethnic groups outside the catchment area.³²⁷ Kenyan teacher training colleges also used district quotas, which lowered the bar for students from historically underserved regions. Since 2003 Uganda distributes roughly a quarter of university scholarships based on district quotas to candidates from underprivileged backgrounds,³²⁸ while in Kenya the grade-point cut-offs for government-sponsored university and college courses are lower for women, minority and marginalised groups and disabled applicants.³²⁹

In recent years these governments have also sought to address equity in job access directly. Following the post-election violence in 2007, Kenya adopted the National Cohesion and Integration Act (2008), which requires that ‘all public establishments [...] seek to represent the diversity of the people of Kenya,’ and prohibits public establishments from hiring more than

³²³ Patrick Francois, Ilia Rainer, and Francesco Trebbi, 'How Is Power Shared in Africa?,' *Econometrica* 83, no. 2 (2015).

³²⁴ Francois, Rainer, and Trebbi, 'How Is Power Shared in Africa?,' 466.

³²⁵ For instance secondary schooling, see: W. T. S. Gould, "Secondary School Admissions Policies in Eastern Africa: Some Regional Issues," *Comparative Education Review* 18, no. 3 (1974): 374–87.

³²⁶ Pieter J. D. Drenth, Henk van der Flier, and Issa M. Omari, "Educational Selection in Tanzania," *Evaluation in Education* 7 (1983): 93–217.

³²⁷ Munene Mwaniki, 'Mother Tongue Education in Primary Teacher Education in Kenya: A Language Management Critique of the Quota System,' *Multilingual Education* 4, no. 11 (2014).

³²⁸ Connie V. Nshemereirwe, *The Relationship between Pre-University Schooling and University Grades in Uganda* (Unpublished PhD dissertation, University of Twente, 2014).

³²⁹ The Kenya universities and colleges central placement service, "Placement Processing," 2014, http://www.kuccps.net/sites/default/files/Placement_Processing_16042014_v1.pdf.

30% of their employees from a single ethnic community.³³⁰ Following the civil conflict in Uganda, the government introduced district quotas in the army.³³¹ Efforts to decentralise recruitment to local governments in Uganda since the 1990s have also been interpreted as a means of ensuring greater equity in public employment as local level recruitment is expected to privilege local candidates.³³²

In parallel with these explicit attempts to level the playing field, some have suggested that the highly bureaucratised, transparent hiring criteria in place in the East African public sectors (which emphasise educational qualifications and years of experience) are a direct reaction to ethnic polarization, as simple transparent rules help to reduce accusations of capture.³³³ Perceptions of public servants themselves support the idea of a strong formal emphasis on merit. A 2006 study by Therkildsen and Tidemand, which surveyed graduate-level public servants in Tanzania and Uganda, found that over 80% believed merit was an important factor in recruitment decisions, although a minority also believed that political and social connections mattered.³³⁴

Successful affirmative action policies should have a similar distributional effect to that predicted by Azam and FTR; a relatively equitable distribution of public sector jobs on a regional or ethnic basis. While FTR predicts that this levelling is the effect of patronage resources trickling down from an inclusive cabinet, affirmative action or regional policy fosters meritocratic competition, albeit with a lowering of the bar for predefined underprivileged or marginalised groups. It also shifts competition and bargaining to the formal political arena. In essence then, it may well be that formal rules and institutions – shaped in turn by ethnic considerations – have the bigger effect on employment distribution.

In sum, the existing literature makes a range of predictions about public sector hiring imperatives in Africa and the resulting inequalities in job access. Large-scale microdata samples from the Kenyan, Tanzanian and Ugandan censuses makes it possible to examine some of these hypotheses quantitatively. By identifying public servants within these census samples,

³³⁰ Government of Kenya, *National Cohesion and Integration Act* (2008). Section 7(2).

³³¹ Lindemann, “Exclusionary Elite Bargains and Civil War Onset: The Case of Uganda.”

³³² Ibid.

³³³ Rothchild, “Ethnic Inequalities in Kenya”; Drenth, van der Flier, and Omari, “Educational Selection in Tanzania.”

³³⁴ Ole Therkildsen and Per Tidemand, 'Staff Management and Organisational Performance in Tanzania and Uganda: Public Servant Perspectives,' (Danish Institute for International Studies, Copenhagen, 2007); Ole Therkildsen, 'Working in Neopatrimonial Settings: Public Sector Staff Perceptions in Tanzania and Uganda,' in *States at Work: Dynamics of African Bureaucracies*, ed. Thomas Bierschenk and Jean-Pierre Olivier de Sardan (Brill, Leiden and Boston, 2014).

we can see how their characteristics, be it educational, ethnic or gender, differ from those of the labour force at large, and how these inequalities conform to the various predictions.

As already noted, this chapter is not the first study to examine ethnic and regional inequalities in public employment in East Africa, but earlier studies have tended to examine a fairly small number of high level offices, be it ministerial appointments or cabinets,³³⁵ senior civil servants,³³⁶ or ministers, deputy ministers and the army officer corps.³³⁷ Cabinet positions and other appointed roles, however, are by design a form of patronage: these post-holders are appointed by the president or party in order to deliver a political agenda.³³⁸ These strategic posts serve a different purpose from those of the rank and file public servants. This study in contrast considers the public sector labour force at large.

4.3. PUBLIC EMPLOYMENT, EDUCATIONAL ATTAINMENT AND EDUCATIONAL INEQUALITIES

Before examining the characteristics of the public sector labour force, this section discusses the relationship between education and public sector employment. As discussed in Chapter 2 and 3, over the course of the postcolonial era newly created public sector jobs in Kenya, Tanzania and Uganda have disproportionately benefitted educated East Africans. An estimated two-thirds or more of all public sector employees had at least four years of secondary education by the 2000s, compared to an educational status of the working population as a whole which ranged from a quarter in Kenya to around 10% in Tanzania and Uganda (See Table 3.3.). Public employment outcomes therefore need to be viewed in relation to education policy.

The relationship between public employment and education in East Africa in part reflects a colonial legacy of underinvestment in human capital formation. In the late colonial and immediate postcolonial era policymakers were preoccupied not with the consequences of an overstuffed bureaucracy, but with the shortage of skilled African manpower to replace expatriates in the colonial service.³³⁹ Post-primary educational policies, and particularly those relating to tertiary education, were designed with the skills-needs of the public service in mind. Angus Maddison characterised the skills gap in Sub-Saharan Africa in 1965 as a ‘crisis situation’, as ‘[a]lmost all leading posts in the administration and the economy were held by

³³⁵ Francois, Rainer, and Trebbi, 'How Is Power Shared in Africa?.'

³³⁶ Bangura, 'Ethnic Inequalities.'

³³⁷ Lindemann, 'Exclusionary Elite Bargains.'

³³⁸ For a discussion of political appointments and patronage: Merilee S. Grindle, *Jobs for the Boys: Patronage and the State in Comparative Perspective* (Harvard University Press, 2012).

³³⁹ Angus Maddison, "The Contribution of Foreign Skills, Training and Technical Assistance to Economic Development," *Development Centre Studies* (Paris, 1965), 18.

expatriates and settlers until very recently.³⁴⁰ There was strong pressure on independence leaders to replace this foreign public sector elite with Africans, yet persistent under-investment in education meant that there simply were not enough Africans with the requisite skills to meet the demand.

The fervour of the debate is captured in the political discourse and policy documents from this time. In response to the Kenyan education minister's 1965 budget proposal for instance, one Member of Parliament admonished that: 'quite often when he has been questioned in this House about Africanization, we are told, that we cannot Africanize unless we have experienced people, and we would expect a definite government policy which would lead our nation to provide all the personnel it requires.'³⁴¹ In Kenya's first development plan President Kenyatta stressed in his introduction that '[o]ur plan places particular emphasis on the expansion of secondary education. This should have the greatest and earliest effect on the capacity of Kenya's citizens to contribute to the nation's development and to benefit from it.'³⁴² Tanzanian government officials used similarly emotive language: 'At her Independence in 1961 Tanzania (...) had very few citizens in high and middle level posts. Thus, it became the Country's top priority to produce qualified manpower for almost 86% of the then existing high and middle level posts were held by foreigners. Everything else had to wait.'³⁴³ Uganda's first president, Milton Obote, explicitly highlighted the relationship between manpower and full independence from the colonial powers in a speech from 1969:

'The replacement of expatriate staff by the citizens at all levels is a fundamental need for the consolidation of our independence, and the production of local qualified staff must therefore be given priority over all other educational requirements. If this is not done or achieved the independence of the country becomes lopsided and the most powerful instrument - the government - which must belong to the people becomes weak and unresponsive to the wishes of the people.'³⁴⁴

All three governments therefore tailored their investments in post-primary education to the expected manpower needs of the state.³⁴⁵ Fearing a loss of government-financed tertiary

³⁴⁰ Ibid.

³⁴¹ Kenya National Assembly. (1965) Debates of the National Assembly (Hansard) Vol.5 Col. 1178 (20th July 1965)

³⁴² Kenya, "Development Plan, 1964-1970" (Nairobi, 1964)., Introduction by Prime Minister Kenyatta.

³⁴³ Statement made in 1973, cited in: Tanzania. Ministry of Labour and Manpower Development., "Tracer Study of Secondary School Leavers," 1.

³⁴⁴ Cited in: Cooper F Odaet, "Implementing Educational Policies in Uganda," World Bank Discussion Papers (Washington D.C., 1990).

³⁴⁵ See for instance: Tanganyika. National Assembly., "High-Level Manpower Requirements and Resources in Tanganyika, 1962 - 1967"; Kenya. Ministry of Economic Planning and Development, "High-Level Manpower Requirements and Resources in Kenya, 1964-1970"; Uganda. Ministry of Economic Development and Planning., "Work for Progress: The Second Five-Year Plan 1966-1971" (Entebbe: Government Printer, 1966).

graduates to the private sector, moreover, East Africa's governments provided tied bursaries that required graduates from certain tertiary institutions to work for the government for 2-5 years upon graduation. In exchange these graduates received an employment guarantee. There was a circularity to the employment system: expanding the educational system required the state to hire more skilled workers. As the system expanded more people graduated with the expectation (and in some cases explicit promise) of a public sector job.³⁴⁶

The shortage of educational supply proved a short-lived phenomenon however, as the popular demand for education after independence proved insatiable. Aided by government spending, primary school enrolment exploded in the decades after independence, with the number of primary school students increasing five-fold in Kenya, eight-fold in Tanzania and three-fold in Uganda between c.1960-1980.³⁴⁷ Secondary enrolment also grew rapidly, but the higher unit cost and stronger central government controls over secondary schoolings meant planners initially tried to curb secondary access to what they considered a reasonable level of growth, albeit with varying success across the three countries. Governments in all three countries subsidized secondary and tertiary education heavily. University students received full bursaries, including accommodation, food and supplies; secondary schooling in public schools was also largely paid for by the state. Fiscal ceilings therefore put a relatively firm cap on the number of students that could be catered for in public secondary and tertiary institutions. In Kenya in 1968 the annual per student cost of university education was 27 times GDP per capita.³⁴⁸ In Ugandan parliamentary discussion the ministry puts the unit cost of secondary education at £1,000 per year, or 26 times GDP per capita, on account of Uganda's expensive boarding school system.³⁴⁹ Tanzania's secondary schools were also mostly boarding schools and therefore had high unit costs.³⁵⁰

Some country differences in educational policy deserve note. In Kenya the government encouraged a separate track of so-called Harambee schools – community funded schools – to emerge alongside the government-financed secondary schools. This helped to shift some of the

³⁴⁶ This argument has been made by: World Bank, "Kenya: Re-Investing in Stabilization and Growth through Public Sector Adjustment"; Leinert and Modi, "A Decade of Civil Service Reform in Sub-Saharan Africa."

³⁴⁷ Statistical Appendix 1.

³⁴⁸ Gary S Fields, "Private Returns and Social Equity in the Financing of Higher Education," in *Education, Society and Development: New Perspectives from Kenya*, ed. David Court and Dharam P. Ghai (Nairobi: Oxford University Press, 1974).

³⁴⁹ Uganda National Assembly. 1964/65. Debates of the National Assembly (Hansard), Vol. 49 : 2724

³⁵⁰ Sabot and Knight, *Education, Productivity, and Inequality : The East African Natural Experiment*.

popular pressure for secondary education from the government to local communities.³⁵¹ With time, however, this put pressure on the government to extend support to Harambee schools. Starting the 1970s select Harambee schools were allocated teachers and other resources from the national budget, shifting them into a new category of ‘assisted’ schools.³⁵² Some have argued that this increased the regressivity of educational spending as it opened a back door for richer communities, which were in a better position to start Harambee schools, to access public education funds.³⁵³ It also spread the secondary school budget more thinly and resulted in falling per student spending in the traditional government schools.³⁵⁴

The Tanzanian central government maintained a firmer grip on secondary school expansion, limiting it in line with projected manpower needs and restricting private schooling on equity grounds.³⁵⁵ A government report from 1982 made the distinction between secondary education for national development versus education as a right, noting that ‘one of the principles guiding manpower policy in Tanzania is to provide secondary and higher education only to the extent justified by the manpower requirements of the economy (...) due to constraints in resources the Country cannot afford to educate everybody to the extent they would like.’³⁵⁶ In the mid-1980s the government liberalized its policies on private education and the country has seen a big growth in private enrolment since.³⁵⁷

Uganda had a longer tradition of secondary schooling than either Kenya or Tanzania, with education rooted in religious institutions during the colonial era. Private education thus had and retained a bigger place in the secondary education system after independence and already by 1969 provided 40% of all secondary schools.³⁵⁸ However, as in Kenya, the Ugandan private schools on the whole provided inferior education to that of the government schools, and were thus less competitive.³⁵⁹ In the 1980s, motivated by budget constraints, the government

³⁵¹ Claudia Buchmann, “The State and Schooling in Kenya : Historical Developments and Current Challenges,” *Africa Today* 46, no. 1 (1999): 95–117; Mwiria, “Kenya’s Harambee Secondary School Movement: The Contradictions of Public Policy.”

³⁵² Ibid.

³⁵³ Ibid.. This may have been true on a regional basis, but Sabot and Knight (1990) find that Harambee schools increased opportunities for social mobility when compared to the restricted Tanzanian system.

³⁵⁴ Buchmann, “The State and Schooling in Kenya : Historical Developments and Current Challenges.”

³⁵⁵ Gerard Lassibille, Jee-peng Tan, and Suleman Sumra, “Expansion of Private Secondary Education : Lessons from Recent Experience in Tanzania,” *Comparative Education Review* 44, no. 1 (2000): 1–28.

³⁵⁶ Tanzania. Ministry of Labour and Manpower Development., “Tracer Study of Secondary School Leavers,” 19.

³⁵⁷ Lassibille, Tan, and Sumra, “Expansion of Private Secondary Education : Lessons from Recent Experience in Tanzania.”

³⁵⁸ Stephen P. Heyneman, “Education during a Period of Austerity: Uganda, 1971-1981,” *Comparative Education Review* 27, no. 3 (1983): 404.

³⁵⁹ David R. Evans, *Teachers as Agents of National Development: A Case Study of Uganda* (New York: Praeger Publishers, 1971).

followed the Kenyan example of encouraging community-supported day secondary schools, where the capital costs were covered by communities and supplies and teaching staff financed by the government.³⁶⁰

As illustrated in Table 4.1, secondary schooling expanded at different paces in the three countries. Using population data to roughly estimate the size of the secondary and tertiary-aged cohorts, the table below calculates rough gross enrolment rates for secondary school (Form I-IV) and tertiary education (including teacher training). Kenya had the most rapid growth in secondary and tertiary education in the first decades of independence with secondary enrolment six times higher than in Tanzania by the 1980s. Uganda's educational growth was respectable considering the perilous state of the economy, and converged with Kenya's in the 1990s. All three countries saw strong attainment growth in the 2000s and Tanzania's secondary and tertiary attainment levels began to converge with those of its neighbours.

Table 4.1. Kenya, Tanzania and Uganda: Secondary and tertiary enrolment, 1961 - 2000

	1961	1970	1980	1990	2000	2010
Secondary gross enrolment rate						
Kenya	3.2%	11.6%	26.0%	27.4%	23.8%	45.4%
Tanzania	1.2%	3.1%	3.7%	5.8%	7.4%	37.5%
Uganda		4.3%	5.7%	14%	20.4%	37.9%
Tertiary gross enrolment rate						
Kenya	1.2%	2.5%	3.0%	4.3%	3.8%	7.8%
Tanzania		1.2%	1.5%	1.5%		6.9%*
Uganda		1.9%	2.2%		4.2%**	9.7%**

* 2009. ** Total enrolment at all tertiary institutions, unclear if all are degree/certificate courses.

Sources and definitions: Secondary enrolment in Form I-IV over population aged 13-16; tertiary enrolment (incl. teacher training) over population aged 20-22. Enrolment data, see Statistical Appendix 1; population data from WB WDI.

As the educational system expanded, however, the pressure on the state to continue employing graduates increased, even when this threatened the affordability and efficiency of the public service itself. In 1986 the Kenyan government finally abandoned its employment guarantee for graduates from state colleges on the grounds that it was no longer sustainable. In Tanzania, however, where educational expansion had proceeded more slowly, the government continued employing a large share of graduates for longer and never formally abandoned its employment guarantee. Qualitative evidence from Uganda suggests a similar dynamic, although the years of conflict also appear to have weakened the bargaining position of graduates.³⁶¹

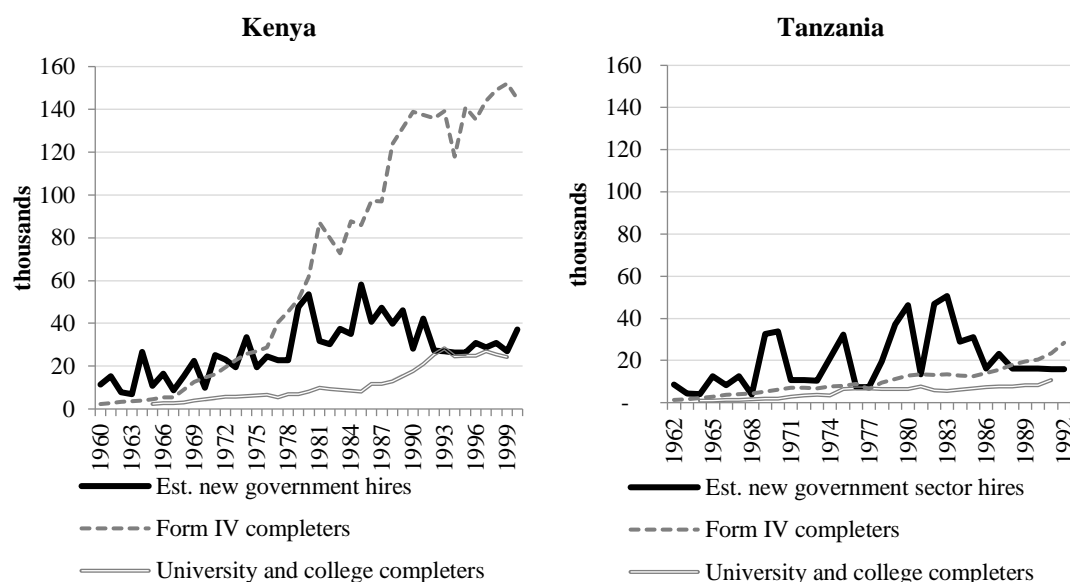
³⁶⁰ UNESCO, "Uganda: Education: Recovery and Reconstruction" (Paris, 1983).

³⁶¹ International Labour Organisation, "Wages, Income Policies and Employment in Uganda: Agenda for Institutional Reform" (Addis Ababa, 1989).

Figure 4.1 illustrates the relationship between public sector job creation and educational supply in Kenya and Tanzania (comparable series could not be constructed for Uganda). These charts compare the number of new government jobs created each year against the number of secondary school and college and university graduates entering the labour market. These are rough estimates, with ‘new hires’ calculated by assuming an attrition rate of 5% added to the annual growth in government employment.³⁶² Form IV (secondary school) completers is calculated by taking the previous year’s Form IV enrolment and subtracting those entering Form V. All college and university graduates are assumed to join the labour market the year after they graduate. These estimates illustrate orders of magnitude rather than the exact rate of absorption; some share of new jobs most certainly went to employees with less than secondary schooling, while some graduates presumably never desired to enter the public service.

Nonetheless it illustrates that already by the mid-1970s the number of secondary school graduates had exceeded the annual public sector employment intake in Kenya. By the 1980s moreover, the government labour force stopped expanding while the number of graduates continued to grow. By the early 1990s roughly the same number of Kenyan college and university graduates were entering the job market each year as the number of new public sector jobs created in total. In Tanzania the secondary school attainment grew much slower, and it was only towards the late 1980s that secondary school completers begin to outnumber government job growth.

Figure 4.1. Demand and supply of employment: estimated number of new public sector jobs against secondary and tertiary graduates



Sources: Statistical Appendix 1.

³⁶² This overstates the level during the structural adjustment phase when some of the downward adjustment to the public sector level was achieved by not replacing retiring staff. Note that parastatal employment is excluded as it is difficult to tell what represents the nationalisation or divestures.

How did this influence the public sector job prospects of secondary and tertiary graduates? Data from tracer surveys (designed to understand the career paths of a cohort of graduates) and manpower surveys suggests that the majority of people graduating from higher learning institutions embarked on public sector careers in the early independence period but that this ratio subsequently dropped (see Table 4.2 for a full list of all consulted surveys). Although these surveys rarely rely on randomized sampling techniques and cannot be assumed to be representative, taken together they suggest that somewhere in the order of 65-90% of all economically active university and college graduates were employed in the public sectors of their respective countries during the 1960s-1980s. Tanzanian and Ugandan tracer surveys from 2003 suggest that the share of graduates entering the public sector fell in the 1990s.

In the early postcolonial era the public sector's absorption of secondary school completers was also high (as previously discussed in Chapter 3). A 1969 Kenyan survey of select secondary schools found that two-thirds of those secondary school graduates (Form IV) that did not proceed to upper secondary school joined the public sector or a public sector training programme (1965-68).³⁶³ In Uganda, among a sample of employed secondary school graduates, 66-93% worked for the public sector in 1964-1971.³⁶⁴ Since the 1970s however the share of secondary school completers entering public employment in Kenya and Uganda has fallen. In Tanzania in contrast, where secondary school expansion was slower, the public sector continued to absorb 50% of all secondary school leavers into the 1990.³⁶⁵

These findings alone suggest some need to temper or modify our understanding of patronage in East Africa. The employment guarantees in place and extremely high absorption of secondary and tertiary graduates suggests institutionalised educational and career paths over which politicians exercised comparatively little direct control. This point will be explored further in the coming section. Rather than, it appears that unequal access to education – be it along regional or ethnic lines – may be the bigger factor influencing public employment inequalities. At least for some public sector cadres, competition to get into the right secondary school, college or university may have been the more critical juncture, rather than competition on the job market itself. How then, were educational opportunities spread?

³⁶³ Kabiru Kinyanjui, "Education, Training and Employment of Secondary School Leavers in Kenya," in *Education, Society and Development: New Perspectives from Kenya*, ed. David Court and Dharam P. Ghai (Nairobi: Oxford University Press, 1974).

³⁶⁴ Janice Currie and Jacob van L. Maas, "Uganda's Secondary School Graduates: Postponement of Labour Market Entry," *Manpower and Unemployment Research in Africa: A Newsletter* 7, no. 1 (1974): 14–31.

³⁶⁵ Mukyanuzi, *Where Has All the Education Gone in Tanzania?: Employment Outcomes among Secondary School and University Leavers*.

Table 4.2. Summary of tracer and manpower survey results, Kenya, Tanzania and Uganda

Country	Source	Type	Year	Sample / coverage	Size, response rate	Results
Kenya	Kinyanjui, 'Education, Training and Employment of Secondary School leavers in Kenya'	Tracer survey	1968	Secondary students, Form IV leavers, 1 years after completion	3,000 Over four years – 1965-68	Form IV completers went on to: Upper secondary: 27% Public sector training programmes or employment: 48%
Kenya	Hughes, 'Revisiting the fortunate few'	Tracer survey	1987	University of Nairobi graduates	294	Among uni graduates between 1970-83: 64-79% entered public empl.
Kenya	KE MANPOWER 1986-88	Manpower survey	1986	Entire formal sector	Formal sector establishments. Likely under-coverage of private sector	Of total recorded formal sector employment, public sector employed: Uni grads: 75% Secondary: 60%
Kenya	KE MANPOWER 2010/11	Manpower survey	2010	Entire formal sector	Likely under-coverage of private sector	Of total recorded formal sector employment, public sector employed: Uni grads: 44%
Tanzania	TZ MANPOWER 1970-82	Admin data on placements	1970-82	Secondary, Form IV leavers	Full coverage	Of all Form IV completers between 1970-82, 63% were placed through the govt mechanism (presumably in public employment)
Tanzania	Tanzania. Ministry of Labour and Manpower Development., "Tracer Study of Secondary School Leavers" (Dar es Salaam, 1984).	Tracer survey	1982	Secondary, Form IV leavers	500 from 7 schools (public only)	
Tanzania	Cited in: Brian Cooksey, Daniel Mkude, and Lisbeth A. Levey, <i>Higher Education in Tanzania: A Case Study</i> (Oxford: James Currey Publishers, 2003).	Tracer survey	1989	University – faculty of engineering	Unknown	Graduates between 1977-80: 84% worked for the public sector
		Tracer survey	1995	University – faculty of engineering	Unknown	Graduates between 1992-94: 64% worked for the public sector
Tanzania	Faustin Mukyanuzi, <i>Where Has All the Education Gone in Tanzania?</i> (Brighton: Institute of Development Studies: University of Sussex, 2003).	Tracer survey	2003	Secondary and university students from 10 secondary schools and 5 university faculties	Stratified sampling of schools / faculties. Stratified sampling of students. secondary: 1000, response rate 97% Uni: 500, response rate: 90%	Shares in public employment Form IV 1990 leavers: 50% Form IV 1995 leavers: 26% University 1980 leavers: 72% University 1999 leavers: 55%

Uganda	Cited in: John B. Knight, "The Determination of Wages and Salaries in Uganda," <i>Bulletin of the Oxford University Institute of Economics & Statistics</i> 29, no. 3 (1967): 233–64.	Manpower survey	1963	Formal sector employment and earnings	All formal sector employers	Public sector and education share of graduates in formal employment: University graduates: 68% Secondary completers: 84%
Uganda	UG MANPOWER 1967	Manpower survey	1967	Formal sector employees	All of government and all formal sector employers	Public sector and education share of all graduates in formal employment University graduates: 70% Secondary completers: 69%
Uganda	Currie and Maas, 'Uganda's secondary school graduates'	Tracer survey	1971	Secondary school leavers	209 respondents (response rate 37%) randomly sampled from 25 government secondary schools	Activity 1 year after completion of secondary school: Further studies: 59% Government employment: 11% Private employment: 5% Unemployment/other: 25%
Uganda	International Labour Organisation, "Manpower Assessment and Planning Uganda: Project Findings and Recommendations" (Geneva, 1979).	Manpower survey	1977	Formal sector employees, establishments with 50+ workers	All establishments with 50+, thus in particular underestimates the stock of primary and secondary teachers	Government and community services (primarily health and education) as % of total 'high-level manpower': 71% (Government: 60%; community services: 11%)
Uganda	Kirumira and Bateganya, 'Where has all the education gone in Uganda?'	Tracer survey	2003	University graduates from Makerere University and secondary school leavers (Kampala and Iganga (rural))	321 uni graduates (graduating b/w 1980-1999); 590 secondary school leavers (S4 and S6) leaving in 1990 or 1995, sampled from a 'representative' group of schools. Original sample of 1,500; successfully traced 83% of uni sample, 77% of secondary sample.	Of those alive and living in Uganda: University graduates: 66% in public employment; 68% for 1980 graduates, 52% for 1999 graduates. Secondary (S4) completers: 35% in public employment (majority teachers) (Calculated based on Tables 3.1, 3.4, 5.1 and 5.5.)

Ethnic and regional inequalities in educational attainment

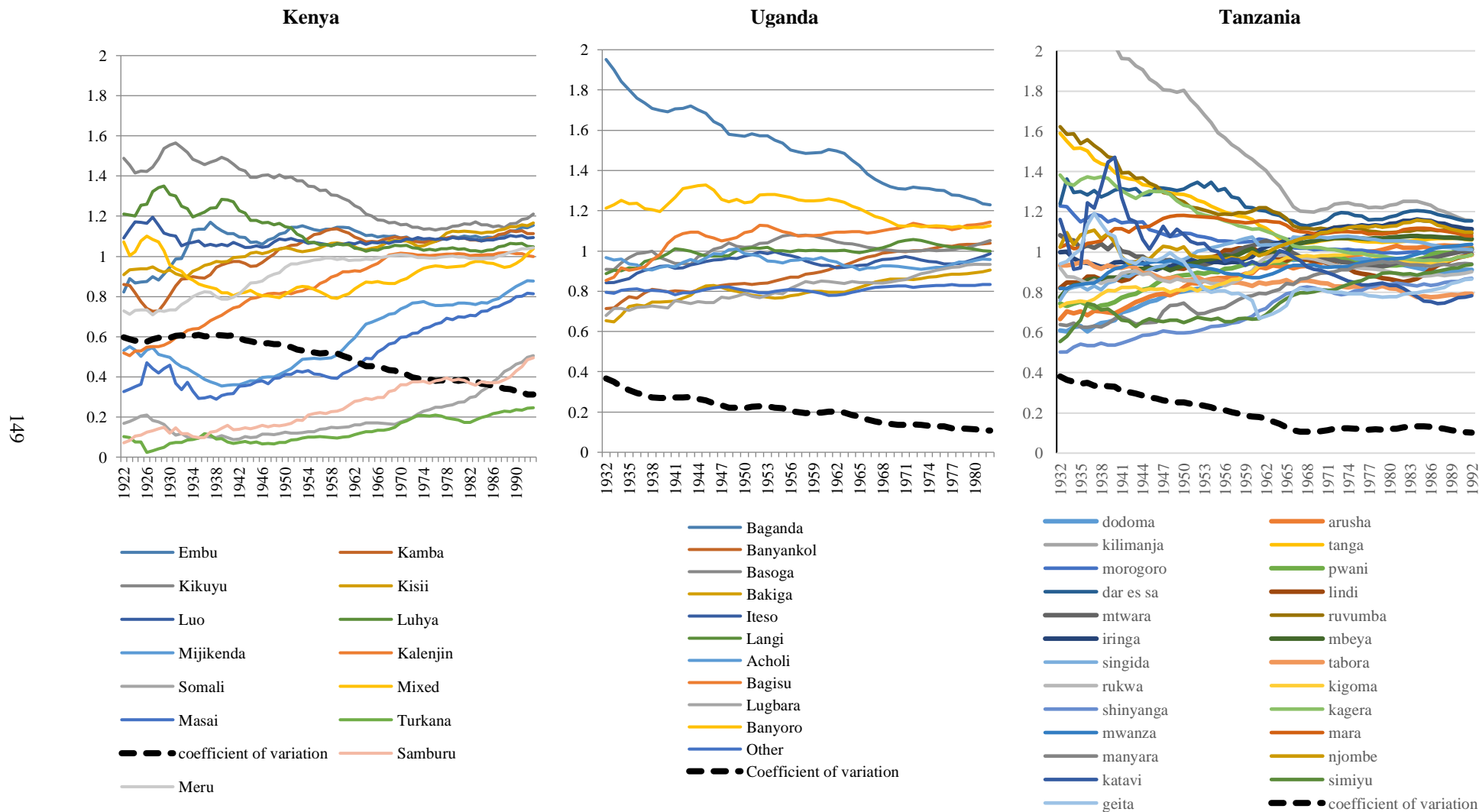
As discussed in Chapter 1, ethnic groups were unevenly incorporated into the modern economy during colonialism and access to schooling differed considerably across sub-national regions.³⁶⁶ However, while these inequalities have persisted in the postcolonial era, they appear to have narrowed rather than worsened. The figures below trace educational convergence by ethnicity or region of birth across birth cohorts (these measures of ethnicity are described further in Section 4.3 and Appendix VII). In the Kenyan case I pool data from the 1969, 1989, 1999 and 2009 censuses, in Tanzanian case the 1988, 2002 and 2012 censuses, and Uganda the 1992 and 2002 censuses, and measure average educational attainment for each group and age cohort, standardized in relation to the mean and smoothed using five-year moving averages. Thus, a score of 0.5 means the group has an average educational attainment 50% below the national average (for a given birth cohort), and +1.5 means a score 50% above the average. I then measure the coefficient of variation across ethnic or regional groups and cohorts.

In all three countries average years of primary schooling has converged strongly across ethnic groups or regions, as illustrated by the falling coefficient of variation (Figure 4.2). Yet perhaps the more salient indicator in relation to formal labour markets is not the years of primary schooling but secondary or tertiary attainment. I therefore also measure convergence in the share of the population with secondary and university education across ethnic/regional groups. Figure 4.3 shows the coefficient of variation in educational attainment across groups for each level of education. This shows that secondary attainment has also converged over time. In Kenya and Uganda the rate of convergence slowed with time while Tanzania saw some divergence in attainment for cohorts born in the late 1960s and early 1970s, and then further convergence. University attainment also became more evenly spread for cohorts born up until the mid/late 1960s in Kenya and Tanzania and late 1950s in Uganda (in other words, convergence slowed amongst those cohorts who would have entered university in the 1980s or 1990s). This divergence since the 1980s however, was driven largely by the higher university attainment of people born in the capital cities. Removing the people born in the capitals shows a continued decline among the remaining ethnic groups in Kenya and a flattening in Uganda.

Although inequalities have persisted, it appears that educational attainment is more evenly spread today than at independence, even at the higher echelons of the education system. How have these dynamics shaped access to public employment? The next section examines this more systematically by looking at the determinants of holding a public sector job.

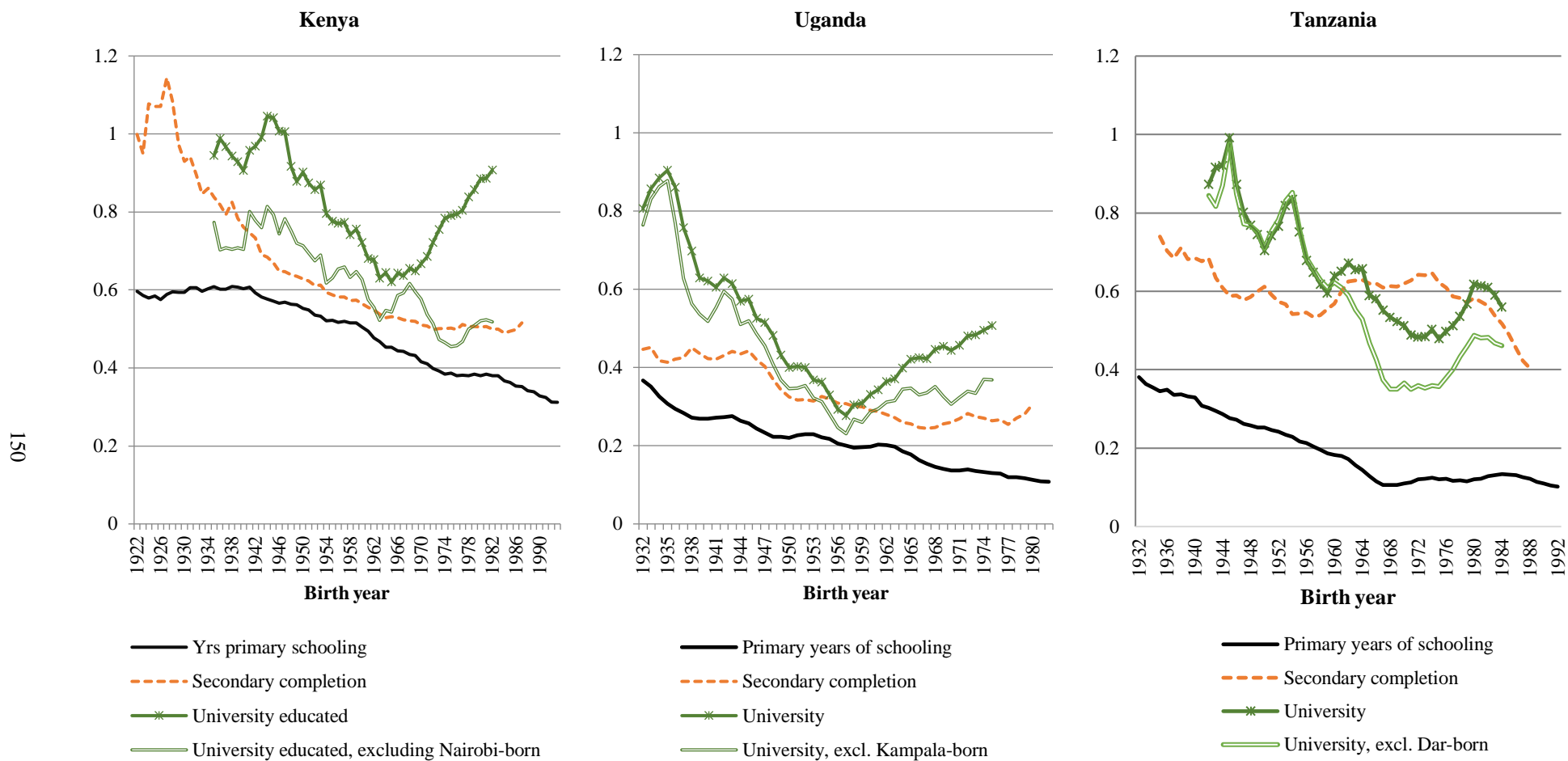
³⁶⁶ Jutta Bolt and Dirk Bezemer, "Understanding Long-Run African Growth: Colonial Institutions or Colonial Education?," *Journal of Development Studies* 45, no. 1 (January 2009): 24–54.

Figure 4.2. Average years of primary schooling by ethnic group and age cohort in proportion to the national mean



Note: 5-year moving averages. **Sources:** author's calculations using: KE CENSUS, 1969, 89, 99 & 2009; TZ CENSUS 1988, 2002 & 2012; UG CENSUS 1992 & 2002.

Figure 4.3. Coefficient of variation in educational attainment across ethnic groups/regions by birth year



Sources: Author's calculations using: KE CENSUS, 1969, 89, 99 and 2009; TZ CENSUS 1988, 2002 and 2012; UG CENSUS 1992 and 2002.

4.4. THE DETERMINANTS OF HOLDING A PUBLIC SECTOR JOB

Method and data

The remainder of this chapter examines the factors affecting the likelihood of holding a public sector job, using census and household survey data from Kenya (2009), Tanzania (2002) and Uganda (2002) from the Minnesota Population Center's Integrated Public Use Microdata Series (IPUMS). These datasets are used to construct a binary logistic model that specifies the (log) odds of holding a public sector job, conditional on the following variables:

$$\log(P(y = 1) / P(y = 0)) = \alpha + \beta_1 x_{1i} + \beta_2 x_{2i} \dots + \beta_k x_{ki} \quad (1)$$

y: Public employee (1 = yes, 0 = no)

x₁: Level of education (1 = none or some primary, 2 = primary, 3 = secondary, 4 = college, 5 = university)

x₂: Age (in years)

x₂ # x₂: Quadratic age effect

x₃: Sex (1 = female, 0 = male)

x₁ # x₂: Education # age interaction term

x₁ # x₃: Education # gender interaction term

x₄: Ethnicity dummies

x₅: District of birth characteristics

This model allows us to examine the conditional effect of age, gender, education and ethnicity on the probability of holding public employment. The sample is restricted to Kenyan/Ugandan-born individuals and in the Tanzanian case citizens (born and living on the mainland only) between the ages 25 – 55 who are economically active (i.e., engaged in some form of economic activity, whether informal or formal). Respondents still attending school or university are also excluded.³⁶⁷ I use a relatively low age ceiling of 55 because this was the official public sector retirement age in East Africa up until recently. The census samples cover 10% of the population of each country. As a quality check I also present some results from the smaller Tanzanian 2000 labour force survey and Ugandan 2006 national household survey. Further details about the samples and all variables are provided in Appendix VII.

The dependent variable (Y) is set to 1 if the individual is a public sector employee and 0 if not. The Kenyan 2009 census recorded respondents by sector of employment, with the public sector grouped into four categories: central government, local government, teacher's service and state-owned enterprises. The Tanzanian and Ugandan censuses lack a sectoral breakdown of employment but the respondent's 'industry of employment' include the categories 'public administration and education' sector in the Tanzanian case and the separate industries 'public service', 'education' and 'health' for Uganda, which are used as proxies for public

³⁶⁷ This has only a minor effect on the Kenyan and Ugandan results, but a large share of Tanzanian university students classified themselves as employed in agriculture, which imposed a bias on the results.

employment. The Ugandan data can be disaggregated using and occupational classification, which allows further differentiation between public servants, teachers, health workers, soldiers and policemen.

These proxies, however, exclude parastatal employees and some construction and agricultural workers in public sector, while including some private education and health providers. In Tanzania 8% of the 2002 teaching forces worked in private schools. In Uganda private schools employed 23% of secondary and primary school teachers in 2002, and private health facilities roughly 20% of health workers in 2005.³⁶⁸ While not a perfect measure therefore, alternative data sources suggest that of those respondents falling into these industrial classifications, 75-80% do genuinely work in the public sector, with the remainder are in private schools and hospitals.³⁶⁹ Furthermore, I use the smaller Tanzanian and Ugandan labour force and household surveys, which contains precise public sector employment measures, to corroborate some of the main results.

In this model age is also treated as a measure for likely year of entry into the public service. Respondents may of course have entered the public sector mid-career, but survey data suggests that this is the exception rather than rule, at least in Kenya and Tanzania. The Kenyan 1994 household survey and 2014 Tanzanian labour force survey (both of which provide data on year in employment) shows a strong correlation between age and year in current employment among public sector employees (Kenya: $R=0.76$; Tanzania: $R=0.86$).³⁷⁰ Studies of the public services of East Africa also highlight that dismissals or resignations from the public service are relatively uncommon, with people usually leaving the public service at retirement or death.³⁷¹

Ethnic identity is extrapolated from the census data. This analysis is limited to Kenya and Uganda as ethnic proxies could not be constructed for Tanzania.³⁷² However, as Tanzania is considered to be one of the few countries in Africa where ethnicity has played a relatively minor role in politics any ethnic preference effects would likely be weaker than in Kenya and Uganda anyhow.³⁷³

³⁶⁸Tanzanian teachers: TZ SA 2002; Ugandan teachers: UG EDU 2000-2012; Ugandan health workers: Africa Health Workforce Observatory, "Human Resources for Health Country Profile: Uganda," 2009, 30–35.

³⁶⁹ TZ LFS 2000 & 2006, UG HBS 2002.

³⁷⁰ KE WMS 1994, TZ LFS 2014.

³⁷¹ Therkildsen and Tidemand, 'Staff Management '.

³⁷² Tanzania has not included ethnicity questions in its censuses since the 1960s and the relatively large regions of birth and high ethnic fragmentation would make proxies based on birth locations very blunt.

³⁷³ See for instance: Yusuf Bangura, "Ethnicity , Inequality and the Public Sector : A Comparative Study," 2006; Mamdani, *Define and Rule: Native as Political Identity*.

Table 4.3. Kenya, Tanzania and Uganda: Summary statistics

Variable	Full sample					Public sector employees		
	Obs	Mean	St. D.	Min	Max	Obs	Mean	St. D.
KENYA								
Age	909,186	36.4	8.5	25	55	56,247	38.8	8.4
Sex (0 = male, 1 = female)	909,186	0.5	0.5	0	1	56,247	0.4	0.5
Highest level of education (1 = none, 5 = university)	909,186	2.0	1.0	1	5	56,247	3.3	1.1
UGANDA								
Age	431,560	36.0	8.2	25	55	32,830	35.3	7.7
Sex (0 = male, 1 = female)	431,560	0.4	0.5	0	1	32,830	0.3	0.5
Highest level of education	431,560	1.6	1.0	1	5	32,830	3.1	1.2
TANZANIA								
Age	870,772	36.3	8.5	25	55	51,273	38.6	8.2
Sex (0 = male, 1 = female)	870,772	0.5	0.5	0	1	51,273	0.4	0.5
Highest level of education	870,772	1.7	0.6	1	5	51,273	2.6	0.8

The Ugandan census data coded individuals by ethnic group. The analysis considers the 12 largest Ugandan ethnic groups individually (which comprise roughly 75% of the population) and a composite group of all remaining small ethnic groups. The Kenyan census sample does not include an ethnic variable so respondents' counties of birth are used to construct an ethnicity proxy.³⁷⁴ A respondent is assigned to the ethnic group that dominates his or her county of birth.³⁷⁵ If no group constitutes more than 50% of the county population it is coded as 'mixed' instead. The ethnic dummy variable thus covers 11 different ethnic categories, the mixed group, as well as a group of all residual smaller ethnicities. Note however that the mixed category is predominantly comprised of respondents born in the two main urban centres, Nairobi and Mombasa. As the Kikuyu ethnic group are overrepresented in the capital city, this may understate their employment shares somewhat. However, of those public servants living in the capital city, the vast majority (85%) were born in districts outside the capital, so this classification issue should have a relatively minor effect on the overall results.

Following the literature on ethnic favouritism in Africa, we are particularly interested in whether coethnics of past or current Presidents are over-represented in the public service. Two of the Ugandan ethnic groups have had coethnic Presidents in the recent past: the Langi (President Obote), and the Banyankole (President Museveni). Kenya also has two ethnic groups who have had coethnic Presidents in the postcolonial era: the Kikuyu (Presidents Kenyatta and Kibaki) and the Kalenjin (President Moi).

³⁷⁴ Data on county ethnic composition taken from: U. U. Wiesmann, B. Kiteme, and Z. Mwangi, "Socio-Economic Atlas of Kenya: Depicting the National Population Census by County and Sub-Location" (Nairobi, Nanyuki, Bern, 2014), 57.

³⁷⁵ This approach is similar to that of: Burgess et al., 'The Value of Democracy: Evidence from Road Building in Kenya.'; Lara Tobin, *Essais Sur L'urbanisation En Afrique Subsaharienne* (Unpublished PhD dissertation, Paris School of Economics, 2015).

To what extent do educational qualifications determine public sector job access?

As already established in early chapters, the educational attainment of Kenya, Tanzania and Uganda's public sector employees is considerably higher than that of the labour forces at large. Unsurprisingly therefore, the logistic model predicts that higher educational attainment sharply increases the likelihood of working in the public sector. Regression results examining the effect of education, age and gender on the probability of holding public employment are presented in Table 4.4 and fitted probabilities in Figure 4.4. The marginal effect of education is particularly strong among older public employees. In 2009, a 55-year old university-educated Kenyan had a 57% probability of holding a job in the public sector, while Tanzanian had a 59%, and a Ugandan had a 52% probability (2002). The probabilities are also high among workers with college certificates (many of whom are teachers), with estimated probabilities of 58% in Kenya, 57% in Tanzania and 45% in Uganda for the same age cohorts. Among those with lower educational attainment the probability of working in the public sector drops sharply. Among the secondary educated the corresponding probabilities are 19% in Kenya and Uganda and 50% in Tanzania, and for those with only primary schooling the shares fall to 5% in Kenya, 16% in Tanzania and 4% in Uganda. Note that the higher employment levels for secondary educated Tanzanians is consistent with its comparatively slower growth in secondary attainment.

In Kenya and Tanzania the likelihood of holding public employment decreases for younger cohorts. While roughly 60% of university educated Kenyans born in mid-1950s worked in the public sector, only around 30% of labour force participants born around 1980 did. In Tanzania the share of university graduates in public employment fell more modestly, from 59% among those born in early 1950s, to 49% for those born in the mid-1970s. The shares also fell for college and secondary school graduates, albeit modestly so for Tanzania's college graduates. This most likely reflects the rationalisation of public sector employment in the 1990s coupled with continued expansion of the education system, which increased the number of qualified candidates in relation to the state's absorption capabilities.

In Uganda in contrast, the likelihood of working for the public sector differs less with age of the respondent. As a result, younger tertiary educated Ugandans have a higher probability of working for the state than in Kenya. This may reflect the more comprehensive reform of the Ugandan public service after President Museveni came to power in 1986 along with the expansion of the teaching service, which seems to have created more space for recent graduates to advance.³⁷⁶ This is reflected in the lower average age of Ugandan government employees.

³⁷⁶ Sendyona, 'Public Service Restructuring.'

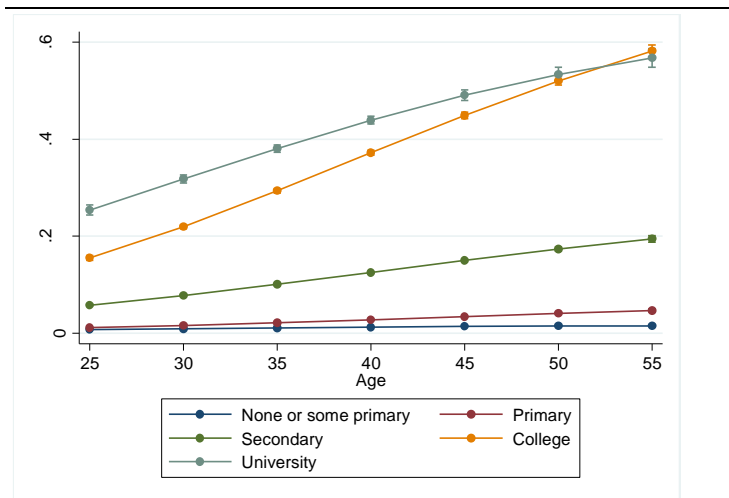
Table 4.4. Kenya, Tanzania and Uganda: the effect of education on public employment probabilities

VARIABLES	(K.1) pubemp	(T.1) pubemp	(U.1) pubemp	(T.2) pubemp	(U.2) pubemp
age	0.0795*** (0.00605)	0.0763*** (0.0114)	0.0433*** (0.00821)	0.431*** (0.0806)	0.129* (0.0777)
age#age	-0.000709*** (7.19e-05)	-0.000537*** (0.000129)	-0.000910*** (0.000107)	-0.00455*** (0.000861)	-0.00111 (0.000951)
sex (1 = female)	-0.796*** (0.0354)	-1.396*** (0.0813)	-0.987*** (0.0302)	-2.563*** (0.569)	-1.760*** (0.539)
Education dummies (base = none or some primary)					
Primary	-0.263*** (0.0952)	-0.551*** (0.181)	-0.456*** (0.0950)	-0.641 (1.574)	3.042*** (0.993)
Secondary	1.264*** (0.0848)	3.776*** (0.186)	0.958*** (0.0896)	4.902*** (1.645)	3.265*** (1.150)
College (other post-secondary)	1.655*** (0.0892)	5.787*** (0.272)	2.704*** (0.0893)	5.786*** (1.659)	5.496*** (1.067)
University	2.802*** (0.105)	5.279*** (0.382)	1.724*** (0.137)	4.173* (2.288)	3.994** (1.576)
age#education interaction (base = none or some pri)					
Primary	0.0252*** (0.00237)	0.0547*** (0.00420)	0.0303*** (0.00262)	0.0650* (0.0351)	-0.0252 (0.0247)
Secondary	0.0228*** (0.00210)	0.000227 (0.00438)	0.0298*** (0.00250)	-0.0208 (0.0373)	-0.0141 (0.0292)
College (other post-secondary)	0.0448*** (0.00222)	-0.0295*** (0.00667)	0.0196*** (0.00245)	-0.0137 (0.0375)	-0.0205 (0.0267)
University	0.0223*** (0.00266)	-0.0200** (0.00904)	0.0455*** (0.00360)	0.0243 (0.0521)	0.0203 (0.0418)
sex#education interaction (base = none or some pri)					
Primary	0.117*** (0.0437)	1.448*** (0.0845)	0.506*** (0.0466)	2.200*** (0.591)	1.453** (0.573)
Secondary	0.624*** (0.0388)	2.065*** (0.0870)	1.251*** (0.0423)	2.371*** (0.619)	0.961 (0.670)
College (other post-secondary)	0.948*** (0.0403)	1.910*** (0.126)	1.429*** (0.0417)	3.678*** (0.645)	1.555** (0.609)
University	1.020*** (0.0473)	1.999*** (0.187)	1.029*** (0.0666)	2.761*** (0.878)	1.872** (0.758)
Constant	-6.088*** (0.133)	-6.685*** (0.270)	-3.796*** (0.156)	-14.50*** (2.142)	-8.053*** (1.627)
Observations	909,186	870,772	431,560	16,124	8,946
Pseudo R ²	0.2316	0.2784	0.2822	0.3808	0.3167

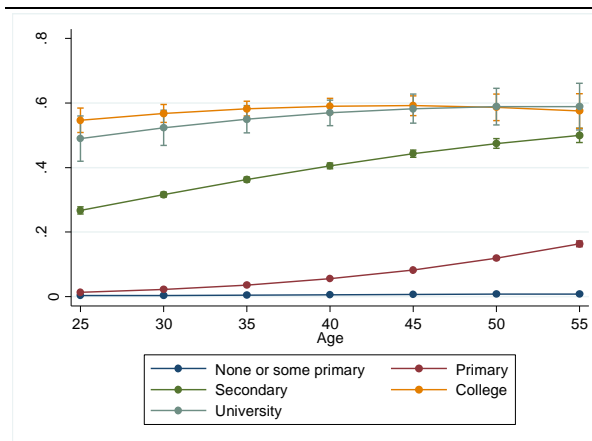
Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Figure 4.4. Estimated probabilities of being employed in the public sector by educational attainment and age (95% confidence interval)

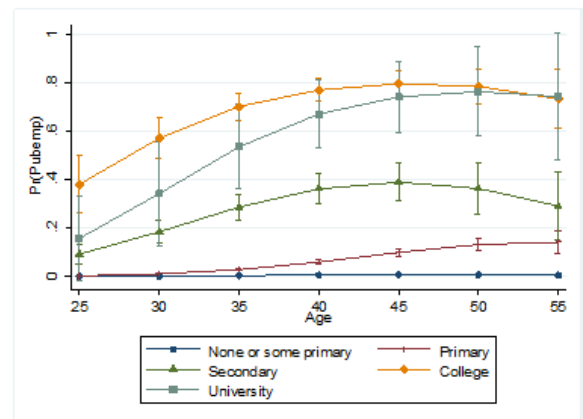
KENYA 2009 CENSUS



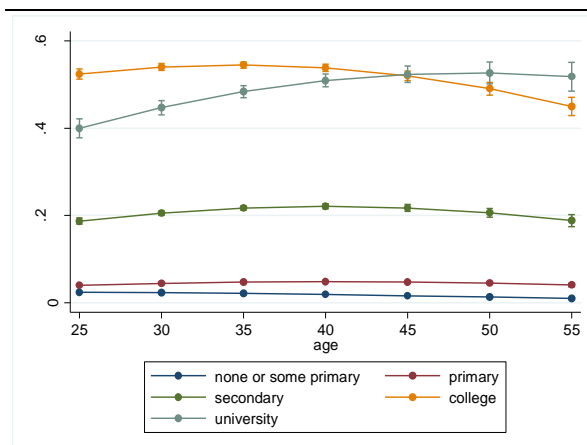
TANZANIA 2002 CENSUS



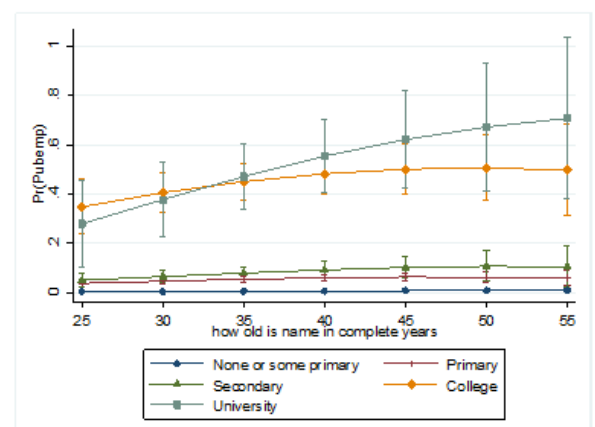
TANZANIA 2000 LFS



UGANDA 2002 CENSUS



UGANDA 2006 NHS



The model also provides some interesting results relating to gender and public employment. Overall women are less likely to be employed by the public sector than men (all else being equal), but this is driven by a disproportionate share of men among low-skilled workers. Women with college or university education, in contrast, have a higher probability of working for the state than men with the same educational qualifications. A Ugandan 2003 tracer survey found similar results; tertiary and secondary educated men were more likely to be self-employed than women.³⁷⁷ This is consistent with the pattern in Europe and North America, which reflect the state's high demand for traditionally female professions such as nursing, teaching and childcare. Yet a female bias usually signifies the comparatively low rather than high social status of a profession.³⁷⁸

A potential problem with these results, however, is that they do not account for the effect of migration. It may be that those skilled graduates who failed to secure government employment instead chose to emigrate. Appendix VIII examines this potential bias by estimating the volume of migration to Europe and North America, presumably the preferred destinations for the highly educated. Using migration data in combination with the United Kingdom and US censuses give rough back-of-the-envelope estimates for the number of skilled migrants. It suggests that in the order of 5% of Kenyan and Ugandan university graduates and 3% of Tanzanian ones may have left the continent during the 1960s – 2000s (an upper bound estimate); not enough then, to significantly change the findings above. Ugandans also migrated to Kenya in large numbers, but Ugandan graduates in Kenya were only around 1% of the Ugandan university stock in 1999.

As discussed above, the Tanzanian and Ugandan results rely on an imprecise measure of public employment that captures only employees in public administration, education and health. As a quality check I therefore replicate this analysis using data from other household surveys where the public sector variable is precisely defined (Figure 4.4). Although this raises the confidence intervals considerably as the samples are smaller, it gives estimates roughly consistent with the census results. In the Tanzanian case it suggests that the share of university and college graduates in public sector employment was even higher than that estimated by the census, peaking at over 70% for employees in their late 40s and 50s, while the secondary school graduate share is estimated to be somewhat lower. The alternative results for Uganda estimate similar levels for university graduates, but lower levels for college and secondary graduates, albeit with very high confidence intervals.

³⁷⁷ Kirumira and Bateganya, "Where Has All the Education Gone in Uganda? Employment Outcomes Among Secondary School and University Leavers."

³⁷⁸ Asaf Levanon, Paula England, and Paul Allison, 'Occupational Feminization and Pay: Assessing Causal Dynamics Using 1950-2000 U.S. Census Data,' *Social Forces* 88, no. 2 (2009), pp. 865-91.

For certain skill segments and age groups within the East African labour market then, the likelihood of working in the public sector is high. This supports the argument made in some of the policy literature that graduates from the right colleges and degree programmes had easy, if not guaranteed, access to public sector jobs, at least in the first decades of independence. Consistent with the results in Chapter 2 which showed a sharp contraction in the public sector labour market starting the late 1980s as governments rationalised their payroll during the structural adjustment phase, the probability of holding a public sector job fell for younger cohorts. Uganda provides an exception to this trend, but given the more extreme collapse and reorganisation of Uganda's public service in the 1990s, age may be a worse indicator of likely year of public service entry.

Geographic variation in public sector employment

How geographically equitable is the distribution of public sector jobs? Given the strong relationship between education and public employment, we should expect a skew in access to public sector jobs driven by geographic inequalities in access to education. This is indeed the case; coming from a district or region with high educational attainment increases the likelihood of holding a public sector job. Entering the educational attainment in the respondent's district of birth into the logistic regression (without other controls) shows strong and positive results in all three countries (Appendix Table VI.1).

Conditional on the educational attainment of the respondent however, the coefficient changes sign in Kenya and Uganda and falls significantly in Tanzania. In Kenya and Uganda, if not in Tanzania, highly educated respondents born in regions with low educational attainment have a higher probability of working in the public sector than others. Figure 4.5 provides a visual illustration of this. The heat map shows the share of secondary educated workers employed in the public sector by district of birth. In Kenya and Uganda the levels are correlated with distance from the capital city. Secondary educated workers from the most peripheral parts of each country are more than twice as likely to work for the public sector as those born in the capitals. Dar es Salaam similarly has a very low share of secondary educated workers in public employment, although in Tanzania the correlation with distance from the capital is weaker.

To examine this more systematically I introduce another independent variable measuring the level of economic development in each respondent's district of birth. The level of economic development is measured from 0-100 using an index combining the distance to the capital city, population density, the share of the adult population in wage employment and the share of the population with electricity. I use factor analysis to determine the weight of each variable.

The models in Table 4.5 introduce this development index into logistics model 1. This shows that in Kenya and Uganda the probability of holding a public sector job is higher for people from less developed parts of the country, once their educational attainment is controlled for (Models K.D.1 and U.D.1). The effects are considerable: all else being equal, lowering the developmental index in a respondent's place of birth by one standard deviation raises the probability of holding a public sector job by 21% in Kenya and 15% in Uganda.

Models K.D.2, K.D.3, U.D.2 and U.D.3 interact the development index with education, sex and age. The effect increases in strength with the level of education. Secondary and tertiary graduates from disadvantaged regions are strongly overrepresented, while those public sector employees with only a primary school degree or below are more likely to have been born in economically advantaged regions. A standard deviation reduction in the development index raises the probability of holding a public sector job among college graduates by 44% in Kenya and 16% in Uganda. The effect is also stronger for men than for women. In more economically advanced regions, educated women are still quite likely to hold public employment compared to women from less advantaged areas of the country, while highly educated men from advantaged regions are far more oriented towards the private sector than men with the same educational attainment from less developed regions.

In Kenya, although not in Uganda, the effect is stronger for younger public servants, shown by the positive coefficient on the age#development index interaction term. This could suggest that the public service wage declines in the 1990s and improved private sector prospects in the 2000s attracted graduates from more prosperous regions of their respective countries to the private sector.

In Tanzania in contrast, public sector employees are on average from more economically developed regions, controlling for education, age and gender (Table 4.5). A standard deviation reduction in the development index lowers the public employment probability by 3.5%. The effect differs by level of education, however. Secondary and college graduates in public employment are more likely to come from less developed regions (consistent with Kenya and Uganda), while for primary school completers and university graduates, candidates from the more advantaged regions have a small advantage. This ambiguous impact of region on employment may partly be a data problem. Region of birth data for mainland Tanzania is less granular than for the other two countries (only 21 regional divisions) and thus the development variables have lower standard deviations. However, Tanzania liberalized its economy first in the 1990s, and these results may also reflect the fact that private sector opportunities remained scarce even for graduates from the most developed parts of the country, with the result that senior public service jobs continued to be attractive to those from the most prosperous regions.

Figure 4.5. Percent of secondary educated population in public employment, by district/county of birth

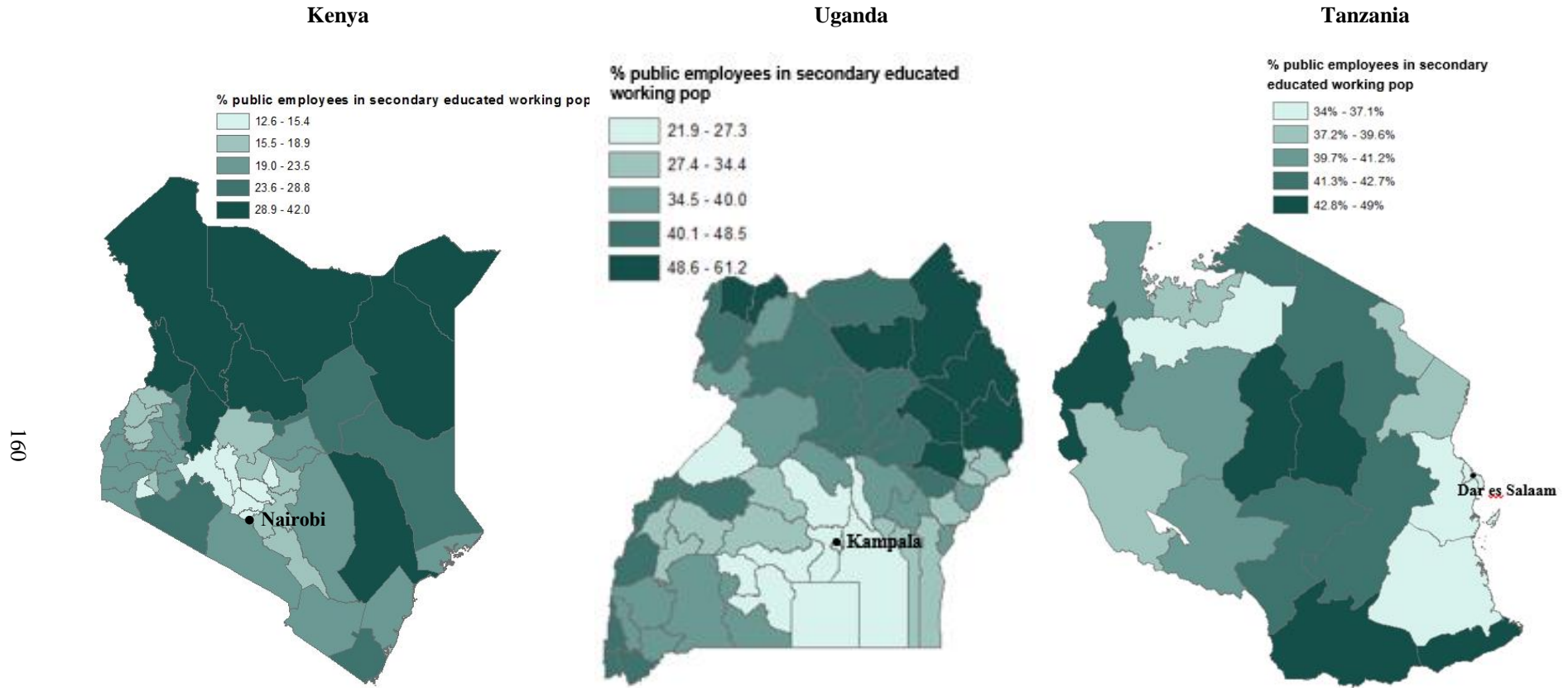


Table 4.5. Kenya, Tanzania and Uganda: level of development in place of birth and public employment probabilities

VARIABLES	(K.D.1) pubemp	(K.D.2) pubemp	(K.D.3) pubemp	(T.D.1) pubemp	(T.D.2) pubemp	(T.D.3) pubemp	(U.D.1) pubemp	(U.D.2) pubemp	(U.D.3) pubemp
Age controls	YES	YES	YES	YES	YES	YES	YES	YES	YES
Gender controls	YES	YES	YES	YES	YES	YES	YES	YES	YES
Education controls	YES	YES	YES	YES	YES	YES	YES	YES	YES
District/region of birth development index	-0.0140*** (0.000351)	0.0109*** (0.000959)	-0.0226*** (0.00154)	0.00219*** (0.000399)	0.0183*** (0.00188)	0.0148*** (0.00190)	-0.0186*** (0.000652)	-0.00570** (0.00246)	-0.0154*** (0.00307)
Development index # education interaction (base = none or some pri)									
Primary		-0.0221*** (0.00137)			-0.0129*** (0.00195)			-0.0123*** (0.00307)	
Secondary		-0.0279*** (0.00110)			-0.0245*** (0.00195)			-0.0231*** (0.00272)	
College		-0.0414*** (0.00117)			-0.0255*** (0.00250)			-0.0292*** (0.00269)	
University		-0.0351*** (0.00132)			-0.0163*** (0.00287)			-0.0169*** (0.00280)	
Development index # gender interaction (base = male)									
Female		0.00720*** (0.000735)			0.00452*** (0.000739)			0.0192*** (0.00133)	
Development index # age interaction			0.00023*** (4.04e-05)			-0.00034*** (4.79e-05)			-9.36e-05 (8.88e-05)
Constant	-5.656*** (0.133)	-6.451*** (0.138)	-5.378*** (0.141)	-6.736*** (0.269)	-7.156*** (0.264)	-7.004*** (0.267)	-3.585*** (0.156)	-3.670*** (0.158)	-3.613*** (0.159)
Observations	909,186	909,186	909,186	870,772	870,772	870,772	431,560	431,560	431,560
Pseudo R ²	0.2359	0.2395	0.236	0.2787	0.2822	0.2792	0.2819	0.2836	0.2819

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Drivers of the distribution of public sector jobs

What explains this higher propensity for candidates from comparatively underdeveloped regions of Kenya and Uganda to enter the public service? Presumably the geographic placement of public sector jobs will shape employment prospects. As discussed in Chapter 2, public sector employment grew more geographically equitable over the course of the postcolonial era and has remained more equitably spread than formal private employment throughout the period. Table 4.6 calculates the range and coefficient of variation in public and private employment shares across districts in each country and shows lower coefficients of variation in the public sector than in the private sector. As shown in Figure 4.6, across Kenya's eight former provinces, Uganda's four regions and capital city, and Tanzania's regions, the public employment to population ratio is reasonably even, with the exception of higher levels in the capital cities and a low level in Kenya's North East. Much of the remaining variation is explained by differences in rates of urbanisation. Comparing regional public employment levels separately for urban and rural areas shows even less regional variance.³⁷⁹ As a result the public sector generates more jobs than the private sector in remote or underdeveloped regions where non-natives to the area are unlikely to settle. In areas where educational attainment is low and private sector employment opportunities are scarce, a higher share of secondary school graduates will presumably pursue public sector careers. In more economically developed regions in contrast, promising students are exposed to a broader range of career options while also facing greater job competition from other graduates.

In Kenya and Uganda the coefficient of variation is lowest among teachers. Although overseen by a national teacher's service commission, teachers are usually recruited at the district or county level. Moreover, as the first few years of primary schooling is commonly taught in local languages, local candidates are automatically privileged over candidates from other linguistic groups, which may account for a particularly equitable distribution of teaching jobs.³⁸⁰

Lastly, even though the skilled labour force in each respective country is free to migrate to more prosperous regions, social and ethnic background and the networks these bring may in fact matter more in the private sector than public sector, privileging ethnic groups from more developed regions and pulling them away from the public sector. Studies from other regions of

³⁷⁹ Results not included. Public employment levels are higher in urban areas, and coefficient of variation falls when comparing regional urban and rural areas separately.

³⁸⁰ Munene Mwaniki, "Mother Tongue Education in Primary Teacher Education in Kenya: A Language Management Critique of the Quota System," *Multilingual Education* 4, no. 11 (2014): 1–17; Mathias Bwanika Mulumba and Fred Masagazi Masaazi, "Challenges to African Development: The Medium of Instruction in Uganda's Education System," *Pedagogy, Culture and Society* 20, no. 3 (2012): 435–50.

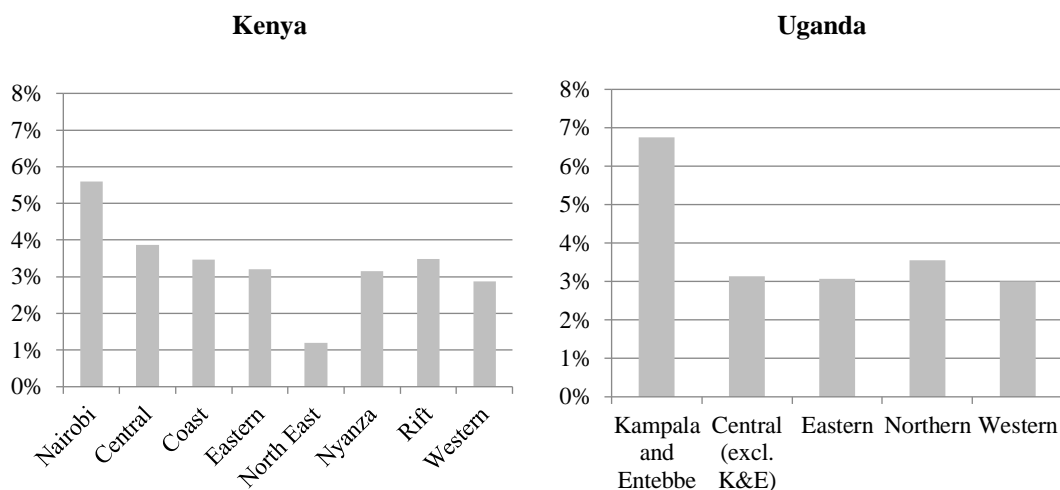
the world, in particular the United States, have found that ethnic, racial and gender discrimination in earnings tends to be lower within the public than private sector.³⁸¹

Table 4.6. Variance in public and private sector wage employment across counties/districts

% adult population (18-65)	Obs	Mean	Std. Dev.	Min	Max	Coefficient of variation
KENYA 2009						
private	47	9.3	6.0	1.2	29.3	0.6
public employment	47	3.7	1.2	1.1	6.5	0.3
<i>Central govt</i>	47	1.3	0.7	0.4	4.1	0.5
<i>Local govt</i>	47	0.4	0.2	0.1	1.2	0.5
<i>Teaching service</i>	47	1.3	0.4	0.4	2.1	0.3
TANZANIA 2002						
private	20	4.4	2.3	1.9	12.1	0.5
public employment	20	4.2	1.0	3.0	7.3	0.2
UGANDA 2002						
private	56	3.5	4.1	0.6	26.4	1.2
public employment	56	3.6	1.5	2.0	10.8	0.4
<i>Public services</i>	56	1.1	0.9	0.4	5.0	0.8
<i>Education</i>	56	1.9	0.8	0.6	3.9	0.4
<i>Health</i>	56	0.5	0.3	0.2	1.6	0.5

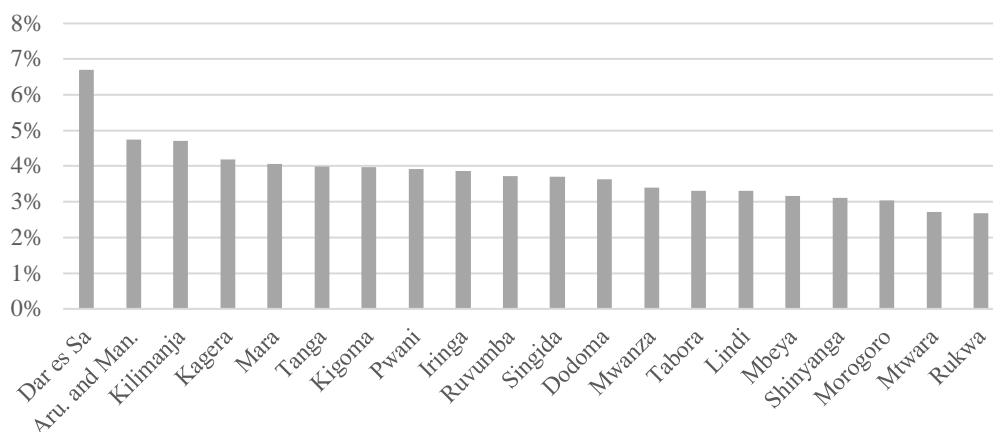
Note: Private sector definition: Kenya: based on 'private' sectoral classification and NGOs and faith-based employers; Uganda and Tanzania: based on those classified as paid employees, excl. public sector and agriculture. Note that the Tanzanian public sector variable cannot be disaggregated.

Figure 4.6. Percentage of adult population (15-65) in public sector employment, by province/region



³⁸¹ For a summary of this literature, see: Gregory and Borland, "Recent Developments in Public Sector Labor Markets."

Tanzania



The data allows us to test this last proposition by examining the internal migration propensity of public servants. This sheds light on the degree to which regional or district-level job markets are open to candidates from other parts of the country. The scatter plots in Figure 4.7 measure the share of all public sector employees in a given district that were born outside their district of work along the y-axis,³⁸² and the level of economic development in said district along the x-axis. In Kenya and Uganda the ratios are positively correlated, particularly strongly so in the Kenyan case. I.e., in richer districts, a higher proportion of public sector employees were born outside the district. As an alternative specification for Uganda, given that Uganda's districts show little variation in district development, I include a second figure examining correlation with distance to the capital city, which shows a stronger relationship. In summary, in Kenya and Uganda, less developed or geographically remote districts recruit a higher proportion of local candidates, while the more developed districts attract candidates from further afar. This could be due to a stronger local hiring preference in more remote parts of the country, or a reluctance by non-natives to migrate to a less developed part of their respective country.³⁸³

In Tanzania in contrast there is no clear relationship between these variables. In fact, with the exclusion of Dar es Salaam in upper right-hand corner, the relationship would be negative. The levels are also higher, particularly considering the larger size of the subnational unit under consideration in Tanzania. On average 45% of public servants are born outside the region in which they work compared to 35% in Kenya and Uganda.³⁸⁴ Tanzanian public servants appear

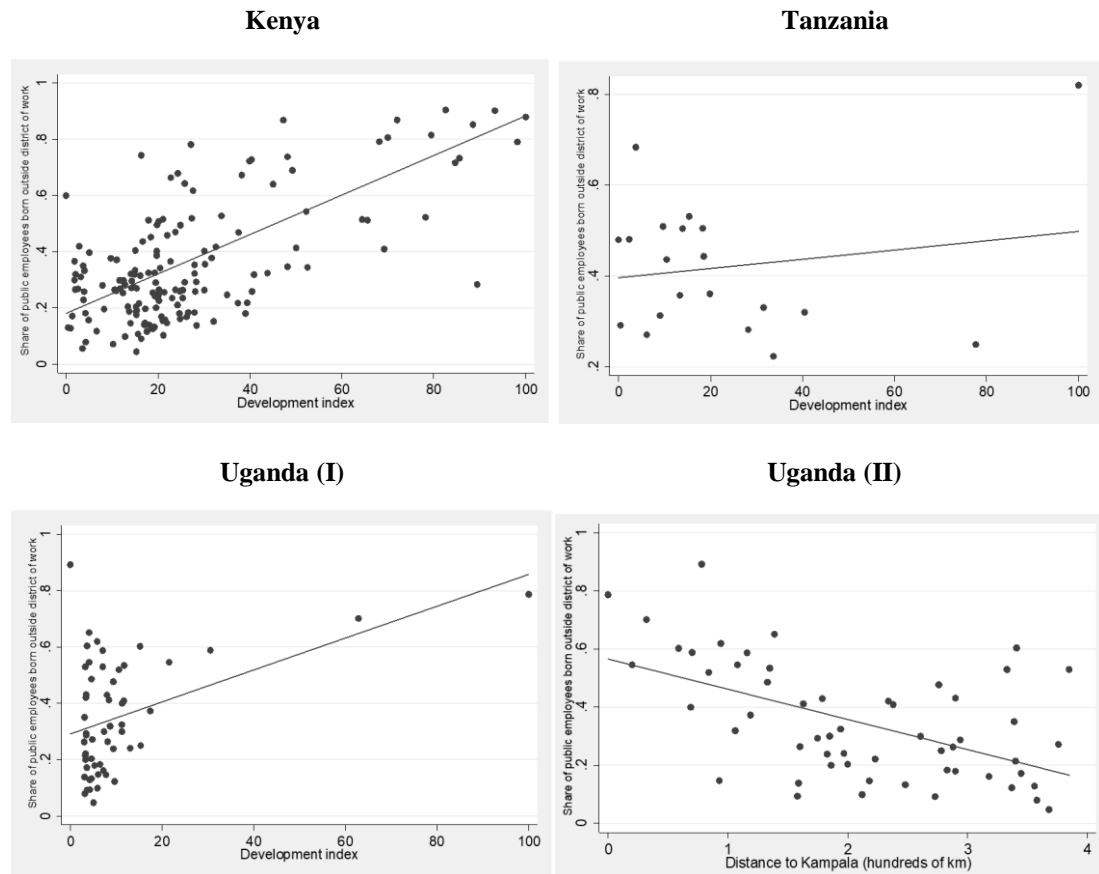
³⁸² District of work assumed to be the district in which they are enumerated at the time of the census.

³⁸³ Both factors are suggested by Therkildsen and Tidemand, 'Staff Management'.

³⁸⁴ Note that the district divisions in Kenya and Uganda are smaller so these shares would be lower if using divisions of the same magnitude as in Tanzania. For instance, the share drops to 25% in Uganda if using the 1960 district divisions.

to be more geographically mobile than that of their neighbours. This may explain why there is less of a relationship between the level of economic development in the region of birth and propensity to work for the public sector; in Tanzania local candidates have less of a home-field advantage.

Figure 4.7. Correlation between share of migrants in public employment and level of development, by district



Is the Kenyan and Ugandan home-field advantage due to employment discrimination at the local level? Does such discrimination also affect locally born ethnic minorities? The Ugandan data allows us to investigate this more closely as it is possible to differentiate between ethnicity and place of birth. I introduce three additional variables into the logistics model: (i) a dummy for whether a respondent is a migrant (working in a district different from the district of birth), (ii) a dummy for whether a respondent is an ethnic minority, and (iii) a migrant-minority interaction term. Ethnic minorities are defined as those respondents with a different ethnicity to the dominant ethnicity in their district of residence. Districts where no ethnic group constitutes at least 50% of the population are excluded from the sample. Controls for education, age and sex are retained. Results are given in Appendix Table VI.3, models U.E.5 & U.E.6.

This exercise shows that migrants are considerably more likely to work for the public sector than non-migrants, all else being equal, most likely because a disproportionate share of migrants are public servants who have been posted to a new district. Ethnic minorities face a small public sector penalty (~5%), while being a migrant and ethnic minority makes no additional difference to the probability of holding a public sector job. This ethnic minority penalty, however, is solely in the teaching service. Removing teachers from the sample shows ethnic minorities to have a slight advantage instead. This may be due to the practice of teaching primary school in local languages, which could be biasing against candidates from outside the locally dominant language group. In sum these findings show very little evidence of discrimination against either migrants or ethnic minorities at the district level.

Ethnic inequalities in public sector employment

Given these regional public sector employment dynamics, how ethnically unequal is the distribution of public sector jobs? Are ethnic inequalities solely the result of unequal schooling? Using descriptive statistics, Table 4.7 and Table 4.8 first measure the share of each ethnic group's adult population that works in the public sector (grey columns), and secondly the share of an ethnic group's secondary educated population that works in the public sector (clear columns). This second measure provides a rough measure of ethnic public employment inequalities in relationship to each ethnic group's number of qualified candidates. In Appendix Table VI.2 and Appendix Table VI.3 I also include results from a logistic regression that includes ethnic group dummies. This shows that these ethnic group differences are (for the most part) statistically significant. Tanzania is excluded from this section as it is not possible to construct measures of Tanzanian ethnicity.

Column 1.A in Table 4.7 gives the Kenyan share of public sector employees to total population by ethnic group, ordered from highest to lowest. With the exception of a few outliers, the variation in ethnic group public employment shares is not enormous, with an average of 6.2% and standard deviation of 1.8% (CoV = 0.31). The 'mixed' county group has the largest share (reflecting the high proportion of Nairobi-born public sector employees), followed by the Kalenjin. The Kikuyu share is only slightly above the national average. The laggards are the Turkana and Somali, two groups with large pastoral populations living in some of the least developed parts of Kenya, and in the Somali case the site of a secessionist war in the 1960s. Removing these two groups more than halves the standard deviation to 0.8%.

When the sample is limited to secondary school educated respondents this rank order is reversed. The Turkana and Somali public employment shares are now the highest, with 33% of all secondary educated Turkana respondents and 31% of all secondary educated Somali

respondents employed in the public sector, compared to a national average of 17%. The Kikuyu, Kisii and 'mixed' counties, the three groups with the highest educational attainment, now have public employment shares well below the national average. The Kalenjin (former President Moi's ethnic group) are something of an outlier with a high share on both measures, a point to which we will return. It is not the case then, that Kenyans from larger and wealthier ethnic groups have disproportionate access to public sector jobs. In fact, conditional on skills, groups with low educational attainment are favoured.

I also calculate these percentage shares separately for different segments of the Kenyan public sector (central government, local government, teaching force and state-owned enterprises), testing the suggestion by Francois, Trebbi and Rainer that ethnic patrons control different segments of the public service resulting in pockets of ethnic advantage in different parts of the service. This exercise does not significantly alter the rank orders, nor does it dramatically raise the coefficient of variation. An important exception however is the 'mixed' group, which has very high central and local government employment shares but low teacher shares. Given that these respondents are largely born in Nairobi and Mombasa, the seat of government and home to two large municipal governments, it is perhaps not surprising that their access to central and local government jobs is high.

The differences in public employment share across Uganda's 12 largest ethnic groups is smaller than in Kenya, with a mean of 7.6%, a standard deviation of 1.8% (CoV = 0.22) (Table 4.8, column 1.A.). Here the outliers are two ethnic groups with unusually large shares: the Iteso (12.8%) and Achoil (9.7%). Acholiland and Teso were sites of uprisings against the Museveni government in the 1990s, and their high public employment shares may be a result of an explicit effort to reduce civil strife by investing more state resources in these areas. Rather than punishing dissenters then (as some of the ethnic favouritism literature would predict), the government appears to be spending more on staffing in these war-affected regions. President Museveni's coethnics in contrast, the Banyankole, lie below the mean.

Restricting the sample to secondary educated respondents reduces the coefficient of variation slightly, suggesting that educational differences explain some of the variation. As in Kenya, the group with the lowest shares are now the Baganda, Uganda's largest and most educationally advantaged group, who send a comparatively small share of their secondary school completers into the public service. Segmenting employees by sub-sector (general public service, teachers, health workers and security personnel) does not significantly alter the ethnic group rank order.

Table 4.7. Kenya: Percentage of public sector employees in total employment, by ethnic group and public sector sub-sector

Ethnic group	Total public sector		Central government		Local government		Teacher's service commission		State-owned enterprises		Population share	Secondary educated share
	Total	Secondary educated only	Total	Secondary educated only	Total	Secondary educated only	Total	Secondary educated only	Total	Secondary educated only		
	1.A.	1.B.	2.A.	2.B.	3.A.	3.B.	4.A.	4.B.	5.A.	5.B.		
Mixed	8.1%	16%	3.1%	6.2%	1.4%	2.0%	1.9%	4.0%	1.8%	3.5%	5%	40.6%
Kalenjin	7.3%	23%	2.6%	8.3%	0.7%	1.4%	2.6%	9.1%	1.4%	3.9%	11%	26.3%
Embu	6.9%	18%	2.4%	6.7%	0.8%	1.4%	2.6%	7.3%	1.1%	2.7%	2%	31.2%
Luo	6.6%	20%	2.0%	6.7%	0.8%	1.8%	2.4%	8.2%	1.3%	3.6%	10%	25.7%
Kamba	6.5%	17%	2.0%	5.6%	0.7%	1.4%	2.6%	7.5%	1.3%	3.0%	10%	29.6%
Kikuyu	6.4%	14%	2.1%	4.9%	0.8%	1.4%	2.2%	5.1%	1.2%	2.4%	22%	38.3%
Kisii	6.3%	15%	2.0%	4.9%	0.6%	1.2%	2.6%	6.5%	1.1%	2.3%	6%	36.2%
Luhya	5.9%	18%	1.8%	5.9%	0.6%	1.4%	2.3%	7.8%	1.2%	2.9%	15%	25.6%
Other	5.6%	22%	1.9%	7.9%	1.0%	2.6%	1.7%	7.9%	1.0%	3.9%	3%	18.5%
Meru	5.4%	19%	1.9%	7.1%	0.5%	1.4%	2.2%	8.1%	0.8%	2.6%	6%	23.3%
Mijikenda	5.3%	22%	1.4%	6.9%	0.9%	2.7%	1.8%	8.4%	1.2%	4.3%	4%	16.1%
Somali	2.7%	31%	1.2%	15.6%	0.3%	2.4%	0.9%	9.8%	0.3%	3.5%	4%	4.8%
Turkana	1.7%	33%	0.7%	16.2%	0.3%	1.8%	0.5%	11.2%	0.2%	3.7%	2%	2.8%
Mean (weighted)	6.2%	17%	2.0%	6%	0.7%	1.5%	2.2%	6.8%	1.2%	3.0%		28.5%
Mean (unweighted)	5.7%	21%	1.9%	8%	0.7%	1.8%	2.0%	8%	1.1%	3.3%		24.5%
Std. dev	1.8%	5.8%	0.6%	3.7%	0.3%	0.5%	0.7%	1.9%	0.4%	0.6%		11.7%
CoV	0.31	0.28	0.31	0.47	0.40	0.30	0.32	0.24	0.40	0.19		0.48
Min	1.7%	14%	0.7%	4.9%	0.3%	1.2%	0.5%	4.0%	0.2%	2.3%		2.8%
Max	8.1%	33%	3.1%	16.2%	1.4%	2.7%	2.6%	11.2%	1.8%	4.3%		40.6%
# obs	909,186	259,344	909,186	259,344	909,186	259,344	909,186	259,344	909,186	259,344	909,186	909,186

Note: sample limited to economically active respondents born in Kenya, aged 25-55 at time of enumeration.

Table 4.8. Uganda: Percentage of public sector employees in total employment, by ethnic group and public sector sub-sector

Ethnic group	Total public sector		Public service		Education		Health		Defence		Pop share	Secondary educated share
	Total	Sec educated only	Total	Sec educated only	Total	Sec educated only	Total	Sec educated only	Total	Sec educated only		
	1.A.	1.B.	2.A.	2.B.	3.A.	3.B.	4.A.	4.B.	5.A.	5.B.	7.	8.
Iteso	12.8%	44.9%	2.8%	7.5%	6.7%	28.2%	1.0%	4.1%	3.0%	6.4%	5%	17%
Acholi	9.7%	44.9%	2.4%	7.7%	4.8%	28.3%	1.0%	5.2%	1.4%	4.3%	4%	13%
Lugbara	8.3%	47.2%	1.6%	6.1%	5.0%	32.5%	0.8%	5.6%	1.5%	4.9%	4%	13%
Banyoro	8.1%	33.0%	2.0%	6.5%	4.3%	20.5%	0.8%	3.6%	1.4%	3.6%	3%	19%
Bakhonzo	7.9%	44.8%	1.7%	7.1%	4.2%	27.7%	0.8%	6.1%	1.2%	4.7%	2%	11%
Baganda	7.8%	23.4%	1.7%	4.1%	4.4%	14.7%	1.2%	3.8%	0.7%	1.2%	18%	25%
Banyankole	7.5%	35.3%	1.7%	7.2%	4.2%	21.3%	0.7%	3.5%	1.0%	3.4%	10%	15%
Langi	7.3%	43.7%	1.4%	5.5%	4.4%	30.3%	0.6%	3.6%	1.0%	4.3%	7%	12%
Bagisu	7.2%	36.6%	1.3%	5.8%	4.3%	24.1%	0.7%	3.2%	1.1%	3.5%	5%	15%
Basoga	7.0%	34.2%	1.1%	4.7%	4.0%	20.8%	1.1%	5.5%	0.9%	3.1%	9%	15%
Other	6.9%	36.7%	1.6%	6.4%	3.4%	22.4%	0.7%	3.9%	1.6%	4.9%	22%	11%
Batoro	6.5%	28.7%	2.0%	7.6%	2.9%	14.3%	0.9%	4.9%	1.1%	2.8%	3%	16%
Bakiga	5.6%	40.8%	1.0%	6.4%	3.4%	26.8%	0.5%	3.3%	0.9%	3.9%	8%	10%
Mean (weighted)	7.6%	34.0%	1.6%	5.8%	4.1%	21.3%	0.8%	4.0%	1.2%	3.3%	7.7%	15%
Mean (unweighted)	7.9%	38.0%	1.7%	6.4%	4.3%	24.0%	0.8%	4.3%	1.3%	3.9%	7.7%	15%
Std. dev	1.8%	7.2%	0.5%	1.1%	0.9%	5.7%	0.2%	1.0%	0.6%	1.3%	6.0%	4.1%
CoV	0.22	0.19	0.29	0.17	0.22	0.24	0.25	0.23	0.44	0.32	0.78	0.28
Min	5.6%	23.4%	1.0%	4.1%	2.9%	14.3%	0.5%	3.2%	0.7%	1.2%	2.5%	9.8%
Max	12.8%	47.2%	2.8%	7.7%	6.7%	32.5%	1.2%	6.1%	3.0%	6.4%	22.3%	25.4%
# obs	431,560	66,168	431,560	66,168	431,560	66,168	431,560	66,168	431,560	66,168	431,560	431,560

Note: sample limited to economically active respondents born in Uganda, aged 25-55 at time of enumeration.

Table 4.9. Kenya and Uganda: Percentage of public sector employees in total employment by ethnic group and skills level

Kenya						Uganda					
"Skill level"		"Low skilled"	"Medium skilled"	"High skilled"	"High skilled"	"Skill level"		"Low skilled"	"Medium skilled"	"High skilled"	"High skilled"
Level of education	ALL	Primary and below	Secondary	College	University	Level of education	ALL	Primary and below	Secondary	College	University
Mixed	8.5%	1.7%	3.2%	2.2%	1.4%	Iteso	12.1%	5.2%	2.7%	4.6%	0.9%
Kalenjin	7.8%	1.3%	2.7%	2.8%	1.1%	Acholi	9.7%	3.7%	3.0%	3.1%	0.6%
Embu	7.3%	1.2%	2.5%	2.5%	1.1%	Baganda	8.4%	1.8%	2.1%	2.8%	1.3%
Luo	7.0%	1.3%	2.6%	2.0%	1.1%	Lugbara	8.4%	2.3%	2.2%	3.7%	0.6%
Kamba	6.8%	1.3%	2.5%	2.1%	0.9%	Banyoro	8.4%	2.0%	2.2%	3.2%	0.9%
Kikuyu	6.7%	1.0%	2.5%	2.0%	1.1%	Bakhonzo	7.7%	3.1%	1.5%	3.1%	0.5%
Kisii	6.6%	0.8%	2.4%	2.1%	1.2%	Banyankole	7.5%	2.2%	1.5%	3.0%	0.9%
Luhya	6.2%	1.2%	2.2%	1.9%	0.9%	Basoga	7.3%	1.9%	2.0%	2.6%	0.8%
Other	6.0%	1.5%	2.0%	2.0%	0.6%	Langi	7.2%	1.9%	1.8%	3.3%	0.7%
Meru	5.7%	0.9%	1.8%	2.1%	0.9%	Other	6.8%	2.8%	1.6%	2.2%	0.6%
Mijikenda	5.6%	1.7%	2.2%	1.3%	0.3%	Batoro	6.7%	2.0%	1.4%	2.6%	0.7%
Somali	2.9%	1.1%	0.9%	0.4%	0.3%	Bagisu	6.7%	1.7%	1.7%	3.3%	0.7%
Turkana	1.9%	0.8%	0.5%	0.5%	0.1%	Bakiga	5.4%	1.6%	1.1%	2.6%	0.5%
Mean (weighted)	6.5%	1.2%	2.3%	2.0%	1.0%	Mean (weighted)	7.6%	2.4%	1.9%	2.9%	0.8%
Std. dev	1.8%	0.3%	0.7%	0.7%	0.4%	Std. dev	1.7%	1.0%	0.5%	0.6%	0.2%
CoV	0.30	0.24	0.34	0.38	0.48	CoV	0.21	0.40	0.28	0.20	0.30
Min	1.9%	0.8%	0.5%	0.4%	0.1%	Min	5.4%	1.6%	1.1%	2.2%	0.5%
Max	8.5%	1.7%	3.2%	2.8%	1.4%	Max	12.1%	5.2%	3.0%	4.6%	1.3%
# obs	945,110	945,110	945,110	945,110	945,110	# obs	437,503	437,503	437,503	437,503	437,503

While the educational requirements necessary for the higher level public service positions limits the pool of eligible applicants and thus opportunities for patronage, the lower skilled public sector jobs are theoretically open to a much larger pool of applicants, and therefore, presumably, more amenable to patronage influences. In Table 4.9 I therefore segment the public sector labour force by educational attainment level, treating educational attainment as a proxy for skill level, and measure inequalities in public sector employment separately for each 'skills level'. To give an example, the first column measures the percentage of primary-educated public sector employees to total employment by ethnic group.

This exercise shows that in Kenya lower-skilled public sector jobs are more equitably distributed on an ethnic group basis than those requiring higher levels of education. The Somali, Turkana and Mijikenda are not outliers when it comes to access to low skilled jobs, adding further support for the argument that skills rather than discrimination drives the ethnic inequalities observed above.

In Uganda, however, the pattern is reversed. Jobs are more equitably distributed at higher levels of education/skill (although educational attainment is also more equitably spread in Uganda). This effect is driven by the Iteso and Acholi who have unusually high levels of unskilled employees in public employment. This is quite consistent with the conflict hypothesis above. More public spending in conflict-affected areas (on for instance reconstruction, staffing of IDP camps etc.) would likely raise the availability of low skilled public employment in particular.

This hypothesis is tested further in model U.E.4 (Appendix Table VI.3) by introducing a dummy for conflict-affected districts in the 1990s. People born in districts with more than 100 conflict-related deaths between 1989 and 2002 are coded as conflict-affected.³⁸⁵ This dummy is positive and significant after controlling for education, ethnicity and development indicators in the respondent's district of birth. People born in districts that experienced significant conflict between 1989 and 2002 have a 19% higher probability of working in the public sector, all else being equal. This result should not be interpreted causally, as there could be underlying factors driving both public employment and conflict intensity, but the results are at least consistent with a conflict hypothesis.

³⁸⁵ 1989 is the earliest available year of data, but the effect ought to have been the strongest in this period as the majority of the Ugandan 2002 public sector labour force would have been hired in the 1990s. Data from UCDP.

Ethnic favouritism for Presidential coethnics?

Across the Kenyan tables, however, the Kalenjin group appears as something of an outlier with unusually high public employment shares in relation to the educational attainment and level of development in Kalenjin districts. Given that former Kenyan President Moi was of Kalenjin descent, this suggests a possible effect of Presidential ethnic favouritism. Keep in mind however, that for the other three groups across Kenya and Uganda with coethnic presidents the public employment shares are below or on par with the national average, both in aggregate terms and when controlling for education.

A way to test this is to examine whether the coethnic advantage is concentrated among those cohorts who would have entered the labour market during the tenure of their coethnic president. To do this I construct another dummy variable that takes the value 1 if a respondent was of the same ethnicity as the President at the time when he or she was 25 (the average age of public service entry).³⁸⁶ The era dummies are admittedly imperfect, given that people do not enter or leave the public service at a precise age. Nonetheless they capture the cohorts that were most likely to have benefitted from presidential the ethnic favouritism. This dummy is added to the logistic model, in addition to educational, gender and ethnic controls, the district development index, and dummies for each presidential era (Appendix Table VI.4).

The regression results shows that only the Kalenjin dummy is significant and of the right sign. The Kalenjin entering the labour market at the time of their coethnic's presidency had an 8% higher probability of working for the public sector than at other times, all else being equal. Treating this over-representation as the jobs attributed to patronage suggests that in the order of 1% of all public sector jobs in Kenya were unfairly held by Kalenjin candidates in 2009. While not insignificant, presidential favouritism appears to have had a marginal rather than dominant effect on the composition of the Kenyan public sector labour force.

Ethnic favouritism within the public service

While some literature predicts an uneven distribution of public sector jobs on account of ethnic favouritism, others have suggested that ethnicity may be more salient within the public service, as favoured ethnic groups are promoted to higher positions or rewarded with benefits or access to informal rents. Using the asset wealth indices constructed in Chapter 3 as a proxy for income, I can examine ethnic group differences in asset wealth within the public services. Limiting the

³⁸⁶ This approach is similar to that used by Kramon and Posner, 'Ethnic Favouritism.', which uses years of schooling as the dependent variable.

sample to public sector employees, I examine the effect of ethnicity on the probability of being in the top asset wealth decile:

$$\log(P(y = 1) / P(y = 0)) = \alpha + \beta_1 x_{1i} + \beta_2 x_{2i} \dots + \beta_k x_{ki} \quad (2)$$

y: 'Asset wealthy' (1 = in top 10%, 0 = in bottom 90%)

x₁: Ethnicity dummies

x₂: Level of education (1 = none or some primary, 2 = primary, 3 = secondary, 4 = college, 5 = university)

x₃: Age (in years)

x₄: Sub-sector of the public service³⁸⁷

x₅: Urban/rural dummy

x₆: District of residence dummy

To reduce possible biases resulting with the inclusion of public sector employed women with wealthy husbands, the sample is restricted to male heads of household working in the public sector. I control for respondent age, education, district of residence, urban/rural status and sub-sector of the public service. As a robustness check I also include an alternative specification where the sample is limited to respondents resident in the capital cities, thus holding geographic location constant.

Note that this model may well suffer from omitted variable bias and the results should not be interpreted causally. Asset wealth can be a function of far more than the household head's employment and unobserved ethnic group differences may well account for some of the observed inequalities. These results nonetheless provide a descriptive account of horizontal inequalities within the public service, even if we cannot distinguish ethnic favouritism from all other structural drivers of such inequality.

The regression results are given in Appendix Table IV.5 and predicted probabilities in Figures 4.8-4.9. These results show little sign of a wealth advantage for coethnics of present or past presidents. On average 26% of the Kenyan public servants in this sample are found in the top wealth decile,³⁸⁸ while the predicted probabilities by ethnic group range from 20% to 33% (all else being equal). The Kalenjin and Kikuyu are not outliers, with probabilities quite close to the average (both have probabilities of 27%). Limiting the sample to residents of Nairobi reduces the variance across ethnic groups further and increases the confidence intervals, while the rank order remains broadly the same.

³⁸⁷ Kenya: local govt, central govt, parastatals and teacher's service; Uganda: public service, education, health, security.

³⁸⁸ These shares are higher than those reported in Chapter 3 because the sample is restricted to economically-active, male household heads in the 25-55 age range.

In Uganda the ethnic group differences in are smaller still and for the most part statistically insignificant. On average 30% of all public servants in this sample are found in the top asset wealth decile. Across ethnic groups the probability of being asset wealthy ranges from 27% to 35%. The Banyankole are found towards the middle of the distribution. The Langi do have a wealth advantage conditional on education and locality, but this seems linked to geographic factors as the wealth premium disappears when restricting the sample to residents of Kampala and Entebbe.

While acknowledging that these remain crude measures of ethnic wealth inequalities, the exercise finds little evidence that coethnics of past or present presidents have higher probabilities of being wealthy compared to other public servants with the same educational level and working in the same locality.

Figure 4.8. Kenya: conditional probability among public sector employees of being in top asset wealth decile by ethnic group

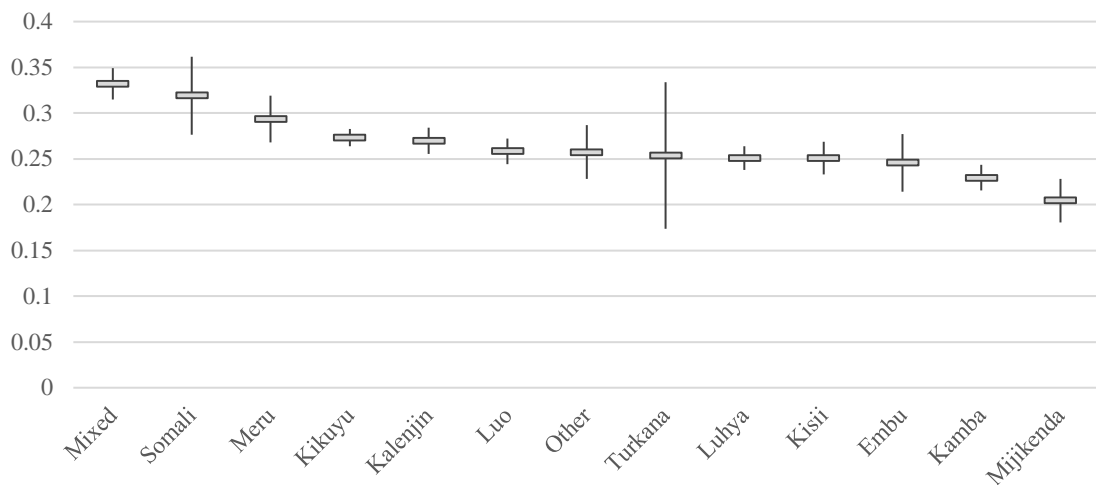
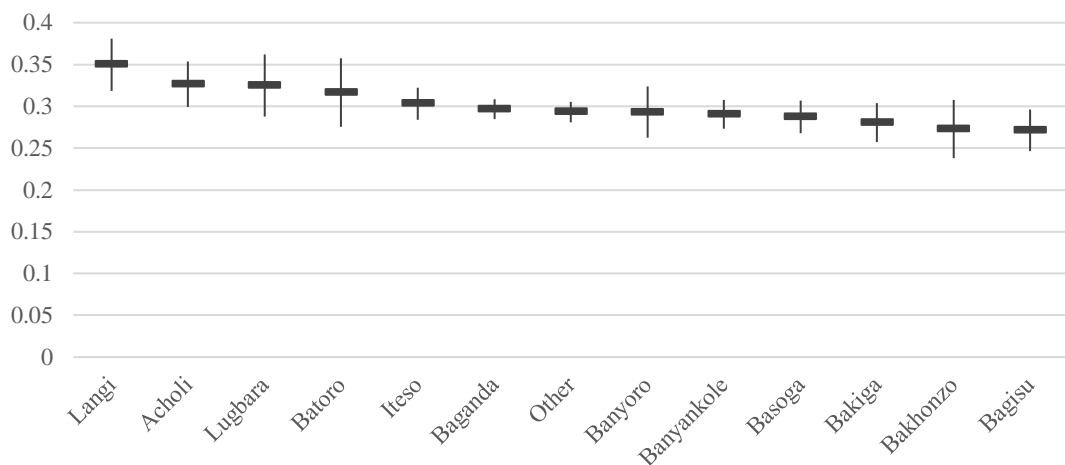


Figure 4.9. Uganda: conditional probability among public sector employees of being in top asset wealth decile by ethnic group



4.5. SOCIAL REPRODUCTION IN PUBLIC EMPLOYMENT?

Intergenerational educational mobility

The ethnic and regional distribution of public sector jobs, which seems to privilege candidates from less advantaged communities (conditional on education), suggests that the public service is not the exclusive preserve of children of the elite. This is not an uncommon feature of the public service; studies of British civil servants have also found that they tend to be educational high achievers from comparatively poor households, relative to their own educational achievement.³⁸⁹ So far the analysis has looked at differences in probability at the group rather than individual level however. By linking characteristics of the parents of public sector employees it is possible to examine the effect of individual socioeconomic background on the probability of holding public sector employment.

Some Ugandan household surveys from the 1990s and 2000s include questions about parental educational and occupational background.³⁹⁰ Assuming a strong correlation between educational attainment and socioeconomic status, these surveys provide insight into the socioeconomic background of public sector employees. I focus on the 1992 and 2005/06 household surveys for consistency with Chapter 3.

These datasets can be used to examine the effect of parental educational attainment on a respondent's likelihood of working in the public sector, conditional on the respondent's own educational attainment. I therefore introduce a further set of independent variables into logistic model 1 measuring parental education attainment, while retaining the age, gender and (respondent) educational controls. Respondents with missing parental characteristics are dropped from the sample. The predicted effect of the father's educational attainment on the probability of holding a public sector job for a university educated respondent is given in Table 4.10 and the full regression results in Appendix Table VI.6.

The results for 1992 show that controlling for respondent education, having a highly educated father reduces the likelihood of working in the public sector, although none of the coefficients are significant.³⁹¹ Having a mother with a university degree also reduces the likelihood of working in the public sector – and this result is significant - while a mother with a post-

³⁸⁹ W. D. Rubinstein, "Education and the Social Origins of British Elites 1880-1970," *Past & Present* 112 (1986): 163–207.

³⁹⁰ Some of these survey have previously been used in studies of social mobility, see: Bossuroy and Cogneau, "Social Mobility in Five African Countries."

³⁹¹ The coefficients are also quite sensitive to the model specification; including the parastatal sector for instance, changes some of the signs.

secondary certificate or diploma increases it, likely reflects the higher probability of children of teachers entering public employment (significance at 5% level).

These effects are stronger when using the 2005/06 sample. All else being equal, the likelihood of working in the public sector is halved if the respondent's father has a university degree, as compared to no formal education, with results significant at the 10% level. In other words, relative to other labour market participants with the same educational attainment, public sector employees have comparatively uneducated parents, and thus presumably come from humbler backgrounds than their educationally-equivalent private sector counterparts.

Table 4.10. Uganda: Predicted average probability of public employment for a university educated respondent, by father's educational attainment

Educational attainment of father	probability	Std. err.	95% confidence interval	
			min	max
UGANDA 1992				
None or some primary	0.61	0.07	0.47	0.75
primary	0.58	0.08	0.43	0.73
secondary	0.54	0.09	0.37	0.71
college	0.68	0.12	0.44	0.92
university	0.44	0.15	0.14	0.73
UGANDA 2005/06				
None or some primary	0.50	0.08	0.35	0.65
primary	0.46	0.08	0.30	0.61
secondary	0.39	0.07	0.25	0.54
university	0.33	0.10	0.13	0.52

Sources: calculated from: UG IHS 1992; UG NHS 2005/06.

Although no dataset from Kenya or Tanzania has been found that asks respondents about the educational or occupational background of their parents, the censuses provides a sub-sample where parent-child variables are linked. From the censuses it is possible to observe parental characteristics when the respondent and parent reside in the same household, and for this sub-sample it is therefore possible to examine the effect of parental education on the probability of holding a public sector job. This introduces a risk of sample biases, as the decision by a working adult to live with their aging parents is presumably not random, nor is the probability of having a parent who is still alive. To limit such biases this analysis is restricted to respondents classified as the head of their household (so that the parent is a dependent and not vice versa), and considers only respondent-mother pairs. It is considerably more common for adult heads of households to live with their mothers than with their fathers, and the characteristics of households with co-resident mothers are less atypical.

In Table 4.11 and Table 4.12 the characteristics of adult respondent heads of households living with their mothers are compared to the national average. The summary statistics do not differ markedly between the full census sample and mother-cohabitation sub-sample. In Kenya respondents living with their mothers are more likely to be male, are on average slightly older, from slightly less developed regions of the country and have lower educational attainment, but in all cases the differences are within half a standard deviation or less. In Tanzania the differences are even smaller, although respondents living with their mothers are more likely to be male, are on average slightly older and have roughly the same educational attainment and district of birth developmental level as in the full sample.

Table 4.11. Kenya 2009: Sample mean, comparing the full sample with sample of household heads residing with their mothers

Characteristic of respondent	Full sample (St.dev.)	'mother' sample (St.dev.)	Full public sector sample (St.dev.)	'mother' public sector sample (St.dev.)
Percent male	73%	77%	77%	80%
Age	38.2 (8.2)	40.2 (8.0)	40.0 (8.0)	42.4 (7.2)
Average years of schooling	7.8 (4.2)	6.9 (4.5)	11.5 (2.7)	11.3 (3.0)
Development index in place of birth	0.48 (0.16)	0.42 (0.18)	0.51 (0.15)	0.46 (0.16)
# observations	525,849	8,273	41,382	737

Table 4.12. Tanzania 2002: Sample mean, comparing the full sample with sample of household heads residing with their mothers

Characteristic of respondent	Full sample (St.dev.)	'mother' sample (St.dev.)	Full public sector sample (St.dev.)	'mother' public sector sample (St.dev.)
Percent male	72%	76%	75%	72%
Age	37.7 (8.6)	38.2 (8.3)	39.2 (8.3)	41.2 (7.6)
Average years of schooling	5.4 (3.5)	5.4 (3.4)	9.2 (3.0)	8.9 (2.9)
Development index in place of birth	0.23 (0.22)	0.23 (0.23)	0.30 (0.27)	0.32 (0.30)
# observations	480,401	17,668	41,037	1,317

Using these two samples of households where the household head resides with his or her mother, I use the same the same approach as described for Uganda above and introduce a variable measuring the educational attainment of the respondent's mother. Results are presented in Appendix Table VI.7, and predicted probabilities are given in Table 4.13 below for a university educated respondent.

The Kenyan results mirror those for Uganda. On average, the higher the educational attainment of the mother, the lower the probability of working for the state, although the coefficients are

only significant at a 10% confidence interval. The only exception is a slightly higher probability of public employment for respondents with college educated mothers, as compared to secondary educated mothers, suggesting a possible positive effect of having a mother who was a teacher on a respondent's public sector prospects.

The Tanzanian results are largely insignificant; only primary school educated mothers have a statistically significant difference in probability of holding public employment compared to those with no education. However, the coefficient is positive rather than negative. In contrast to Kenya, the Tanzanian results therefore suggest that a more highly educated mother increases the prospect of working for the state, although the results are not significant.

While the Tanzanian results are far from conclusive, they are at least consistent with the notion that the public service aids social reproduction by favouring children of a pre-existing elite. This result reinforces the findings on region of birth discussed above. Just as people born in a district of higher developmental level have a higher probability of working for the public sector (conditional on education), so too do people from families with high educational attainment.

Table 4.13. Kenya and Tanzania: Predicted probability of public employment for a university educated respondent, by mother's educational attainment

Educational attainment of mother	probability	Std. err.	95% confidence interval	
			min	max
KENYA 2009				
None or some primary	0.48	0.02	0.43	0.52
primary	0.37	0.04	0.30	0.45
secondary	0.27	0.05	0.16	0.37
college	0.33	0.08	0.19	0.48
university	0.20	0.12	-0.04	0.44
TANZANIA 2002				
None or some primary	0.43	0.07	0.30	0.56
primary	0.54	0.08	0.38	0.69
secondary	0.47	0.29	-0.09	1.03
university	0.60	0.16	0.30	0.91

Public-private wealth premiums and elite concentration

An alternative approach to examining social reproduction in the public sector is to consider public-private wealth premiums using an adapted mincer function. As the censuses contain no income data however, I examine the probability of being in the top 10% based on asset wealth instead, conditional on education, age and sector of employment (as in Section 4.3 above). Mincer models are usually used to study pay premiums, but here the aim is different. The goal is not to establish the returns to skills in the public sector compared to an individual's next best option, but the economic standing of public sector-headed households relative to other

households with similar levels of educational attainment. The intuition is the following: independent family wealth, high earnings and educational quality are likely to be correlated. If coming from a privileged socioeconomic background increases the likelihood of a public sector career, then public sector-headed households should have a clear wealth premium relative to candidates with the same educational attainment in private employment. Consequently, if we find a public sector wealth *penalty*, this would suggest that the public sector is not the main, or at least not the only, career route for graduates from the most privileged social backgrounds. Such a penalty should not, however, be interpreted as a sign that public sector employees are underpaid – unobserved differences could well explain this penalty.

In the logistic model below, therefore, the dependent variable is a dummy variable set to 1 if the household is included in the top 10% of asset wealthy households and 0 if not (using the same asset wealth variable as in Chapter 3). As an alternative specification I also examine the probability of being in the top 1% of households.

$$\log(P(y = 1)/ P(y = 0)) = \alpha + \beta_1 x_{1i} + \beta_2 x_{2i} \dots + \beta_k x_{ki} \quad (3)$$

y: asset wealth index (1 = top 10%, 0 = bottom 90%)

x₁: age of household head (in years)

x_{1#} x₁: age squared

x₂: education of household head (0 = none, 1 = some primary, 2 = primary, 3 = secondary, 4 = post-secondary, 5 = university)

x_{1#} x₂: age # education interaction term

x₃: sector of employment dummy (1 = public sector, 0 = all other)

x_{2#} x₃: public sector employee # educational attainment interaction term

x₄: rural / urban status (1 = urban, 0 = rural)

x₅: Province or region dummies

As in the previous exercises, the Kenyan results uses the 2009 census which includes a precise definition of public sector employment, while the Tanzanian and Ugandan censuses from 2002 only capture government employees in the public sector sample. For Uganda and Tanzania this has the disadvantage that it captures parastatal employees in the private rather than public sector variable. The sample is limited to male-headed households where the household head is economically active. The main variable of interest is the sector of employment dummy. The model controls for the age and education of the household head, as well as including a sector#education interaction term to see how the public sector premium varies with educational attainment. I control for province or district of residence and urban/rural status.

The regression results are given in Appendix Table VI.8 and the predicted probabilities shown in Figures 4.10 – 4.13. In Kenya public sector employees have a considerable wealth premium (i.e. a higher probability of being in the top wealth decile) among primary and secondary school educated workers. At the college and university level the bias is reversed, and public sector

employees face a wealth penalty, albeit only statistically significant among the university educated. The results are similar when examining the probability of being in the top 1% as opposed to top 10% of households, where this public sector wealth penalty rises further for college and university graduates.

In Uganda public sector employees have a significantly higher probability of being in the top 10% among those with primary or secondary education only, a lower probability among those with college degrees, and a slightly higher, but statistically insignificant probability of asset wealth at university level. The probability of being in the top 1% however, is lower for university-educated public sector employees.

Tanzanian public sector employees have a higher probability of being in the top 10% at all educational levels but the differences are statistically insignificant among college and university graduates. The probability of being in the top 1% is slightly lower for university educated public sector workers than those in private employment, although again this difference is statistically insignificant.

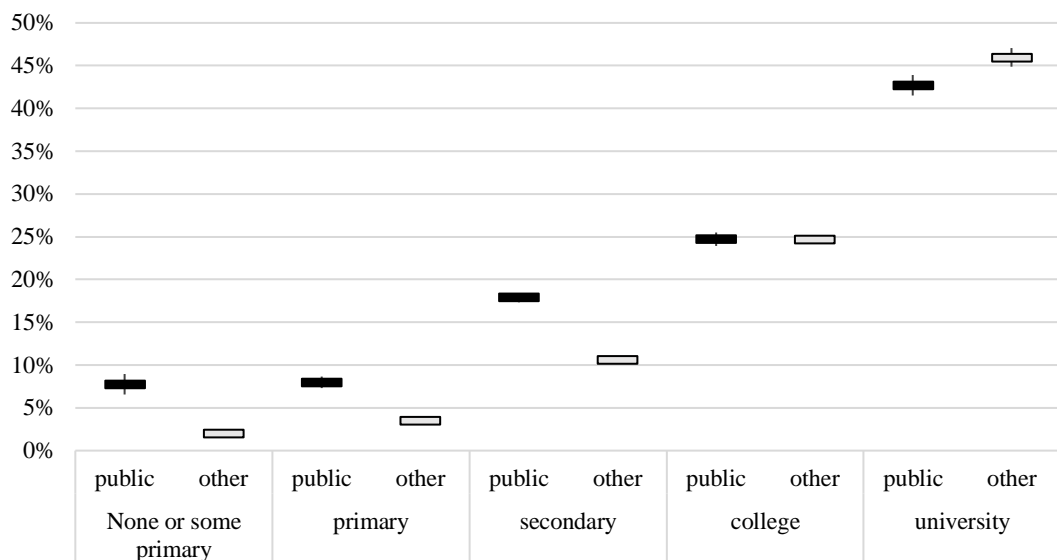
These public-private categories are heterogeneous groupings however, and in an alternative specification I examine the Kenyan data using disaggregated sub-sectors of employment. For simplicity the sample is restricted to university-educated candidates only and examines the conditional probability of being in the top 1% of asset wealthy households. Predicted probabilities are given in Figure 4.11. This shows that the probability of being in the top 1% varies considerably across different sub-sectors of the labour market and divisions within the public sector (range of 8-32%). Teachers and local government employees are found towards the bottom of the rank order, with probabilities of being in the top wealth percentile of 8% and 13% respectively. Central government employees are found in the middle (17%), and parastatal (/state-owned enterprise) employees towards the top (25%). The highest probability of being in the top 1%, however, are among employees in international NGOs, followed by business owners ('self modern'), state-owned enterprises and private sector employees. With the exception of the parastatals/state-owned enterprises, this suggests that the wealthy are more strongly clustered in the formal private sector and NGOs than in the public sector.

Overall then, there is little sign of a wealth premium among college and university-educated employees in the public sector relative to those in private or NGO employment, suggesting that the public sector is not disproportionately crowding in the wealthy. In Kenya there is a public sector penalty above secondary level while in Uganda and Tanzania the differences across sectors is statistically insignificant. Given its higher national income and larger private sector it is perhaps not surprising that Kenya's private sector offers more alternative routes to wealth than in Tanzania and Uganda.

The higher wealth probabilities among public sector employees at lower levels of educational attainment moreover, are quite consistent with results from other parts of the world. These tend to find that public sector institutions offer better terms for low-skilled workers relative to the private sector, and the same or worse terms for those at the top.³⁹²

Summarizing the results from these different exercises (region of birth effects, intergenerational educational mobility and public wealth premiums), suggests that in Kenya and Uganda the public sector promotes social mobility more so than the private sector. The Tanzanian results are ambiguous but point to a possible elite concentration in public employment. This may seem a counterintuitive result given the policy emphasis on social equity in Tanzania, but could reflect fewer private sector alternatives for the sons and daughters of the elite, given the country’s historical statist orientation.

Figure 4.10. Kenya 2009: Probability of being in top asset wealth decile by educational attainment and sector of employment (showing 95% confidence intervals)



³⁹² For example: Fournier and Koske, “The Drivers of Labour Earnings Inequality: An Analysis Based on Conditional and Unconditional Quantile Regressions.”

Figure 4.11. Kenya 2009: Probability of being in top asset wealth percentile if university-educated, by sector of employment (showing 95% confidence intervals) (public sector in black)³⁹³

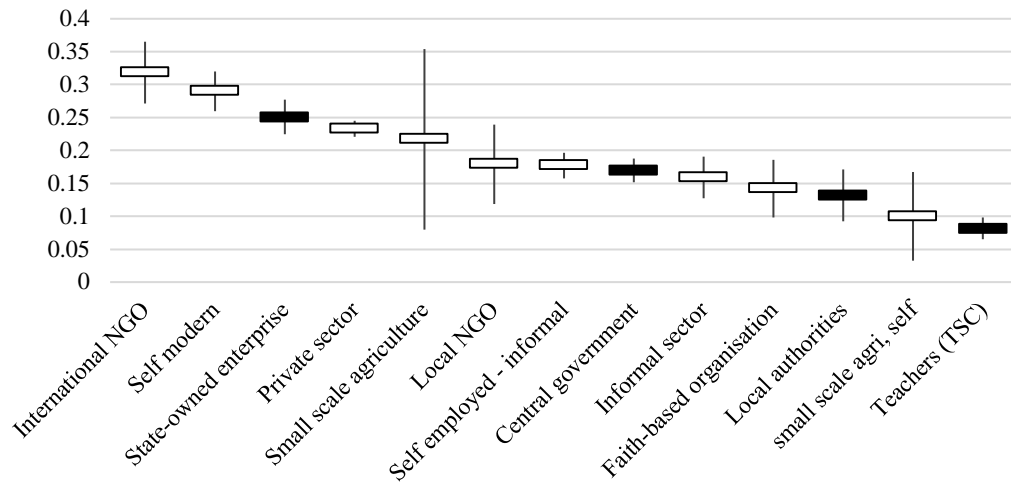


Figure 4.12. Uganda 2002: Probability of being in top asset wealth decile by educational attainment and sector of employment (showing 95% confidence intervals)

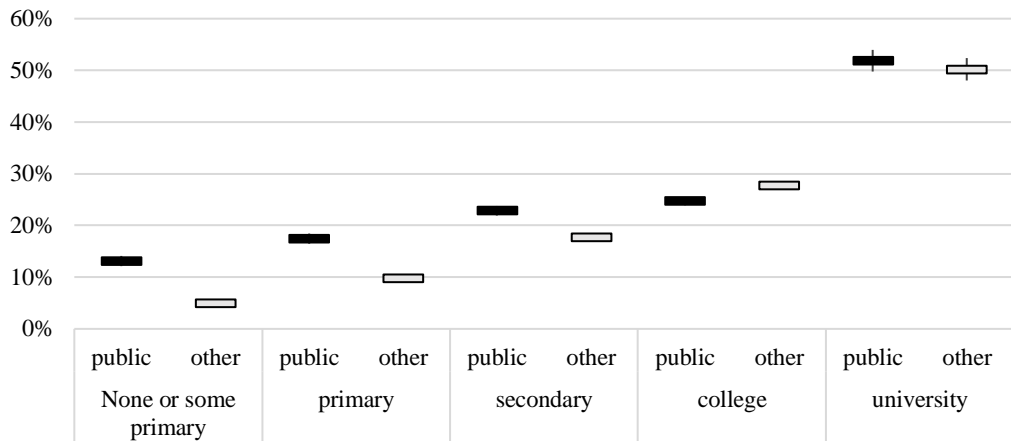
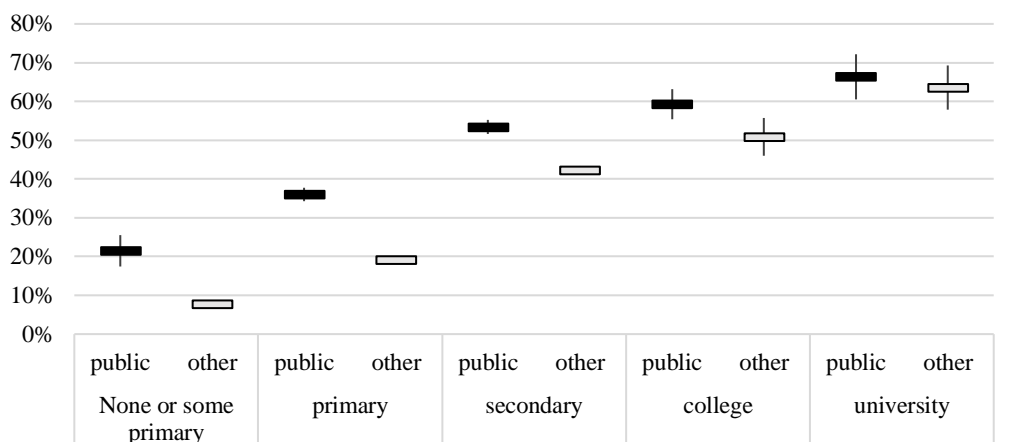


Figure 4.13. Tanzania 2002: Probability of being in top asset wealth decile by educational attainment and sector of employment (showing 95% confidence intervals)



³⁹³ Sectors with very few observations have been excluded from the chart (these include 'other', 'pastoralist' and 'private household').

4.6. CONCLUSION

Previous chapters examined some of the outcomes of East Africa's postcolonial public employment policies including their effect on budgetary allocations and fiscal policy and contribution to the income and wealth stratification of East African society. This chapter looked at the people who make up the public service. By examining the characteristics of the public sector labour force in comparison to the Kenyan, Tanzanian and Ugandan labour forces at large, this paper speaks to a large literature about inequality in access to public sector resources in Africa and the politics driving it.

The first, and perhaps in hindsight obvious observation is that the educational attainment of Kenyan, Tanzanian and Ugandan public sector employees is well above that of the labour force at large, as the majority of public sector employees are teachers, nurses and other comparatively skilled professionals. I argue that once we control for the educational attainment required for such mid-level and senior posts, the government has had relatively few candidates to choose between. Among older cohorts there are less than two university or college graduates per public sector post. Among the candidates with certificates or degrees in disciplines strongly demanded by the state, such as teaching, medicine and nursing, this ratio is presumably even lower. Given the shortage of high level manpower at independence and policies explicitly linking educational qualifications with public sector employment opportunities, this result is consistent with stated policy. As a result, many candidates were selected into a public sector career at an early stage in their academic progression. Assuming that the examination system was broadly fair, their selection was at least in part a function of their educational performance. This is antithetical to the type of personalised, quid pro quo clientelism described by Hicken, Robinson and Verdier, as it curtails the ability of politicians to hire and fire freely. A large share of the East African public sector wage bill has not, at least up until recently at least, been amenable to the type of patronage described in this literature. It appears to have been distributed in accordance with institutionalized rules rather than informal negotiations on the 'back veranda'.³⁹⁴

A meritocratic system can of course be elitist. If the existing elite is better able to provide its children with the preconditions for strong academic performance then they stand a better chance of accessing public sector jobs.³⁹⁵ This dynamic is likely to intensify as educational attainment increases and competition for jobs within this growing group of graduates becomes

³⁹⁴ Common euphemism to describe informal power relations, see: Berman, "Ethnicity, Patronage and the African State: The Politics of Uncivil Nationalism," 335.

³⁹⁵ See for instance recent discussion about the United States in the Economist: "America's Elite: An Hereditary Meritocracy," *The Economist*, January 22, 2015.

fiercer. Although the evidence is scarcer, what data is available on intergenerational mobility however, suggests that the public sector (at least in Kenya and Uganda) is more amenable to social mobility than the private sector; it employs a disproportionate share of educational high achievers from comparatively underprivileged regions and educationally-underprivileged backgrounds. It also hires a disproportionate share of female educational high achievers. This is not to say that the distribution of public sector jobs is progressive. Educational attainment is itself correlated with socioeconomic background, and thus the average public sector employee comes from a comparatively privileged social background. Since independence however, educational attainment has grown more regionally and ethnically equitable – not less so. As a result, educational attainment and public sector employment access is more equitable today - on a regional, ethnic, gender and socioeconomic basis - than what the unfettered market would have delivered.

Interestingly this is less the case in Tanzania, where there is no strong relationship between public employment probability and the level of development in a respondent's place of birth, possibly because inequality was lower to begin with. It also appears that Tanzania's public servants are more mobile than in the neighbouring countries and jobs outside the capital are therefore not disproportionately taken by people native to the locality.

A different strand of literature about clientelism argues that public sector resources are used to reward favoured ethnic groups or regions, without necessarily targeting particular individuals within this favoured group. This is expected to lead to pronounced ethnic inequalities in public sector employment, and many academics have argued that it usually leads to an employment advantage for coethnics of present or past presidents. In both Kenya and Uganda however, ethnic inequalities in public employment (across the larger groups at least), are not particularly pronounced. In Kenya the differences are in large part explained by inequalities in educational attainment, while in Uganda the legacy of conflict seems to raise the availability of public employment, resulting in elevated public employment levels for some of the more disadvantaged ethnic groups. The public employment to population ratio of the ethnic groups of the current presidents, the Kikuyu and Banyankole, are roughly on par with the national averages. Only in the case of the Kalenjin, the ethnic group of former Kenyan President Moi, do we see signs of possible presidential favouritism. But my analysis suggests that this unfair Kalenjin advantage only accounts for around 1% of all public sector jobs and presumably a similar share of the wage bill (in 2009). It may have been higher prior to when President Moi left office in 2002, but is unlikely to have consumed more than a few percentage points of the overall share of jobs. Given that the Kalenjin had comparatively low educational access during

the colonial era, ethnic favouritism may in this case have been heightened by a particular sense of historical grievance or injustice.³⁹⁶

Lastly a third strand in the literature (also invoking the concept of patronage), argues that ethnically polarized societies favour ethnically inclusive cabinets, where posts are allocated in rough proportion to the ethnic composition of the population. This is presumed to lead to a relatively equitable pattern of spending, albeit with different ministers using their spheres of influence to favour their coethnics. Yet segmenting the public service by broad sub-sections shows little evidence of pockets of favouritism in different sections of the service, and the large share of employees hired at local levels suggests that ministers have relatively limited control over employment anyhow.

Problematically, this literature takes for granted that inclusive ruling coalitions will turn to patronage to reward their supporters, rather than using formal rules and institutions to safeguard the interest of their constituencies. I argue instead that the ethnic and regional pattern of public employment distribution are relatively consistent with the formal policies and rules in place, some of which may well have been instituted precisely to address specific ethnic group grievances and or to counter regional and ethnic inequalities. Across Kenya's eight former provinces, Uganda's four regions and Tanzania's 21 regions, public sector employment is spread quite evenly, with the exception of the capital cities and other particular outliers. This is suggestive of central-level efforts to distribute public spending – and by extension jobs – in proportion to the population.

These observations about the composition and structure of the East African public sector labour force are not dissimilar from those in the public labour market literature focusing on Europe and North America. Public sectors commonly employ a disproportionate share of the highly educated labour force, this skew tends to be stronger among women than men, and stronger among those from comparatively poorer regions or social backgrounds. Whether due to the inheritance of a European public service model under colonialism or an intrinsic public sector labour market 'logic', this suggests the need to bring developing country experiences into the mainstream literature on public sector labour markets rather than treating them as world apart.

These results raise questions for the future. As shown in Table 4.1, secondary and tertiary enrolment have increased rapidly across the region in the past two decades. The government's rate of absorption of graduates, which is already showing signs of a decline across the region,

³⁹⁶ For a discussion of the differences in redistributive strategy when a comparatively wealthier vs. poorer ethnic group is in power, see: Azam, "The Political Geography of Redistribution."

will decline further. This dynamic is already in motion, as evidenced by popular concerns about high unemployment or underemployment among not only secondary school leavers, but also, increasingly, among university graduates.³⁹⁷ As a result, the government's direct control over the skilled labour market is weakening. Besides the obvious economic benefits of increased human capital formation, this dynamic may have positive consequences for political accountability, if it is helping to drive a wedge between the state and educational elite. But it also seems likely that spatial and ethnic inequalities will deepen as the active, politically-motivated distributional decisions of the government fall in importance relative to the narrow employment decisions of private firms.

³⁹⁷ John Aglionby, "Joblessness Is an 'Existential Threat' to Kenya's Future," *Financial Times*, April 21, 2017, <https://www.google.co.uk/amp/s/amp.ft.com/content/1751e888-04cf-11e7-aa5b-6bb07f5c8e12>; Ivan Mafigiri Kanyeheyo, "The Crippling Dilemma of Graduate Youth Unemployment," *New Vision*, January 21, 2015, http://www.newvision.co.ug/new_vision/news/1319320/crippling-dilemma-graduate-youth-unemployment.

Chapter 5.

Conclusion

The changing face of the public service

Over the course of the past 50 years the people working for governments in Africa have been characterised in various ways, be it as a vanguard and driver of modernity, as a rent-seeking and exploitative elite, or as clients of political patronage. This thesis has sought to examine the composition and trace the changes to Kenya, Tanzania and Uganda's public services over this same period to add more quantitative evidence to the debate about public employment and its political significance in postcolonial East Africa.

This analysis has shown that over the course of this period, public employment policies changed markedly. As demonstrated in Chapter 2, across the three countries, public sector employment and pay have oscillated sharply. Public sector employment peaked as a share of the labour force in the 1980s at roughly 6-7%, then fell by a half by 2010. Average earnings in contrast fell by two-thirds or more over the course of the 1970s through 1990s and have been rising since. At the same time the skills and nature of the work of the average public servant has changed considerably. At independence the public service remained racially segmented, with a slim, foreign-dominated professional apex overseeing a large pool of largely unskilled, manual African workers. Today the public sectors of Kenya, Tanzania and Uganda are almost entirely staffed by citizens of their respective countries and the majority are mid-level professionals such as teachers, nurses, administrators and policemen. The vast majority of public servants have completed secondary school and a growing share have tertiary education. A third or more are women, compared to female public sector shares of around 10% in the mid-1960s.

Despite rising salary levels since the mid-1990s, controlling for skills or positions, their earnings are considerably lower today than in the late 1960s. The salary and basic allowances of a Kenyan government director in 2011 was roughly a third of its level in 1961. Among tertiary educated public servants there is little sign of a wealth premium relative to other tertiary educated labour market participants. Thanks to a rapidly expanding secondary and tertiary education system, moreover, these public service professionals are a smaller share of the educational elite than they were in the 1960s, and a smaller share of the relatively high-income earning classes.

Although public sector employees are concentrated towards the top of the income distribution, it is also valuable to keep absolute rather than relative wealth levels in mind. According to recent census data, the majority of public sector-headed households across the three countries live in homes without piped water or sewage in their dwellings, only around half have electrical lighting, and less than a fifth own a car or refrigerator.³⁹⁸ The majority work outside the capital cities and a third or more are based in rural communities.³⁹⁹ While on average better off than most of their compatriots, only a small share of public employees meet a European definition of a middle class income or lifestyle.

A public sector jobs then, seem to offer a comparatively secure middle-tier career rather than an obvious route to riches. As shown in Chapter 4, in Kenya and Uganda, if less so in Tanzania, public sector jobs are disproportionately important for educational high achievers from poor regions of their respective countries, who continue to have a high probability of entering public service. Educated women, too, are over-represented in relation to men with the same educational attainment.

In many regards the public sector labour markets in these three East African cases have come to look like public sector labour markets around the world. Governments often use public sector jobs as a part of their regional policy, with the aim of propping up lagging regions and promoting equity in service access, rather than maximizing growth. The public sector is often a more important employer of skilled workers in peripheral regions rather than in the capitals. Because of the scope of work, benefits structure and more transparent hiring criteria, governments commonly hire more women and minorities than private employers, and tend to institute more compressed pay scales, with premiums at the bottom of the pay scale but penalties at the very top.⁴⁰⁰ The Kenyan and Ugandan cases, if perhaps less so the Tanzanian case, conform to these stylized observations.

The main difference, when comparing these case study countries to richer regions of the world, seems to lie not in the nature of public sector recruitment or remuneration, but in the low level of national income. Because of higher income and educational inequality, and because governments are smaller and employ a lower share of the labour force, public servants stand out as a relatively privileged group. Consequently the politics of public employment is more contentious and has greater inequality implications.

³⁹⁸ Calculated using the public sector definitions used in Chapter 4; KE CENSUS 2009; TZ CENSUS 2002; UG CENSUS 2002.

³⁹⁹ 36% in Kenya, 33% in Tanzania and 67% in Uganda: Ibid.

⁴⁰⁰ Gregory and Borland, "Recent Developments in Public Sector Labor Markets."

Explaining public employment policies

What drove these changes to the structure of public employment? The findings in Chapters 2-4 point to three sets of factors that contributed to these changes to public sector employment and earnings: economic conditions, global development paradigms, and domestic political conditions.

Broader economic conditions had a considerable impact on public employment conditions, particularly the shocks of the 1970s and 1980s. The declining terms of trade and exchange rate depreciations had a dramatic effect on the real value of public spending and by extension on public sector wages. Adjusted for inflation, I calculate in Chapter 2 that wages in the public sector fell by 70-95% on average between the late 1960s and early 1990s. This extreme fall in real earnings in turn prompted a decline in employment in the 1990s, as governments rationalised the public service and curbed new hiring to generate the fiscal space for wage increases. The wage declines probably had the unintended consequence of making such reforms easier as the attractiveness of state employment had declined. The most extensive rationalisation of public employment took place in Uganda where the wage declines had been most severe.

Global ideas about the role of the state also influenced policymaking. As discussed in Chapters 1 and 2, global development paradigms changed radically in the 1980s. While the state was regarded as the rightful driver of economic development in the 1950s to 1970s, by the 1980s an overextended state was thought to be stifling the private sector and preventing growth. These changing paradigms had a particularly pronounced effect on government involvement in industrial development. Governments nationalised industries and banks in the 1960s and 1970s, then reversed these policies in the 1990s by divesting from the parastatal sector. As a result, employment in parastatals shot up rapidly in the early independence era, bringing a larger share of the formal labour force under state direction, and then declined sharply in the 1990s and 2000s. Another important global policy shift was the attention to basic service delivery, advocated strongly by development agencies in the 1990s and 2000s and embodied in the Millennium Development Goals. This has resulted in an even greater share of budget resources (and staff) directed towards primary education and healthcare since the late 1990s.

These global ideas were in part imposed on African governments, through externally dictated loan conditions and grants that nudged spending in the direction of donor priorities. But studies suggest at least some degree of domestic buy-in for these policy shifts. In Uganda for instance, the government constrained spending and liberalised the exchange rate in the 1990s after a long-running internal government debate about the costs and consequences of different courses

of action.⁴⁰¹ In a study of ideological shifts in Africa, Sirkku Hellsten has argued that Africa has developed its own brand of neoliberalism, which in contrast to the solidaristic and egalitarian ethos of African socialism of the 1960s, emphasises individualism, private accumulation and narrow, sub-national loyalties over national ones.⁴⁰² Perception surveys also suggest that attitudes towards the state may be less favourable than in the past. While there are no earlier comparators against which to compare these results, Afrobarometer results from the early 2000s suggest popular support for reforms that reduced the role of the state in economic management.⁴⁰³

Domestic political conditions and institutional legacies have also, invariably, shaped government course of action, although not necessarily in the ways predicted by academics. The nature of the postcolonial African political settlement and its consequences for public employment policies remains contested. A major question in African history is how political priorities changed with the transfer of power from colonial governments accountable to a colonial metropole, to independent, national governments. A further and more recent concern is how the erosion and recovery in democratic governance in Africa over the past half century has (re)shaped the policy space. In many academic texts, whether by historians, political scientists, economists or anthropologists, public sector jobs are viewed as a critical ingredient in postcolonial political settlements. Two arguments have been particularly influential. Dependency theorists and the public choice school saw public sector jobs as a way of creating a co-opted elite, who would use their relative power to oppress and extract from the majority of the population. Others viewed public sector jobs as instruments of patronage that could be given and taken away from individuals or ethnic groups collectively, depending on their ability to deliver political support. However, by tracing the change in employment and earnings and examining the structure of public services, this thesis throws doubt on both arguments.

The idea of the public service as a site of social reproduction fits poorly with the available evidence. Already in the 1980s several scholars showed that wages in the formal sector had declined substantially across Anglophone Africa as union powers eroded, raising doubts about

⁴⁰¹ Alan Whitworth and Tim Williamson, “Overview of Ugandan Economic Reform since 1986,” in *Uganda’s Economic Reforms: Insider Accounts*, ed. Florence Kuteesa et al. (Oxford: Oxford University Press, 2010).

⁴⁰² Sirkku K. Hellsten, “Deconstructing the Myth of the African Middle Class,” in *The Rise of Africa’s Middle Class: Myths, Realities and Critical Engagements*, ed. Henning Melber (London: Zed Books, 2016).

⁴⁰³ 58% of Kenyans, Ugandans and Tanzanians (pooled) were fairly or very satisfied with the government’s reduced role in the economy: Afrobarometer, Kenya, Tanzania and Uganda, 2002/03, Round 2.

the disproportionate political leverage of the salariat.⁴⁰⁴ The long-run data presented in Chapter 2 shows that these wage declines started in the late 1960s, which suggests that the independence leaders were quick to withdraw their support for the continuation of the high wage legacy of the colonial era. As the education system grew and more secondary and tertiary graduates joined the urban labour market, governments sought to include new aspirants rather than limit access to those from particular social backgrounds, at the expense of wages. Consequently, I find that the public sector share of households in the top income and wealth brackets have declined markedly in Kenya and Tanzania, and presumably in Uganda too, although there are no pre-crisis measures against which to compare Uganda's current public sector elite shares.

Furthermore, although the data points are few and samples small, the examination in Chapter 4 of the educational attainment of the parents of today's public servants shows that Kenya and Uganda's public servants come from less educated homes than their educational equivalents in the private sector (the results from Tanzania are more ambiguous). Moreover, Kenyan college and university-educated private sector employees today have higher living standards, on average, than those in the public sector. This throws further doubt on the importance of the public service as a site of social reproduction.

Clientelist theories in contrast, presume that jobs represent a reward to a client in exchange for his or her political support. If said support is not forthcoming, the politician has the power to revoke the privilege by withdrawing the job. This model also accords poorly with descriptions and data about how public sector recruitment actually worked in Kenya, Tanzania and Uganda, where a large share of jobs were allocated to those graduating from universities, teaching or nursing colleges, and in the earlier periods, from the more prestigious secondary schools. As a result, a considerable share of candidates were selected into public employment on the basis of their educational performance. Exam results determined their educational opportunities and by extension employment opportunities. If politicians were seeking to maximise direct control over hiring and firing decisions across the public service, then such a long-term, institutionalised process of recruitment would be one of the least appropriate structures. Moreover, there is little evidence that politicians withdrew jobs other than during the formal retrenchment programmes of the 1990s. Clientelism, nepotism or other forms of favouritism may well have influenced decisions at the margins, but they do not appear to be the broader organising principle shaping access to public sector jobs.

⁴⁰⁴ Valentine, "Government Wage Policy, Wage and Employment Trends, and Economic Instability in Tanzania since Independence"; Jamal and Weeks, "The Vanishing Rural-Urban Gap In Sub-Saharan Africa."

Nor are there obvious signs of ethnic favouritism among the public sector employees of the 2000s. With the exception of the Presidency of Daniel Arap Moi in Kenya, Kenya and Uganda's presidents have not shown strong signs of favouring their own ethnic group in new recruitment, at least not across the broader public service. Ethnic employment shares are correlated with educational attainment, and ethnic inequalities in job access are largely explained by ethnic educational inequalities. There have undoubtedly been instances where ethnic or regional politics influenced decisions about where to place a new college or factory, but on the whole such choices have a small effect on the aggregate distribution of public employment, which is strongly driven by the allocation formulas for the distribution of primary school teachers, policemen and local administrators.

Ethnically-based allegiances may have mattered at the very top of the public service and presumably in politically appointed posts.⁴⁰⁵ But this is in keeping with the formal rules of the governance system. Appointed positions are designed to give presidents or parties the power to place individuals loyal to the party in strategic posts where they can help to drive a political agenda. In ethnically-polarized settings such choices are presumably more contentious, but this is a feature of the institutional design rather than the opaque manipulation of the system by a political leader. It should not be taken for granted that ethnic inequalities at the top will be mirrored across the public service as a whole.

Rather than a public service recruitment system structured around patronage relationships or elite reproduction, the findings presented in Chapters 2-4 suggest an alternative explanation that is consistent with some of the literature that explains how multi-ethnic, young states manage and mitigate conflict, rather than the pathologies they suffer. Kpessa, Beland and Lecours, for instance, have argued that post-independence leaders in Africa used social policy, in particular education and healthcare, to further nation-building aims and counter the ethnic divisions inherited at independence.⁴⁰⁶ This is not a new argument. Gould, for instance, argued in 1974 that all the governments of former British East Africa '[try] to promote national unity by reducing regional and group disaffection, promoting inter-group and inter-regional contact and adopting a national language policy.'⁴⁰⁷ Gould saw secondary schooling policy as key to this strategy, as by improving access to- and equity in secondary education, the government indirectly shaped the composition of its formal sector labour force. More recently Azam has

⁴⁰⁵ As argued by: Lindemann, "Exclusionary Elite Bargains and Civil War Onset: The Case of Uganda"; Francois, Rainer, and Trebbi, "How Is Power Shared in Africa?"

⁴⁰⁶ Michael Kpessa, Daniel Béland, and André Lecours, "Nationalism, Development, and Social Policy: The Politics of Nation-Building in Sub-Saharan Africa," *Ethnic and Racial Studies* 34, no. 12 (December 2011): 2115–33.

⁴⁰⁷ Gould, "Secondary School Admissions Policies in Eastern Africa: Some Regional Issues," 375.

modelled this strategy formally, showing that where African leaders in multi-ethnic societies have the ability to credibly commit to redistribution, they can stave off ethnic conflict through redistribution rather than through force or military deterrence.⁴⁰⁸

This raises the practical question of how leaders can structure a system of redistribution that all groups will accept. Which individuals should benefit and how? Azam argues that this redistribution often takes place through the education system and formal labour market (particularly the public sector labour market):

Village communities send the most promising of their offspring to the urban sector equipped with the required education for hopefully obtaining good positions in the formal sector and preferably in government. They can thus have access to high and regular incomes so that they can in turn remit money to the village community which funded the initial investment in education or fund some investments in local infrastructure. The most talented ones will climb the social ladder and acquire powerful positions that will give them the opportunity to influence the regional allocation of public investment.⁴⁰⁹

Azam regards this as a group dynamic, where communities or ethnic groups collectively invest in the education of their most promising group members and collectively benefit from the gifts and largess which their successful offspring in turn remit to the community. Others, however, have stressed the same mechanism without applying a collectivist logic to explain acquiescence. In a study of Kenya's harambee (self-help) schooling sector, Kilemi Mwiria argued in 1990 that the Kenyan government successfully inculcated an ideology of meritocracy to legitimize inequality.⁴¹⁰ He cited the 1974-78 Kenyan development plan, which justified inequality on meritocratic grounds:

The present plan provides opportunities for everyone to participate in the economy and in so doing improve his standard of living. Such improvements are bound to be achieved more quickly by some than by others, however. Equal income for everyone is therefore not the object of this plan. Differences in skills, effort, and initiative need to be recognized and rewarded.⁴¹¹

Mwiria argued that Kenyans were willing to accept a highly selective and unequal educational system on the grounds that it rewarded talent and hard work, without making the further assumption that educational high achievers would share their high urban salaries with their

⁴⁰⁸ Azam, "The Political Geography of Redistribution."

⁴⁰⁹ *Ibid.*, 238.

⁴¹⁰ Mwiria, "Kenya's Harambee Secondary School Movement: The Contradictions of Public Policy."

⁴¹¹ Cited in: *Ibid.*, 364.

communities of origin.⁴¹² He refers to this as the ‘myth of meritocracy,’ given the obvious educational advantage possessed by those from more economically privileged backgrounds.⁴¹³ In interviews with 200 parents of students in poorer schools in Kenya in the 1980s, he found that 75% approved of a selection system based on examination results. The parents regarded this educational progression system as a fair way of rewarding talent and hard work and believed that it justified higher earnings and standards of living for those who successfully completed their education.⁴¹⁴ He argues that the system was accepted because it afforded poor students some hope of success. Some children from poorer communities did in fact progress up the education system and were rewarded with higher paying jobs. While Mwiria does not explicitly mention ethnicity, presumably the knowledge that people from one’s own ethnicity, religion or region did occasionally succeed in this education race, was important for the legitimacy of this system.

Stephen Heyneman in contrast, writing about Uganda a decade earlier (1979), treated this promise of meritocratic selection as a reality rather than myth. He argued that the flatness of postcolonial Ugandan society offered a genuinely fair playing field:

‘Ambitious children of both cabinet ministers and peasants know three things perfectly clearly: they know that occupational success depends first upon meeting the minimum educational entry requirements; secondly, they know that a grade I ‘pass’ on the Primary Leaving Examination is the only prerequisite for achieving an opportunity for advancement beyond primary school and, thirdly, that only 10% of the applicants each year can achieve it.

Thus the Ugandan grade seven children know that many elites, if not most, have humble origins; that educational advancement is required for most elite status; and that they will all have an opportunity for advancement on the same basis as everyone else, on the basis of their test performance. Although there are other arenas where particularistic ethnic and family influences may affect their mobility, to them, the secretly written, uniformly administered, multiple-choice, computer-graded Primary Leaving Examination represents a trustworthy and fair system of evaluation. The fact that their teachers, families and tribal affiliations will all be unknown and irrelevant to a machine which can only read their ID numbers is a boost in morale to those in the more compromising social milieu.’⁴¹⁵

⁴¹² Ugandan study also showed that the cost of schooling was usually borne by the immediate family, not the whole community: Currie and Maas, “Uganda’s Secondary School Graduates: Postponement of Labour Market Entry.”

⁴¹³ Mwiria, “Kenya’s Harambee Secondary School Movement: The Contradictions of Public Policy,” 363.

⁴¹⁴ *Ibid.*, 365.

⁴¹⁵ Heyneman, “Why Impoverished Children Do Well in Ugandan Schools,” 15:180.

This appeal to meritocracy can be theorised in relation to what Albert Hirschman called the ‘tunnel effect’ or ‘hope factor’. Hirschman observed in 1973 that in the early stages of a social transformation, inequalities between groups and individuals tend to rise, yet those left behind often greet this inequality positively as it signals that their turn will soon come.⁴¹⁶ He used the analogy of being caught in a traffic jam in a two-lane tunnel. If the lane adjacent to one’s own begins to move this is initially gratifying, as it suggests one’s own lane will soon move. After a while however, if one’s own lane remains stationary, this hope turns to envy and anger. In the short-run the tunnel effect can be politically useful, as it allows governments to tackle growth and inequality in turn rather than tackling both at once.

From the perspective of policymakers then, selective educational and occupational advancement based on merit may have been a pragmatic approach to high popular expectations on an independence dividend, if it rested on the expectation that any person with the right talents and effort could succeed. In his autobiography, Duncan Ndegwa, a former head of Kenya’s civil service, reflected on the impossibly high expectations that Kenyans placed on their independence leaders. Had the leaders been honest about what their small budget could deliver, he noted, they ‘would have been accused of being prophets of doom and traitors.’⁴¹⁷ Julius Nyerere, in contrast, with his usual candour, acknowledged the limits to the state’s ability to offer the population modern, stable formal sector jobs, writing in 1967 that ‘it would be grossly unrealistic to imagine that in the near future more than a small proportion of our people will live in towns and work in modern industrial enterprises.’⁴¹⁸ He described Tanzania’s education system as inherently elitist, and recognized that those who passed their exams and were admitted to secondary schools ‘have a feeling of having deserved a prize - and the prize they and their parents now expect is high wages, comfortable employment in towns, and personal status in the society.’⁴¹⁹ While Nyerere sought to counter these tendencies through reform to the curriculum and a reduction in the private returns to education, the pressure to climb the educational ladder continued unabated in Tanzania.

Given this context, I would like to suggest that public sector jobs can be understood as an independence dividend that selectively rewarded aspirants based on educational performance. People proved willing to accept this compromise as long as the competition itself was seen to

⁴¹⁶ Albert O. Hirschman and Michael Rothschild, “The Changing Tolerance for Income Inequality in the Course of Economic Development,” *The Quarterly Journal of Economics* 87, no. 4 (1973): 544–66.

⁴¹⁷ Duncan Nderitu Ndegwa, *Walking in Kenyatta Struggles* (Nairobi: Kenya Leadership Institute, 2011), 336.

⁴¹⁸ Julius K. Nyerere, *Education for Self-Reliance* (Dar es Salaam: United Republic of Tanzania, 1967), 7.

⁴¹⁹ *Ibid.*, 10.

be open to aspirants from all walks of life. At least in the early independence era, if less so by the 1980s, the majority of secondary school entrants across the region came from relatively humble beginnings, proving that talent and hard work was rewarded.⁴²⁰ Maintaining the semblance of an open and meritocratic system, and ensuring that at least some aspirants from underprivileged communities also succeeded, was presumably important for the continued legitimacy of such a system. In all three countries, therefore, the elitism of this system was counterbalanced by efforts to level the playing field. The regional placement of schools, regional quota systems and other forms of affirmative action guarded against capture by any single ethnic or regional group, and presumably also buffered against social reproduction.

As educational attainment grew, however, pressure on the state to continue incorporating these new, comparatively educated, middle class aspirants into the formal job market escalated. There was a circularity to this system moreover, as a large share of the new formal sector employees (particularly in Kenya and Uganda) were teachers, who in turn educated more middle class aspirants. This helps to explain the decision to continue expanding public employment even as wages began to fall in the 1970s. Rather than limiting entry, governments chose to allow real incomes to fall with inflation and ploughed at least some of these wage savings into new employment creation and educational expansion. Partly by design, and partly due to unfortunate economic conditions, salaries fell to extremely low levels.

This practice came to an end in the 1990s under the strain of a declining budget. Governments accepted the need to rationalise the level of employment and put a damper on the rate of employment of new graduates in order to raise wages. Perhaps the falling attractiveness of public sector jobs relative to other employment opportunities also helped to relieve the pressure on the state, making the reforms easier to push through. Moreover, by placing more public sector jobs outside of the main cities, the employment declines were most marked in the capital cities where private sector employment growth was the highest. As a result, in Kenya and Uganda at least, the probability of obtaining a public sector job has continued to be quite high for educational high performers from outside the main urban areas, and particularly from the most economically underdeveloped districts or regions.

Unlike the dependency, public choice or neopatrimonial explanations, this theory stresses the importance of broad-based popular expectations rather than narrow interest groups, and the use of formal, transparent rules of the game for managing such expectations. This does not

⁴²⁰ Heyneman, “Why Impoverished Children Do Well in Ugandan Schools”; Prewitt, “Schooling, Stratification, Equality: Notes for Research”; Hughes, “Revisiting the Fortunate Few: University Graduates in the Kenyan Labor Market.”

necessarily mean that ethnicity or class are irrelevant to African politics or policymaking. I simply want to suggest that such social fissures it need not always result in ethnic patronage politics or elite capture.

Country differences

Much of this dissertation has focused on general trends across all three of the case study countries. An important finding is in fact that the public sector employment and wage trajectories in all three countries share much in common, suggesting that the constraints imposed by being young, poor and primary commodity-dependent nations may have outweighed differences in leadership or political structure. Some of the finer differences between the three, however, deserve note.

The country differences in the severity of wage and employment declines are correlated with the severity of the economic crisis and rate of inflation. The income declines were largest in Uganda, followed by Tanzania and then Kenya, reflecting differences in the degree of economic and political turmoil. Financial constraints also meant that Uganda's public service never grew as large as in the neighbouring countries. Poor economic performance acted as a restraint on wage bill growth, suggesting that the causality ran from economic performance to employment policy rather than vice versa. Furthermore, the retrenchments and wage reforms of the 1990s were further reaching in Uganda and Tanzania than in Kenya, possibly reflecting the greater reform space afforded by the crisis in Uganda, and to a lesser degree Tanzania. Conflict exacerbated the wage crisis but speed up the post-crisis reforms and recovery. Consequently, public sector salaries are relatively similar across the countries today, although average earnings in Uganda still lag those in Kenya and Tanzania.

These similarities also challenge the hypothesis that Kenya and Uganda's greater ethnic polarization have led to a greater use of ethnic patronage to manage the political settlement than in the more politically cohesive Tanzania.⁴²¹ Public employment is often assumed to be an important patronage resource, yet Tanzania's greater national unity and weaker ethnic polarization does not seem to have resulted in markedly different public employment policies. Like its neighbours, Tanzania's leaders expanded employment during the initial period of growth and allowing earnings to fall to exceptionally low levels in the 1980s and early 1990s. Despite its socialist orientation, Tanzania's public service remained smaller than in Kenya, reflecting the binding constraint of finances on the state's reach. Since independence

⁴²¹ See argument and evidence by: Edward Miguel, "Tribe or Nation ? Nation-Building and Public Goods in Kenya versus Tanzania," *World Politics* 56, no. 3 (2004): 327–62.

Tanzania's educational and employment opportunities have grown more regionally equitable, much as it did in Kenya and Uganda. It does not appear that public sector employment by region of birth was any more equitable in Tanzania in 2002 than in Uganda.⁴²²

In contrast to Kenya and Uganda however, the Tanzanian public service offers less of an employment advantage for educated candidates from less developed regions. This may simply be because inequalities were lower to begin with and the absorption of secondary and tertiary graduates into public employment has remained higher. However, it could also be that less ethnic polarization put the government under less pressure to distribute state resources in equal share across ethnic groups or regions. Tanzania's secondary and tertiary education policies differed in some respects from those of its neighbours. In order to foster national solidarity the government explicitly sought to mix students from different regions in secondary schools by relocating secondary school entrants to boarding schools away from their place of birth.⁴²³ In similar fashion, public servants could be relocated to regions other than their place of birth or preferred residence (see Figure 4.7). This may inadvertently have reduced the home-field advantage for candidates from more peripheral regions and increased the relative elite privilege in access to public employment. Furthermore, by placing greater restrictions on private sector accumulation (up until the 1990s), elite competition for public sector jobs may in fact have remained fiercer in Tanzania.

These country comparisons and generalizations should not be stretched too far, however. For practical more so than analytical reasons, this thesis focused on three case studies from a particular sub-region of the African continent. These cases provided some diversity in terms of ethnic structure and political paths, but to explore the relevance of these findings it would be necessary expand the number and diversity of country cases examined. For instance, by selecting countries without significant mineral or oil exports this study lacks variation in the terms of trade cycles, capturing only countries that were hurt by the oil price shocks of the 1970s. The timing and volatility of public sector expansions and contractions may well be different in resource rich countries. Also important to note is the limited variation in colonial legacy. Francophone African countries, for instance, experienced a somewhat different public finance trajectory to that of Anglophone Africa because they retained the colonial monetary unions after independence. This limited monetary expansion and inflation, and thus the extent to which public spending could be adjusted by inflationary means. As a result it appears that

⁴²² Comparing CoV and Thiel T-statistics across a similar numbers of geographic divisions (TZ regions, against UG 1960 district divisions) shows inequality to be higher in Tanzania; TZ CENSUS 2002 and UG CENSUS 2002.

⁴²³ Gould, "Secondary School Admissions Policies in Eastern Africa: Some Regional Issues."

public sector salaries never fell as severely as in Anglophone Africa.⁴²⁴ Exploiting the consequences of this difference in monetary policy could shed light on the causes and costs of the Anglophone African wage declines.

Implications of the postcolonial public employment shifts

One of the reasons to be concerned about the politics of public employment is that it affects state capacity, in particular the quality and efficiency of public service delivery. This thesis stays relatively quiet on the topic of bureaucratic efficiency, approaching public sector employment from the perspective of job and income creation rather than an input into the production of services. By challenging assumptions about social reproduction, patronage and ethnic favouritism, however, I do not seek to discount the very real public service delivery challenges in Kenya, Tanzania and Uganda. Poor public service outcomes however, need not necessarily reflect the politicization of public employment. In fact, the erosion in earnings alone, set against a period of economic and political turmoil, seems quite likely to have eroded morale, discipline and the performance culture. While earnings have in part recovered, this damage to the public service institutions may not be automatically reversed once earnings rebound.

Furthermore, a comparatively inclusive, meritocratic public service entry system, as described in Chapter 4, is by no means incompatible with corruption, nor does it ensure strong performance incentives, or even the right allocation of human capital. Many of its features can lead to perverse outcomes. The practice of queuing for public sector jobs, for instance, where selection into employment depends on the length of time the candidate has been waiting for a job, is unlikely to attract the brightest and best candidates as those still waiting for employment are presumably those less able to forge a successful career elsewhere.⁴²⁵ Nor is it obvious that the national examinations that influence opportunities to progress through the education system are ideal tools for gauging aptitude. Already in the 1970s studies examining Kenya and Tanzania's exam system argued that they were not optimally designed to spot raw talent and inadvertently privileged students from schools where the teachers could help them study to the test.⁴²⁶

⁴²⁴ Leinert and Modi, "A Decade of Civil Service Reform in Sub-Saharan Africa"; Denis Cogneau, Yannick Dupraz, and Sandrine Mesple-Soms, "African States and Development in Historical Perspective: Colonial Public Finances in British and French West Africa," Working Papers, 2016.

⁴²⁵ Which is for instance the current case in the Kenyan teaching service: Nicholas Barton, Tessa Bold, and Justin Sandefur, "Measuring the Rents from Public Employment: Evidence from Kenya," 2017.

⁴²⁶ H. C. A. Somerset, "Who Goes to Secondary School: Relevance, Reliability and Equity in Secondary School Selection," in *Education, Society and Development: New Perspectives from Kenya*, ed. D. Court

Patronage relations may also arise internally within the public service, not necessarily by grand political design but as a grass-roots response to resource scarcity and competition for rents or informal remuneration such as per diems and travel allowances. Poor management, which could be a consequence of many factors, can alone generate dysfunction. A recent study of new teachers in Kenya found new public school teaching recruits to be the most public service oriented and enthusiastic about their jobs, but a few years into their employment they had undergone the greatest decline in public spirit.⁴²⁷ This suggests that the employment experience rather than the characteristics of the candidates had the bigger influence on motivation. Many things have to come right in order for public service delivery to work efficiently, but the findings in this study suggest that they need not be rooted in patronage or ethnic tensions.

How then should we evaluate the changes to the public service structures of East Africa over past five decades? Should these changes be regarded as good or bad for growth and development? What do they bode for the future? There are no simple answers to such questions.

The changes to the wage and employment structure has helped to correct some of the imbalances inherited at independence. It reduced the duality of a racially-segmented salary scale, reduced the urban income bias of the 1960s, and has helped to expand both broad-based demand for- and supply of education.

However, while some decline in the wage levels was probably necessary, it is hard to see how the extreme erosion of real earnings experienced in the 1980s and early 1990s could have been good for development. It is likely to have taken a considerable toll on worker motivation and shifted efforts away from public service provision. As discussed in Chapter 3, a large share of public sector employees are engaged in secondary economic activities, be it a family business, farm or second job. Qualitative accounts suggest a rise in petty corruption linked to falling earnings.⁴²⁸ Furthermore, due to the large rationalisation of employment since the 1990s, the governments of East Africa may well be under- rather than overstaffed today compared to other regions of the world. Teacher to pupil ratios, health worker to population ratios, police to population ratios are all low compared to global standards and UN recommendations.⁴²⁹

and D. Ghai (Nairobi and London: Oxford University Press, 1974); Drenth, van der Flier, and Omari, "Educational Selection in Tanzania."

⁴²⁷ Barton, Bold, and Sandefur, "Measuring the Rents from Public Employment: Evidence from Kenya."

⁴²⁸ For instance: Brett, "Rebuilding Organisation Capacity in Uganda Under the National Resistance Movement."

⁴²⁹ World Health Organisation, "Achieving the Health-Related MDGs. It Takes a Workforce!," *Health Workforce*, 2010, http://www.who.int/hrh/workforce_mdgs/en/; UNODC, "Total Police Personnel at the National Level," *UNODC Statistics*, 2017, <https://data.unodc.org/>.

While earnings have partially recovered since the mid-1990s, this does not guarantee that the boom and bust pattern of public employment growth and wage decline will not repeat itself. In Kenya public employment levels have steadily been inching upwards again in the past five years, particularly since devolution in 2012/13 which shifted more budget responsibility to county governments and led to an increase in hiring.⁴³⁰ At the same time, wage increases contributed to an increase in the wage bill. If growth slowed in the region, this could rapidly reverse the wage increases of the past years.

The results from Chapter 3 which showed a falling share of public sector earners in the top consumption decile and percentile, particularly in the capital cities, is probably a more welcome development. It suggests that high earning private sector employees and business owners have become a more permanent fixture in the East African social structure. Some of these private sector actors may of course depend on the state in other ways, be it through contracts or favourable regulation, but an increase in separation between economic elite and government employment is probably helping to shift political incentive structures in new directions and creating more public debate about public policy. A greater share of skilled workers in private employment also allows price signals to make their mark on labour markets more rapidly. Private sector actors compete with each other for labour, which should prevent the type of erosion in earnings and effort experienced by the East African public sectors. Because governments have unified salary scales that usually have to be adjusted across the board rather than piecemeal, and by virtue of its size and influence on the formal labour market, adjustments take longer.⁴³¹ More private sector benchmarks and more competition for labour may in fact help the public sector to improve its wage setting.⁴³²

However, an interesting implication of the ‘decline of the bureaucratic bourgeoisie’ is the weakening control of the government over educational opportunities and the career paths of graduates. Results in Chapter 4 showed that the government’s absorption of graduates has been declining (at least in Kenya and Tanzania). Recent reports from these countries raise concern about growing graduate unemployment.⁴³³ Less state control over education and employment also means less central ability to manage horizontal inequalities. To the extent that public sector jobs have been used to further nation-building aims and have helped to improve regional and

⁴³⁰ KE IMF ARTICLE IV 2014.

⁴³¹ See literature review by: Gregory and Borland, “Recent Developments in Public Sector Labor Markets.”

⁴³² The Kenyan Salaries and Remuneration Commission for instance, regularly benchmarks public sector pay against private sector comparators.

⁴³³ Aglionby, “Joblessness Is an ‘Existential Threat’ to Kenya’s Future”; Kanyeheyo, “The Crippling Dilemma of Graduate Youth Unemployment.”

ethnic balance within the income elite, recent trends may be a cause for concern. As described in chapter 4, ethnic and regional differences in educational attainment converged in the first decades of independence, but at tertiary level there appears to be some divergence since the late 1980s, at least in Kenya and Uganda. If the education system is growing more regressive and less regionally representative, and if the government influence over labour markets is weakening, how will this influence the composition of the formal labour market participants going forward? Will it aggravate existing ethnic and regional inequalities or give rise to new social fissures? More research will be needed on the implications of the recent changes to the higher education system and labour markets, both from an economic standpoint and from a perspective of social inclusion.

Appendix I. Data appendix

[See separate excel file, can be requested from author.]

Appendix II. Constructing data series on government finances, employment and earnings (supplement to Chapter 2)

This appendix discusses how the main data series which underpin the analysis in Chapter 2 have been constructed and justifies choices of measures and method. These core series cover: (i) government revenue and expenditure, (ii) expenditure by economic classification, (iii) public employment (disaggregated by categories), and (iv), total public sector wage bill and average earnings, from the late colonial period until the present. Most series start around 1950, although several could only be reconstructed starting in the 1960s. The full dataset is provided in data appendix 1. Further notes are given in the excel sheet, which highlights any imputed variables or other adjustments, as well as detailing all sources.

Below I discuss the control variables and other general matters that cut across all three countries, before moving on to a country-specific discussion of the data.

II.1. Common sources and issues

Population. For the pre-1960 era I rely on Frankema and Jerven's population estimates for Africa. These correspond quite well with the World Development Indicator (WDI) population series (originally from the UN World Population Prospects), which start in 1960. Using the census shares, I revise the Tanzanian population estimates downwards to exclude Zanzibar (~3% of total population), as this study is concerned only with the Tanzanian mainland.

For comparative purposes I also include the published national census results, in addition to the WDI population series (which the World Bank sources from the UN Population Division). Note that both the Tanzanian and Ugandan census results are judged to be under-enumerated by the UN and the WDI estimates are higher than official census estimates. For Tanzania the discrepancy only arises in the 2000s, while the Ugandan estimates diverge already in the early 1990s.

The labour force is assumed to be 85% of all 15-64 year olds. WDI provides data on the share of the population aged 15-64. Estimates of labour force participation rates are available from the WDI from the late 1980s or 1990s. For simplicity I use a rounded average for the three countries.

GDP. Nominal GDP estimates are taken primarily from the WDI. For Kenya and Uganda, the WDI GDP series starts in 1960. For the late 1950s I use the contemporary estimates of GDP at factor prices, scaled up to converge with the 1960s estimates of GDP at market prices. For Tanzania however, the WDI only records nominal GDP starting in 1988. For the period before 1988 I use the contemporary estimates scaled up to converge with the 1988 series, see discussion below on Tanzanian sources.

Currency. The British introduced the East African Shilling in Kenya, Tanganyika and Uganda in 1921, equal in value to the British Shilling. The East African Shilling was managed by the East Africa Currency Board until 1966, after which each country established their own central banks and began minting individual, national currencies. Colonial government budgets and financial reports tend to record transactions and expatriate wages in pounds (£1 = Sh.20),

although local market prices and African wages were typically recorded in shillings. All three countries have over time shifted to recording government transactions exclusively in shillings. For the purposes of this study all values have been converted into Sh., denoted by the country first letter to distinguish the different Shillings (KSh., TSh. and USh.). Uganda issued a New Ugandan Shilling in 1987 that removed two zeros from the value of the old shilling.

Time units (fiscal versus calendar year). All three countries moved from calendar year fiscal year to a July 1 – June 30th fiscal year in 1954. While basic economic data is typically recorded on a calendar year basis (GDP, inflation etc.), all budgetary accounts are recorded on a fiscal year basis. Where calendar/fiscal year series are combined or compared, I have simply recorded data on a fiscal year basis to be aligned with the later of the two calendar years to which it corresponds (e.g., 1973 aligned with FY1972/73). This primarily affects the comparison of budget estimates with employment and wage data from the EES. As the EES was typically conducted in June of each year and salary adjustments usually come into effect in July at the beginning of the new fiscal year, this seems the most appropriate way of aligning the series. For long-term trends this simplification should be inconsequential.

East Africa Common Services Organisation / Community. Up until the breakup of the East African Community in 1976 some public sector activities were conducted jointly for all three countries by the East African Common Services Organisation (initially named the East Africa High Commission, it became the East African Common Services Organisation (EACSO) in 1961 and the East African Community (EAC) in 1967). Most of its central functions were administered from Kenya. However, when constructing fiscal accounts for the three countries I have chosen not to incorporate the EACSO in total expenditure and revenue as it had little own revenue (beyond that off the parastatals). It was financed primarily through transfers from the three governments and therefore most of its revenue and expenditure was already captured in the country accounts as transfers to other branches of government.

With the disbandment of the EAC in FY1977/78 Kenya transferred the former EAC administrative staff onto the central government budget;⁴³⁴ the Kenyan employment series have been adjusted to take this into account. Note that the number of EAC administrative staff, as opposed to those employed directly by the parastatals, was small.

Military personnel. None of the main data sources used to estimate public sector employment include the military. The International Institute for Strategic Studies (IISS) military balance, an annual yearbook of global military statistics, provides rough estimates of the size of the armed forces by country (excl. militias). These estimates have been used in certain figures to give a sense of the order of magnitude of the armed forces relative to civilian employment. This data is available from 1971.

II.II. Kenya: main data series

General government revenue comprises central government revenue and local government own-revenue, i.e., revenue net of transfers from the centre. Data on local government revenue has been collected from 1964 (when it constituted roughly 10% of total revenue). For the period prior to 1964 I assume that own-revenue remained a constant share of central government

⁴³⁴ KE IMF RED 1978

revenue. In 1970 the central government subsumed responsibility for many services previously managed by local authorities (education and health and roads maintenance etc.) which reduced the scope of local government activity sharply.

In the revenue accounts from the 1960s some forms of borrowing were included as a source of revenue rather than a source of financing. All borrowing has been subtracted from the revenue totals. I provide separate series for revenue before and after grants. For the accounts from the late 1940s the Colonial Development and Welfare grants are given as a bulk sum for several years. In this particular case the grants are assumed to have been spent evenly across years.

General government expenditure is taken to be the sum of central government expenditure and local government *own-revenue*. In effect, I make the simplifying assumption that local governments run balanced budgets. Judging from the local government accounts, this simplification has a negligible impact on the totals.

General government expenditure by economic classification. I also construct a simple economic classification of government expenditure, by collecting data on spending on personnel, capital, defence and interest payments. The residual, once these items have been subtracted from total general government expenditure, is assumed to be non-wage recurrent spending. Note that defence is a functional rather than economic category of expenditure, but because it plays an important role in the changing composition of spending over this period, it is treated as its own category (including its wage component).

Note however, that in the Kenyan case, personnel spending is taken from the EES rather than the budgetary accounts. In Kenya the budgeting conventions changed a number of times and the wage budget is therefore not a consistent measure over time. For example, in 1969/70 local government staff began to be captured on the central accounts resulting in a jump in personnel expenditure. In the 1980s all teaching staff were moved from the central government wage bill into a separate transfer to the semi-autonomous teacher's service commission. The EES in contrast, provides greater consistency over time. While the EES does not include military personnel, their wages are captured in the separate 'defence' category anyhow.

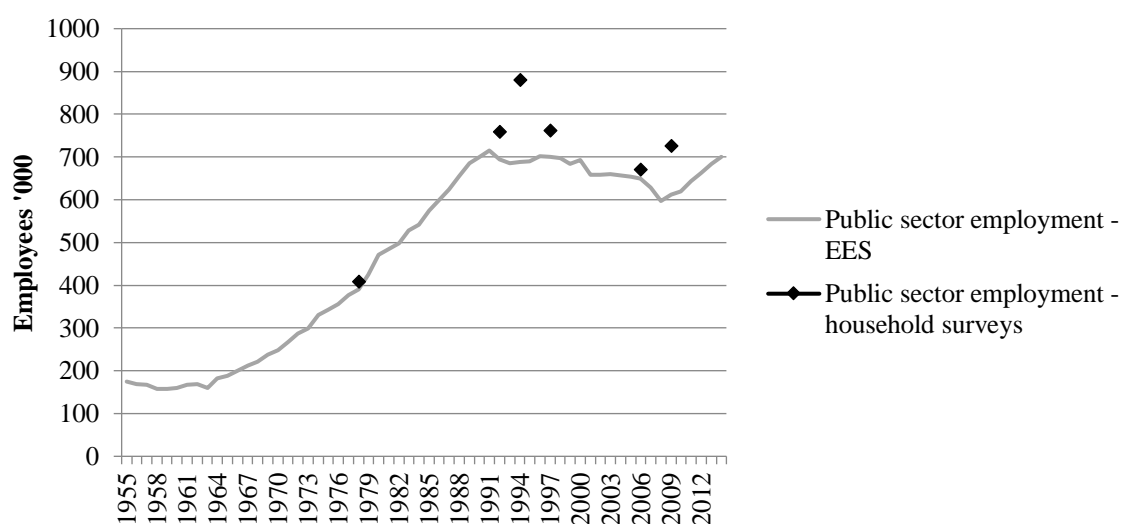
Public sector employment. The main source of Kenyan employment and earnings data is the Enumeration of Employees Survey (EES). It is conducted at the end of June each year through a questionnaire distributed to all formal sector establishments, including all public sector institutions with the exception of all non-civilian employees of the armed forces.

With a few smaller exception, this survey has classified public employees relatively consistently over time. The key exceptions however, are the teachers, which only receive their own heading in 1981 (teachers were classified under local government personnel until 1970 and under the parastatal header between 1971-80). Using the separate industrial classification of public employment, I estimate the share of teachers for the pre-1981 period. I also reclassify administrative EACSO/EAC personnel into the central government category prior to 1977 (as in 1977 they begin being recorded under this header). Note that most of the EAC staff worked for parastatals and their classification therefore doesn't alter after 1977. Kenya also makes a distinction between parastatals (which includes some autonomous agencies) and majority state-owned enterprises. For the purposes of this study these two categories are merged into a single parastatal category.

As discussed, I use the IISS military balance estimate of the total size of the force to give a sense of the order of magnitude of the missing military. The military wage bill is not included in any of the wage bill or earning series.

In addition to the EES which surveys establishments, Kenya has undertaken a number of labour force and household surveys in recent years that allow us to estimate the number of public sector employees on the basis of respondent self-reporting. Figure 1 compares the EES series against the estimates from household surveys and the 2009 census. Note that the household surveys (although not the census) are based on samples (using the national sampling frame), and the point estimates thus have a non-negligible margin of error. While the EES and survey estimates do not differ by orders of magnitude (which is reassuring), the household surveys give consistently higher estimates (the same is true of Tanzania and Uganda). This is probably due to several factors. Firstly, the EES measures may well be incomplete (particularly at local government level where locally hired staff may not be reported in full to the central government). Secondly, it seems likely that the state's definition of employee will differ from that of an individual respondent. Governments do not typically classify consultants, contractors or casual employees hired at the service delivery unit level as public sector employees. Such workers, however, may very well consider the government to be their employer. A further disaggregation of the household survey results suggest that they overestimate the number of employees in lower skilled positions and outside of the main cities, which is consistent with the idea of incomplete measurement of contract or casual staff, particularly at local government level. Note that the absence of military personnel from the EES may constitute a part of this discrepancy, although as households typically exclude group or institutional housing (such as military barracks), military personnel should be understated in these surveys too.

Appendix Figure II.1. Kenya: total number of public sector employees, different sources compared



Note: 1992 survey excluded three districts and estimate is therefore not national; 1978 labour force survey estimate has been scaled based on the 1979 census and should be treated as a rough estimate.

Public sector earnings. The EES also provides an estimate of the public sector wage bill. The survey contains questions about the monthly wage bill (in June) and annual estimates in the reports are simply the June figures multiplied by 12. The earnings data covers “all cash payments, including basic salary, cost of living allowances, profit bonus, together with the value of rations and free board, and an estimate of the employer's contribution towards

housing,” but exclude employer contributions to the National Social Security Fund (NSSF).⁴³⁵ NSSF contributions were a fairly small share of the overall wage bill, judging by the NSSF reports in the Statistical Abstracts.

As already discussed, the EES estimates of total public sector earnings diverge from the budgetary accounts due to differences in coverage. Some of the Kenyan economic surveys, however, provide consolidated general government accounts combining the central, local government and East African services for the late 1960s. In such cases the EES corresponds quite closely to the budgetary amounts.⁴³⁶

Price indices. The wage series are deflated using the consumer price index. From 1960 and on the World Development Indicators provides a continuous price series for consumer prices, which corresponds closely to the Nairobi middle income index. Given the focus on public sector employees, which are majority urban based and mostly found within the middle income bracket (as defined by the statistical abstracts), this is an appropriate choice of measure. For the period before 1960 I use the Nairobi Cost of Living Index (excl. rent). While designed for ‘a standard of living prevailing among European government servants’,⁴³⁷ inflation during this period was fairly low so the choice of index has only a minor impact on the final results.

II.III. Tanzania: main data series

GDP. The WDI GDP series for Tanzania only starts in 1988 following a rebasement of GDP in that year. The previous series with base years in 1966 and 1976 were deemed to be undervalued.⁴³⁸ I therefore project GDP back in time from 1988, assuming that the nominal GDP growth estimated from the earlier series were accurate (which effectively raises the earlier nominal series by 38%).

As an alternative, I also derive nominal GDP from the PENN World Tables (version 9.0). My spliced series corresponds reasonably well with the PENN series up until 1980 and after 2007 (deviations of maximum 10-15%), but diverge sharply for the late 1980s and 1990s, when the PENN estimates are roughly twice the WDI estimates. Comparing the different GDP series to revenue suggests an unrealistically large fall using the PENN series, from a high of 15% in the late 1970s to less than 5% in the 1990s. I therefore choose to use the spliced series instead, but with the caveat that these are rough estimates at best. To the best of my knowledge, Tanzania’s official GDP estimates cover only the mainland (excluding Zanzibar).⁴³⁹

⁴³⁵ KE SA 1977, p.264.

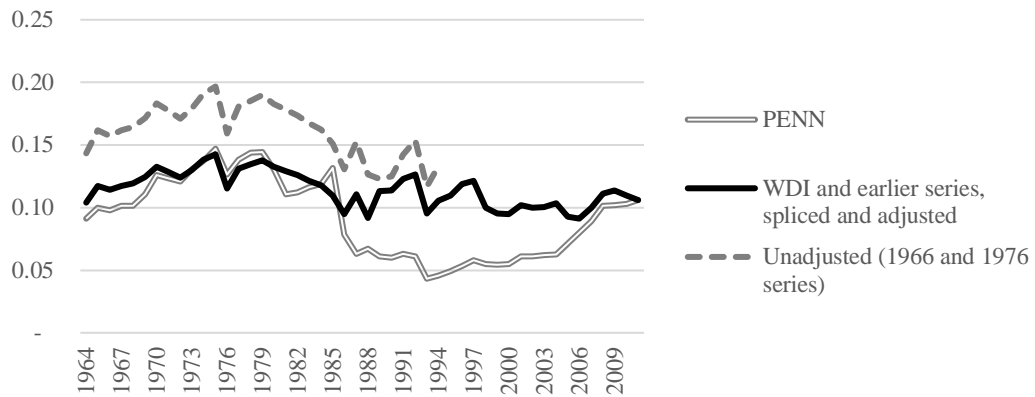
⁴³⁶ KE ES 1971, Table 10.3.

⁴³⁷ KE SA 1960

⁴³⁸ TZ IMF RED 1999

⁴³⁹ See: TZ NA 2014

Appendix Figure II.2. Tanzania: Revenue to GDP ratio, different GDP estimates



Government revenue and expenditure. As in the Kenyan case, general government revenue and expenditure is constructed by summing central government revenue or expenditure and urban and district council own-revenue. In 1972 Tanzania abolished local authorities and their revenue contribution was virtually eliminated; they continued to collect some fees and market dues but these funds were negligible compared to central government revenue.⁴⁴⁰ Although local governments were re-established in 1984,⁴⁴¹ their own revenue remained a very small share of total revenue after that. I only have ad hoc measures of local government own-revenue from the period after their re-establishment and estimate a value for the missing years by assuming that local government revenue remains a fixed share of total revenue.

Tanganyika's revenue accounts proved hard to reconcile prior to 1964, as these earlier revenue figures do not include appropriations-in-aid (fees, charges etc. levied by ministries and departments). I make an upward adjustment to both the revenue and expenditure estimates to account for this omission.

General government expenditure by economic classification. This classification uses the same assumptions and methods as for Kenya. In the Tanzanian case however, I rely on the budgetary estimates of personnel spending (rather than the EES figure). The Tanzanian personnel budget seems to have remained more consistent over time and there is no sign of big shifts in coverage. It corresponds relatively well to the EES up until 1974. Despite the governmental reorganizations of the 1970s and 1980s, it continues to capture most local government wage spending up until the present.

Public sector employment. The public employment and wage series for Tanzania are a lot less reliable than for Kenya and the figures presented in Chapter 2 rest of data from several different data sources. There are three main sources of data on public employment in Tanzania: (i) the Employee and Earnings Survey (EES), which was conducted from the 1950s until 1984, and then restarted in 2000; (ii) payroll/personnel data, reported in a variety of World Bank studies, particularly during the 1980s and 1990s as the civil service reform programme was initiated; and (iii) estimates from household survey and labour force surveys, which are based on sample estimates, weighted on the basis of the national sample frame. Neither the EES nor

⁴⁴⁰ TZ WB 1975, Annex II, Fiscal aspects of decentralization

⁴⁴¹ Urban and municipal councils were re-established earlier, in 1978.

the payroll data include the armed forces, and as the household surveys tend to exclude people in group quarters (such as military barracks), these surveys capture only a small share of the military and where possible to identify, I have omitted those reporting defence as their occupation or industry.

The EES surveys from the 1960s and 1970s are the most comprehensive and robust of the sources, but lacks the crucial mid-1980s through 1990s period when Tanzania's public sector was reformed. Unfortunately the revived EES data from 2001 until the present appears to be flawed. This series shows implausible fluctuations in employment levels and a very rapid employment growth since 2010. A more careful comparison of the EES microdata against the sampling method suggests problems with the weighting scheme. In the discussion of the survey methodology, the EES survey reports state that all public sector establishments were included in the survey (no sampling), while for the private sector they used a two-tiered sampling technique.⁴⁴² Yet the 2013 and 2014 EES microdata⁴⁴³ shows that the public sector results have been scaled up significantly; by as much as 60% in 2014. Even assuming some adjustments on account of non-responses (public sector establishments had an 88% response rate on average), these weights seem implausible. A central government establishment in Morogoro for example, categorised as public order and employing 1642 people (thus presumably the regional police headquarters), has been given a weight of 8.2. This implies that statistically there were likely to be more than 7 other establishments of similar size that went uncounted in that region. Using the raw rather than weighted data gives results that are closer to the administrative records: 389,000 general government employees in 2014, rather than 641,000 when applying weights. Furthermore, it seems likely that non-responding establishments are the relatively smaller ones, rather than big public sector institutions that enumerators will have an easy time locating. An earlier survey (TZ EES 2007) also noted that missing responses were sometimes due to aggregation at a higher level of government, so that the missing establishment numbers were included in the parent institution aggregates instead. While the EES results from the 2000s are retained in data appendix 1 for informational purposes, the chapter analyses do not make use of them.

The second public employment data sources is that generated from the payroll, which captures the vast majority of general government employees, but excludes casual employees (many of whom are paid out of a non-wage budget line, particularly at the local level), local councillors (politicians), trainee teachers, parastatal employees and those in public institutions/executive agencies (which receive un-earmarked budget allocations).⁴⁴⁴ The 2004 payroll analysis put the missing employees in public institutions and teacher trainees at 7% of the total, and in the EES recorded casual employment was usually around 10% of the total. This gives a sense of the upward adjustment needed to compare the payroll and EES estimates. For the 1980s the ministry of labour and manpower also published a separate public employment series that gives somewhat different figures to those from the other payroll estimates. I have chosen to set aside this last source and work primarily with the data from the payroll office.

⁴⁴² TZ EES 2002, p.5.

⁴⁴³ Microdata only released for the 2013 and 2014 surveys.

⁴⁴⁴ Tanzania. President's Office Public Service Management., "Public Service Employment and Pay: The Current State and Trends over the Last Four Years: Part I (Main Report)" (Dar es Salaam, 2004).

The third set of sources are the household surveys. These are in theory comprehensive, but some rely on relatively small samples (particularly for urban areas where many public servants tend to reside), which increases the confidence interval. As in Kenya moreover, the household surveys tend to over-estimate low-skilled staff (particularly at the local government level), most likely reflecting the inclusion of contractors and casual employees that are not formally public sector employees.

The figures below compare these three sets of sources for the parastatal and general government employees separately. Appendix Figure II.3 compares the estimated number of general government employees as reported in the EES, the payroll reports and in household or labour force surveys. The payroll estimates correspond relatively well with the EES up until 1984 and the spike in 1993 followed by a swift decline in employment is supported in the secondary literature.⁴⁴⁵ The estimates for the 2000s, however, vary considerably. The EES data is likely the main culprit due to weighting errors just discussed.⁴⁴⁶ Some of the household surveys (the 2014 labour force survey and 2011/12 household budget survey) also give relatively high estimates, but as noted, household survey estimates are generally higher than the administrative sources.

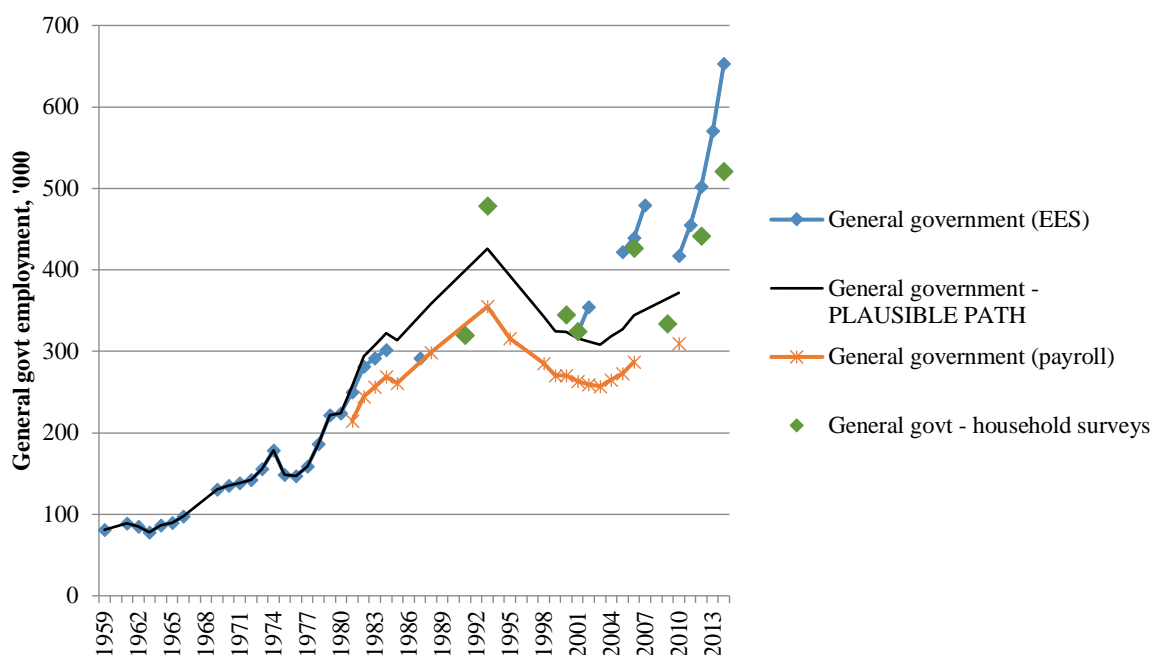
To construct a plausible public employment trajectory therefore, I use the EES estimates up until 1980. After that I rely on the payroll data, but adjust the number upward by 20% to account for omission of casual employees and employees of public institutions from the central government payroll. This is therefore a rough estimate, but errs on the side of caution by selecting reasonably high estimates for the post-1980 period. This gives us a reasonable order of magnitude if not a precise number, and perhaps more importantly, a plausible direction of travel. It appears to capture the relevant peaks and troughs described in the secondary literature accurately. In 1975 the government laid off the former TAZARA railway construction workers, which explains the dip in the series. In 1985 the government had tried to reduce public employment, but failed to follow through on its employment freezes.⁴⁴⁷ Following the 1993 spike in employment the government initiated a civil service reform programme (with donor support) to reduce the absolute number of staff (both through retrenchment and the removal of ‘ghost workers’ from payroll).

⁴⁴⁵ WB PER 1996; TZ POPSM 2004.

⁴⁴⁶ Using the underlying raw EES microdata for 2013 and 2014, with some revision upward for missing respondents, give results that are quite close to the payroll data, at around 330,000 in 2013.

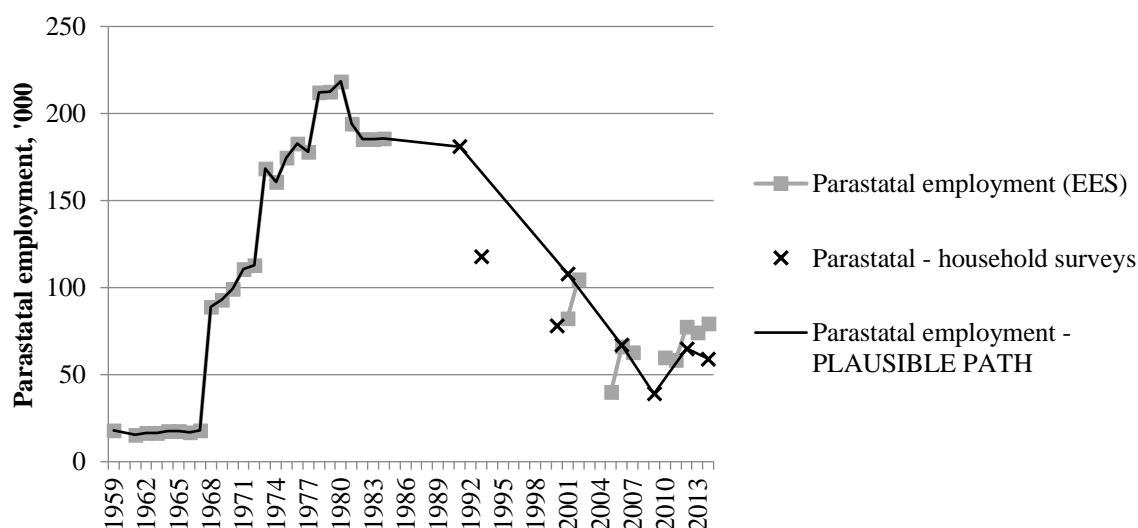
⁴⁴⁷ WB PER 1989, Volume II, p.63.

Appendix Figure II.3. Tanzania: Total general government employment, estimates using different sources



The parastatal employment estimates in contrast, are more consistent across sources. Appendix Figure II.4 shows how the estimates of parastatal employment from the EES compare to that of the household or labour force surveys. These two sources give reasonably consistent estimates, although the EES estimates appear high for the very recent years. As the EES is likely overestimating the parastatal employment, I choose to use the household survey estimates to trace the trend after 1984, see thin black line, the ‘plausible path’.

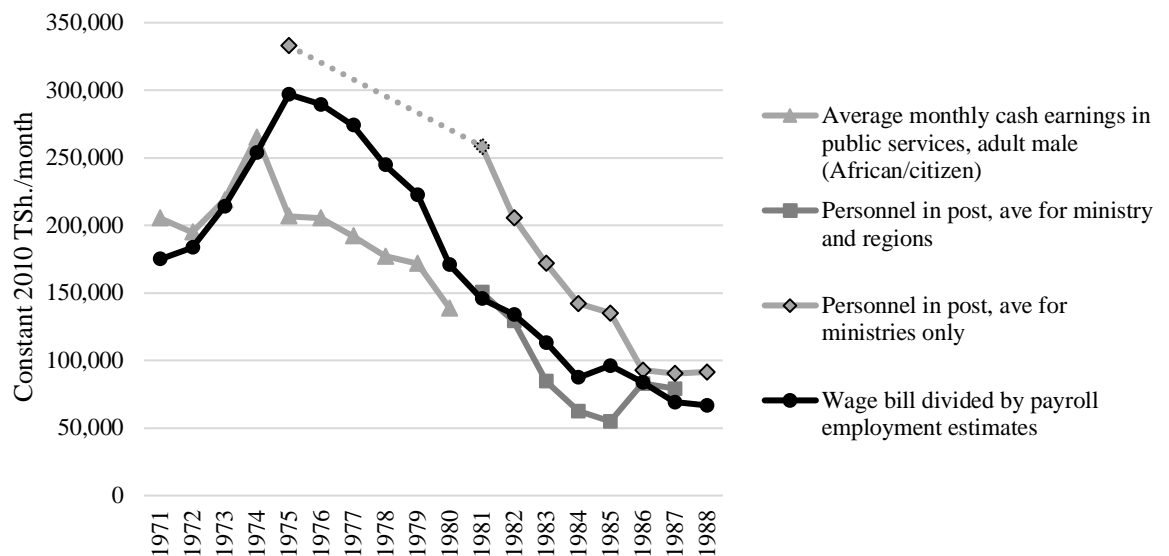
Appendix Figure II.4. Tanzania: Total parastatal employment, estimates using different sources



Public sector earnings. Estimating average public sector earnings in Tanzania also has its challenges. Up until 1984 the EES gives data on average earnings and the total wage bill (disaggregated by sector and industrial category). As in Kenya, these measures of earnings

include benefits and allowances but exclude pension contributions. From the 1980s and on however, I am forced to rely on the budget estimates of total personnel spending divided by the estimated size of the public service. As the personnel expenditure estimate and payroll data on employment appear to come from the same source, I divide personnel expenditure by the unadjusted number of public sector employees recorded from the payroll sources (the dark black dotted line in Figure II.5). Comparing average earnings across the various available sources during the 1970s and 1980s shows agreement on the trend, albeit not perfect alignment. These series have somewhat different coverage however, which presumably explains the level differences.

Appendix Figure II.5. Tanzania: Average government earnings 1971-88, different sources compared



Another important data quality concern however, is the extent to which personnel expenditure (as classified in the budget) is an accurate guide to actual take-home pay. Several World Bank reports, particularly from the 1990s as the civil service reform programme took pace, raised concerns about a number of staff benefits and allowances classified under non-wage budget headings.⁴⁴⁸ The donor-funded development budget was a particular culprit, as projects topped up salaries in various ways in order to motivate staff whose base pay had been falling since the 1960s. A 1994 report estimated that roughly 15% of the budget line “other charges” was in fact salary supplements of different kinds.⁴⁴⁹ A later study from 2009 provided a detailed analysis of for the years 2004/05 through 2009/10, and found that allowances and other effective wage supplements were roughly 20-25% of total pay, although most of these expenses were correctly coded under compensation of employees.⁴⁵⁰ While allowances formed an important part of the public service remuneration package in colonial times too, it seems plausible that the wage declines lead to various creative ways to channel non-wage budgets into staff compensation. In Figure 5 I run some sensitivity tests, adjusting the total wage bill upward by assuming (i) that 20% of non-wage recurrent expenditure leaked into the wage bill, (ii) a 50% leakage, and (iii) that personnel costs stayed constant at 60% of total recurrent expenditure (excl. interest

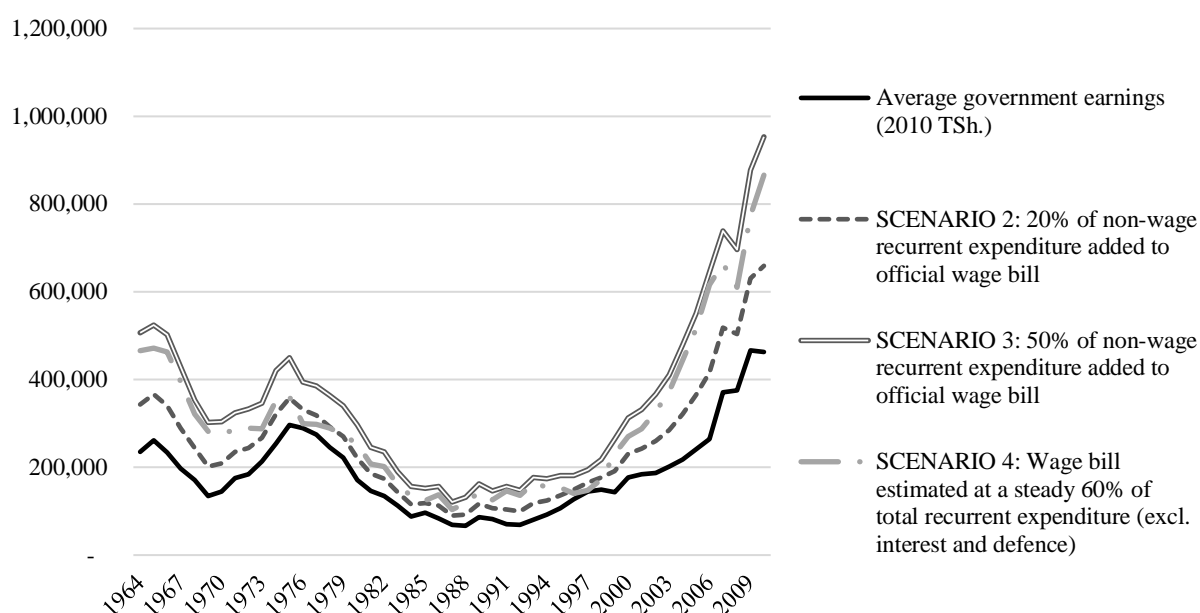
⁴⁴⁸ TZ WB PER 1994, Vol 1, p.22.

⁴⁴⁹ TZ WB PER 1994, Vol 1, Table 3.8

⁴⁵⁰ TZ WB PER 2009, Table 16.

and defence). This shows that even under an implausibly high leakage assumptions, the fall in real earnings during the 1980s was substantial. In recent years however, as government expenditure rebounded, real earnings estimates are more sensitive to these assumptions.

Appendix Figure II.6. Tanzania: Average government earnings using alternative estimates of total wage bill size



II.IV. Uganda: main data series

Government revenue and expenditure. The fiscal and macroeconomic data for Uganda is considerably weaker than for the other two countries and should be treated as indicative. The statistics published by the government and reported in IMF briefs from this era are perhaps a better reflection of how statisticians and IMF staff believed the economy and budget to have fared than an independent measure. Nonetheless, the trends, if not the levels, help to tell the story of Uganda's state erosion and recovery.

Uganda's state practically collapsed after Idi Amin's coup in 1971 and regular reporting ceased. What data we do have on fiscal operations from the 1970s is limited to the central government, and even then is of weak quality. Fiscal operations were in part run through a number of extra-budgetary accounts used to circumvent the official budget, and makes it hard to assess the actual purpose of spending.⁴⁵¹ In addition, high inflation, coupled with exchange rate and price controls and very large spreads between the official and parallel markets, make it difficult to accurately correct for inflation. Some of the statistical volatility is undoubtedly a result of these pricing policies. The situation reached its nadir in the late 1970s and early 1980s around the time of the Ugandan-Tanzanian war. In 1980/81 the deficit reached roughly 75% of total expenditure, financed primarily through domestic borrowing and accumulation of arrears (particularly for defence). The economy briefly improved in the early 1980s when Milton Obote regained power, with a big increase in the revenue take in 1981/82. However, the

⁴⁵¹ To make matters worse, the IMF reported that the central government computer broke down in 1978 and there was no manual backup system, see: UG IMF RED 1983.

political situation deteriorated and fighting resumed in the early 1980s (during the Bush Wars), which rapidly unravelled what progress had been made towards stabilising the economy.

Despite the public finance chaos, the government produced basic accounts, which were reviewed and reported by the IMF and form the basis of the analysis for the 1970s and 1980s, although the data quality from the end of the Idi Amin period is particularly poor. Data from the 1960s are taken from government sources and loans have been subtracted from the revenue accounts.

As for Kenya and Tanzania, the estimates of general government revenue combine central government revenue with local government own-revenue. Up until 1975 it is possible to extract local government own-revenue from the statistical bulletins (with some imputations for missing years). After 1975 I assume that local government revenue represented a fixed percentage of total revenue, based on a few observable benchmark years. In the 1960s local government revenue was substantial, peaking at around a quarter of total government revenue. As in its neighbouring countries however, the central government sought to weaken these competing power bases after independence, and in the 1960s President Obote centralized many services and reduced the local government revenue base. What data we have suggests that the revenue share fell to roughly 10% of total revenue in the mid-1970s. While data is not available for the late 1970s, Uganda's 26 urban and 33 district administrations presumably continued to raise some taxes locally throughout the tumultuous 1970s, but reporting to the central government stopped while their reliance on central government transfers is thought to have increased.⁴⁵² By the 1990s locally raised revenues accounted for only a small share of their resources.⁴⁵³

In 1993 the government embarked on a decentralization process to reform and revive local governments. Local governments were re-established in the 1995 Constitution and subsequent Local Government Act of 1997. Although fiscal decentralisation began in 1994, the central government retained considerable financial control over the districts for some time and the reforms had relatively little impact on local government revenue generation. Local government revenue is estimated at roughly 2% of total revenue today.

Economic classification of government expenditure. For the pre-1976 period, personnel costs are taken from the EES rather than the budget, excluding earnings in the transport sector which are likely to be staffed primarily employed on the railways (a parastatal). Economic classification of expenditure for the 1970s and 1980s period are rough estimates and for some years the estimates are based on a commitment rather than cash-basis. Of all categories of spending, however, the IMF thought the wage bill to be the most reliable, as it was based on the disbursed payroll.⁴⁵⁴ Nonetheless, even disregarding the tumultuous 1970s and 1980s period, it helps to tell a story about the effect of rising defence spending and falling wages, and thus this rough picture of change is included despite its flaws.

Government employment. Uganda only undertook the EES until 1977. Unlike the other two countries, their measure of public employment included the general government and the East Africa Common Services Organisations (primarily railways), but no other parastatals. From 1993 and on the government resumed its annual statistical report on general government

⁴⁵² Ibid.

⁴⁵³ UG IMF SA 1998

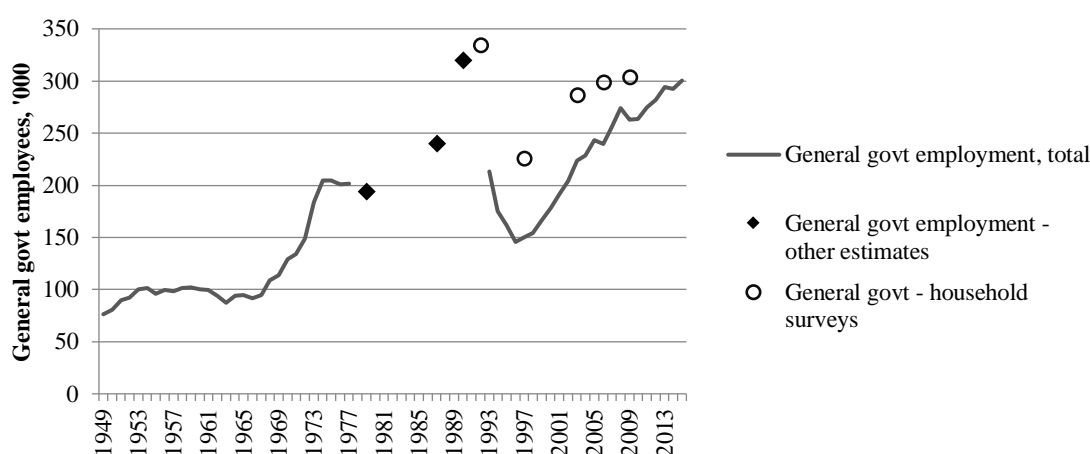
⁴⁵⁴ UG IMF RED 1983

employment (based on the payroll rather than a survey of each institution), although it provided only sporadic wage data. We have a few sporadic data points with which to fill in the gap in reporting between 1977 and 1993. In 1979 the Commonwealth produced a report that provided summary statistics on public employment, and in 1987 the government undertook a civil service census.

For Uganda therefore, we lack any consistent data on the parastatal sector. State-owned enterprises bulged in number in the 1970s when Uganda’s Asian population was expelled and many of their businesses appropriated by the state.⁴⁵⁵ In 1983 there were estimated to be 140 such nonfinancial public enterprises, many of which were heavily reliant on credit or direct subsidies from the central government. A report by the Commonwealth Secretariat from 1979 estimated their total employment to be 80,000, while an estimate from 1988 put total parastatal employment at 54,000.⁴⁵⁶ The data series for Uganda discussed in Chapter 2 simply excludes the parastatal sector, for lack of any reliable measures.

The general government employment estimates from the various available sources are plotted in Appendix Figure II.7. These show that there is considerable uncertainty about the trend between 1977 and the early 1990s. The point estimate of general government employment from 1990 proves particularly problematic to interpret. In several sources, a 1990 estimate of government employment (at 320,000) is referenced. The World Bank traced this number to an unpublished ILO report.⁴⁵⁷ They were unable to ascertain whether it included parastatal employees or not, but presumed that it probably did. As a measure of the general government alone, this 1990 measure seems high compared the other available measures for this period and does not match estimates of the number of posts rationalised. Clearly the jump in number between the 1987 civil service census and estimate for 1990 is implausibly large, and there are no narrative accounts in the IMF or World Bank reports of a major hiring spree immediately after President Museveni came to power in 1986. I therefore choose to revise the 1990 measure downward by 50,000 to adjust for the inclusion of the parastatal sector, see Appendix Figure II.8 (‘plausible path’).

Appendix Figure II.7. Uganda: Total general government employment estimates by source

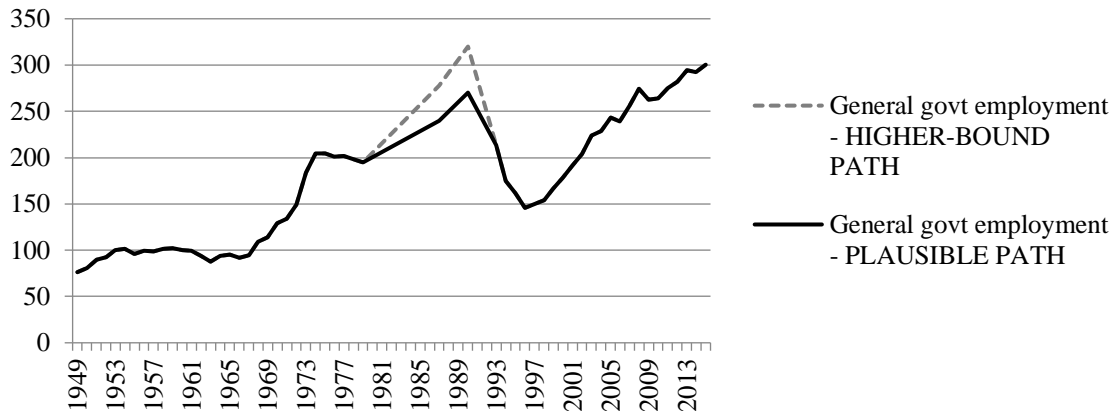


⁴⁵⁵ Ibid.

⁴⁵⁶ UG WB PER 1993, p.105

⁴⁵⁷ Ibid., p.103

Appendix Figure II.8. Uganda: Total general government employment, plausible and higher-bound scenarios



Government earnings. The total earnings reported in the EES match the wage bill figures for the central government relatively well for the period 1962 – 1977. The budgetary estimates are lower in the early 1960, most likely due to the absence of local government personnel costs in the central government accounts as well as staff of the East African parastatals (primarily railways). Over time however, the two series converge as services were centralized and local government personnel costs reported in the central government accounts.

In order to calculate average earnings I therefore divide the reported wage bill for the period 1977 until the present by the level of employment calculated in Figure 7 above. Various ad hoc estimates of salary levels from this time allow me to benchmark these results with independent measures. These give reasonably consistent measures. As in Tanzania however, it seems likely that some non-wage expenditure were in fact used to remunerate staff, as reliance on benefits and informal remuneration increased when wages declined. As in the Tanzanian case however, this is unlikely to have altered the general trend.

Consumer price index. A price index has been constructed up until 1986 (before the currency was revised), by splicing together the Kampala cost of living index and the latter Kampala middle income cost of living index. Extremely high inflation in the late 1980s makes it difficult to account for price changes after 1987 and the available consumer price indices give implausible wage fluctuation results. I therefore normalise earnings in relation to GDP per capita instead, as the WDI nominal GDP per capita series provides a more plausible trend.

Appendix III. Regional distribution of employment and earnings (supplement to Chapter 2)

Figures 2.14 – 2.15 (in Chapter 2) were constructed by using regionally disaggregated data on the population and the total number of public/formal sector employees and public sector wage bill. The table below provides detail on the data sources used for the analysis. Note that in the Tanzanian and Ugandan measures only includes general government employees (i.e., it excludes the parastatal sector).

Appendix Table III.1. Sources underpinning regional analysis of public sector employment and pay

Kenya	<p>Formal sector employment and earnings 1972 – 2005: KE EES, various years</p> <p>Public sector employment and earnings 1972 – 1985: KE EES, various years 1994: KE WMS 1994 2009: KE CENSUS 2009</p> <p>Total population Censuses from 1969, 1979, 1989, 1999, 2009 (population assumed to grow linearly between census years), 1994 data point using estimated district pop from WMS 1994.</p>
Tanzania	<p>Government and formal sector employment and earnings 1965 – 1980: TZ EES (various years); TZ HRDS 1993; TZ HBS 2000/01; TZ HBS 2011/12.</p> <p>Total population Censuses from 1967, 1978, 1988. For data points using household surveys, regional population estimates taken from the surveys.</p>
Uganda	<p>Government and formal sector employment 1965 – 1970: UG EES; 1987: UG BTB 1989/90, Table 32; 1992: UG IHS 1992</p> <p>Total population Census from 1969 (1965 and 1970 normalized by same year); 1992 and 1987 use estimated district population from IHS.</p>

The subnational boundaries in all three countries have changed over time. The data has been constructed on the basis of the 1970s borders in Kenya and Tanzania, and 1960 borders in Uganda.

Kenya

To keep the sample constant over time, the original 41 Kenyan district divisions of the 1970s are used for this analysis. Kenya's administrative divisions have undergone considerable change since independence. Under President Moi and President Kibaki the number of districts in Kenya increased, and as a result the censuses contain an increasing number of districts (69 in 1999, 158 in 2009). However, a High Court ruling in 2009 deemed 210 of the then existing 256 districts illegal, and reverted the administrative structure back to the 46 districts and Nairobi as set out in the Districts and Provinces Act of 1992. When the 2010 Constitution came into effect in 2013, these districts were converted into 47 counties, which form the basis for the devolution envisaged under the new constitution. New Kenyan districts were carved out of single old districts, making it a relatively straightforward task to merge new districts into old ones. The mapping below shows how any new district divisions have been merged into the original 1972 list.

Appendix Table III.2. Kenya: mapping of subnational divisions

Code	Master list (1972)	New districts mapped onto old
110	Nairobi	
205	Kirinyaga	
208	Kiambu	Thinka
220	Nyandaura	
221	Nyeri	
222	Muranga	Maragua
301	Mombasa	
303	Kwale	
306	Kilifi	Malindi
309	Tana River	
311	Lamu	
320	Taita Taveta	
401	Marsabit	Moyale
405	Isiolo	
415	Embu	Mbeere
421	Machakos	Makueni
430	Kitui	Mwingi
431	Meru	Meru South, North, Central, Tharaka
501	Garissa	
520	Wajir	
521	Mandera	
601	Siaya	Bondo
630	Kisumu	Nyando
632	Kisii	Kisii Central, Kisii South, North Kisii
634	South Nyanza	Homa Bay, Migori, Suba, Rachuonyo, Kuria
704	West Pokot	
713	Baringo	Koibatek
730	Nakuru	
739	Kericho	Bomet, Buret
750	Turkana	
751	Samburu	
752	Trans Nzoia	
753	Nandi	
754	Laikipia	
755	Narok	Trans Mara
756	Kajiado	
757	Elgeyo Markwet	Marakwet, Keiyo
758	Uasin Gishu	
816	Busia	Teso
830	Kakamega	Vihiga, Lugari, Butere
832	Bungoma	Mt. Elgon

NB. Other categories excluded (overall share of pop minimal)

Tanzania

Tanzania's regions have undergone less change than Kenya's districts but some of the regions created in 1978 and 2012 have been carved out of more than one original region. As the employment data is not available at district level, I have made the simplifying assumption that a new region was drawn in equal proportion between old regions. This assumption makes a negligible difference to the results. In addition, there were some boundary changes between 1967 and 1978. The 1967 regional populations were calculated using the 1978 boundaries in the 1978 preliminary census report.

Appendix Table III.3. Tanzania: mapping of subnational divisions

Regions	1967	2002	2012
Arusha		Manyara added to Arusha	Manyara added to Arusha
Pwani (Coast)	Mzizima District removed		
Dar es Salaam	Mzizima District added		
Dodoma			
Iringa			Njombe included in Iringa
Kigoma			
Kilimanjaro			
Mara			
Mbeya			
Morogoro			
Mtwara			
Mwanza			Half of Simiyu pop and third Geita pop
Ruvuma			
Shinyanga			Half of Simiyu pop and third Geita pop
Singida			
Tabora			
Tanga			
Kagera/West Lake			Third Geita pop
Lindi	Emp estimated as share of Mtwara		
Rukwa	Emp estimates as share of Mbeya and Tabora		Katavi included in Rukwa

Uganda

Uganda's districts have multiplied in number over the postcolonial period. This analysis used the 1960 district borders, with the latter breakout districts mapped onto the old boarder divisions, see mapping below.

Appendix Table III.4. Uganda: mapping of subnational divisions

1960 Districts	<1992 districts mapped onto old divisions	2002 districts mapped onto old divisions
Kampala (not a district, separated out)	Kampala	Kampala
Mengo	Kiboga, Luwero, Mpigi, Mukono, Rakai	Kiboga, Luwero, Mpigi, Mukono, Rakai, Kalangala, Nakasongola, Kayunga, Wakiso
Masaka	Masaka	Masaka, Rakai, Sembabule
Mubende	Mubende	Mubende, Kiboga
Busoga	Iganda, Jinja, Kamuli	Iganda, Jinja, Kamuli, Bugiri, Mayunge
Bugisu	Kapchorwa, Mbale, Sebei	Kapchorwa, Mbale, Sironko
Bukedi	Kumi, Pallisa, Tororo	Busia, Pallisa, Tororo
Teso	Soroti	Soroti, Katakwi, Kumi, Kaberamaido
Karamoja	Kotido, Moroto	Kotido, Moroto, Nakapiripirit
Acholi (incl. Madi*)	Gulu, Kitgum, Moyo	Gulu, Kitgum, Pader, Adjumani, Moyo
Lango	Apac, Lira	Apac, Lira
West Nile	Nebbi, Arua	Nebbi, Arua, Yumbe
Bunyoro	Hoima, Masindi	Hoima, Kibaale, Masindi
Toro	Bundibugyo, Kabarole, Kasese	Bundibugyo, Kabarole, Kasese, Kamwenge, Kyenjojo
Ankole	Mbarara, Bushenyi	Mbarara, Bushenyi, Ntungamo
Kigezi	Kabale, Kisoro, Rukungiri	Kabale, Kisoro, Rukungiri, Kanungu

*Madi was an independent district in 1960 but not in the latter periods and is therefore grouped with Acholi.

Appendix IV. Calculating average public sector educational attainment (supplement to Chapter 2, 3, 4)

Tables 3.3 – 3.6 provides estimates of the share of the public sector labour force with secondary and tertiary education as well as the share of such graduates working in the public sector. The estimates for the 1990s and 2000s are calculated from census and household survey microdata, while the estimates from the 1960s or 1970s build on manpower surveys. These manpower estimates rest on a number of assumptions. Firstly, the various manpower reports give estimates of the total ‘mid- and high-level manpower’ rather than educational attainment directly. These classifications of manpower level, however, rest on educational or skills requirements, and therefore serve as a proxy for educational attainment. However, workers without the requisite educational attainment may at times have been employed in such posts, or alternatively, there may be overqualified candidates in ‘low-level manpower’ posts. Secondly, I assume that all working secondary and tertiary graduates in the 1960s/70s were employed in the formal (rather than informal) sector. Note that this may overstate the public sector share if there are additional high educational achievers working in private establishments not captured by these surveys. A further point to keep in mind is that these estimates include expatriates, who made up a considerable share of the mid and high-level manpower in the 1960s and early 1970s.

For each country and year I describe how the estimates have been calculated below.

Kenya

1972: Estimates based on 1972 high and middle level manpower survey, reported in KE SA 1974, Table 273. This survey estimated 99,821 people in high and middle level positions in Kenya. Of these 41,000 were in the public sector and 59,000 in the private sector. This puts the high and mid manpower ratio at 15% in the public sector and 15% in the formal sector overall, and 41% of the total high and mid-level manpower in the public sector. ‘High and mid-level manpower’ is in the Kenyan case synonymous with jobs requiring at least a secondary school degree (Form IV).

1994: Author’s calculation based on KE WMS 1994.

2009: Author’s calculation based on KE CENSUS 2009.

Uganda

1967: Based on high level manpower survey 1967, Table II-VI (UG MANPOWER 1967). I use employees categorized in education level 3 – 9 as the definition of the secondary school educated population, as these groupings require at a minimum a Cambridge School Certificate (CSC) (achieved after 4 years of secondary school).

In total there were 27,900 employees in posts requiring at least a CSC. Of these, 14,390 were in the public sector, 4,640 in the education sector and 8,470 in the private sector, set against a total number of employees in the public and education sector of 117,000, and in the private sector of 140,000. This means that 16% of total public and education sector employees were in

posts requiring a CSC, and 11% of all employees in total. The public and education sector employed 69% of all employees with at least a CSC.

The table also allows us to calculate the share with a tertiary degree. I classify tertiary educated as those with a university degree or with a higher secondary degree or secondary degree and at least two years of further training (a generous classification, slightly broader than that for the latter periods). This suggests that 7% of all public and education sector employees had a tertiary-level job, and 2% of those in the formal private sector.

Appendix Table IV.1. Uganda: formal sector labour force by educational attainment, 1967

Education level		Public	Private	Education	Total	Public and education	Pub and edu %
Uni, HCS or CSC plus 2 years further training	9	140	40	810	990	950	96%
	8	1390	1340	940	3670	2330	63%
	7	110	450	560	1120	670	60%
	6	2060	50		2110	2060	98%
	5	1750	870	470	3090	2220	72%
At least CSC	4	2740	1600	1660	6000	4400	73%
	3	6200	4120	200	10520	6400	61%
Primary + further training	2	4670	5650	9590	19910	14260	72%
	1	2000	1410	90	3500	2090	60%
	Total employment	84000	140000	33000	257000	117000	46%
	Level 5-9	5450	2750	2780	10980	8230	75%
	Level 3-9	14390	8470	4640	27500	19030	69%
	Level 5-9 %	6%	2%	8%	4%	7%	
	Level 3-9%	17%	6%	14%	11%	16%	

Source: UG MANPOWER 1967, Table II-VI

1992: Author's calculations based on UG IHS 1992.

2005/06: Author's calculations based on UG NHS 2005/06.

Tanzania

1964: Based on results reported in the Annual Manpower Report to the President 1982 (TZ MANPOWER 1982), which summarised results from all previous manpower surveys. These surveys classify high and mid-level manpower as those positions requiring four years of secondary schooling or equivalent experience.

For 1964, this report records total high and mid-level manpower in the formal sector as 12,639 (categories A-C), of which 5,389 work in the civil service (TZ MANPOWER 1982, Table 64 & 65). This means that roughly 6% of all civil service employees and 4% of all formal sector employees overall, had at least four years of secondary schooling.

For the year 1980 the report also provides a breakdown of the total high and mid-level manpower by sector of the formal labour force. It suggests an extremely high share of the

educated in public employment, with 90% in either the civil service or parastatals, 9% in the private sector and 1% within the party.

Appendix Table IV.2. Tanzania: Distribution of high and mid-level manpower, 1980

	Citizens	Non-citizens	Total	Percentage
Civil service (i.e. general govt)	26,707	429	27,136	57%
Parastatals	15,488	353	15,841	33%
Private firms	4,058	455	4,513	9%
CCM or affiliates	329	12	341	1%

Source: TZ MANPOWER 1982, Table 67

1993: Author's calculations based on TZ HRDS 1993.

2011/12: Author's calculations based on TZ HBS 2011/12.

Appendix V. Reconstructing income and consumption distributions (supplement to Chapter 3)

V.I. Kenyan data sources

Constructing the 1975 income distribution

Kenya did not undertake any comprehensive household budget surveys in the 1960s or 1970s and reconstructions of the income distribution from this period therefore rely on data from several sources. Several authors have used data from the Integrated Rural Surveys (1974-79), in combination with other sources, to establish a rough income distribution.⁴⁵⁸ Because these studies were foremost about poverty, and thus the bottom of the distribution, they tend to have relatively large, undifferentiated brackets at the top. I therefore use the most detailed of the rural income distribution tables available, constructed by Smith (1978) based on the 1974/75 Integrated Rural Survey.⁴⁵⁹ As this survey only covered small-holder households (roughly 75% of the population), other sources are used to add the missing households to this distribution. Large farming households are added to this distribution based on the large farm survey, along with the data on formal sector wages (from the EES), self-employed (income tax statistics report), and urban informal sector (informal sector survey), and rough estimates of the pastoral population from Collier and Lal (1980). This is therefore a rough calculation, and relies on a number of simplifying assumptions in order to reconcile the data from different surveys. Appendix Table V.1 shows the full distribution and indicates the source of data for each sector.

Appendix Table V.1. Constructed income distribution for Kenya, thousands of households, 1975

	(1)	(2)	(3)	(3)	(4)	(5)	(6)	(7)	
	Small holders	Large farms	Public sector (male)	Private sector (male)	Self-employed (formal)	Informal sector (urban)	Pastoral	Other rural	TOTAL
Income groups, KSh/month	IRS 1974/75	Large farm survey	EES	EES	Income tax report	Informal sector survey ⁴⁶⁰	Collier and Lal	Residual	
0-89	192		2	13			40	38	285
90-189	368		7	137			40	38	590
190-389	415		57	90		44	40	38	684
390-579	137		75	39		7	40	38	335
580-990	94		75	34	2	8			213
990+	26	3	48	37	14	2			129
TOTAL	1233	3	264	349	17	62	160	150	2237

⁴⁵⁸ E. Crawford and E. Thorbecke, "Employment, Income Distribution, Poverty Alleviation and Basic Needs in Kenya" (Geneva: International Labour Organisation, 1978); L.D. Smith, "Kenya: Low Income Smallholder Marketing and Consumption Patterns: Analysis and Improvement Policies and Programmes" (Rome, 1978); Paul Collier and Deepak Lal, "Poverty and Growth in Kenya," World Bank Staff Working Papers (Washington D.C., 1980); I. Livingstone, "Rural Development Employment and Incomes in Kenya" (Geneva: International Labour Organisation, 1981).

⁴⁵⁹ Smith, "Kenya: Low Income Smallholder Marketing and Consumption Patterns: Analysis and Improvement Policies and Programmes."

⁴⁶⁰ Results reported in: Crawford and Thorbecke, "Employment, Income Distribution, Poverty Alleviation and Basic Needs in Kenya."

Appendix Table V.2. Constructed income distribution for Kenya, percentage of each income bracket, 1975

Income groups, KSh/month	Public sector	Private sector	Self-employed and informal	Agricultural and pastoral	Income bracket share of total hhs
0-89	1%	5%	0%	95%	13%
90-189	1%	23%	0%	76%	26%
190-389	8%	13%	6%	72%	31%
390-579	22%	12%	2%	64%	15%
580-990	35%	16%	5%	44%	10%
990+	37%	29%	12%	22%	6%
TOP 10%	36%	23%	9%	32%	10%

(1) Small holders comprised 55% of total households. The income distribution in the small holder sector is drawn from the Integrated Rural Survey from 1974/75.⁴⁶¹ Smith (1978) calculated an income distribution based on this survey which presents number of 'adult equivalents' by income group (in KSh per annum). Adult equivalents were calculated by giving all adults aged 15 and above a weight of 1, and all children below 15 a weight of 0.5. For the purposes of this paper the distribution was recalculated into monthly KSh. per household, assuming an average household size of 6.7 (based on IRS 1974/75), and presuming that 50% of household members were below the age of 15 (based on 1969 census). Furthermore, as remittances were included as a form of income, the income cut-offs were lowered on the basis of the average remittance share of income. Lastly, the IRS also included a significant share of households in the top brackets that were headed by formal sector employees; of households in the top income bracket for instance, 27% of that income was earned from regular or casual employment. I therefore adjust the number of households downwards to account for those whose main form of income was from paid employment, thus avoiding double counting as these households will also be captured by the enumeration of employees.

Note that in contrast to the assumptions made by Crawford and Thorbecke (1978), the so-called intermediate or gap farms with holdings of between 20-50 acres (8-20 hectare) are assumed to be captured by the small holder survey, as the total estimated holdings of 8 hectare and above roughly match the number reported in the 1979 intermediate farm survey.

(2) Kenyan authorities defined farms of over 50 acres as large farms. These were land holdings in the former scheduled areas, and there were roughly 3,000 such farms in 1975.⁴⁶² I assume that all 3,000 large farm households had incomes that placed them in the top income decile.

(3) Formal sector employee households are calculated from the 1975 Enumeration of Employees Survey.⁴⁶³ This survey reports the number of employees by wage group. The female share of each wage group is subtracted from the total to give the number of male employees by wage bracket, to avoid double counting. I then assume that each male employee is the head of one household and his earnings are the household's sole source of income. This is a problematic

⁴⁶¹ Kenya. Central Bureau of Statistics., "Integrated Rural Survey 1974/75: Basic Report" (Nairobi, 1977).

⁴⁶² KE SA 1980, Table 84.

⁴⁶³ KE SA 1976, Table 255 & 257.

assumption, as many households headed by employees in formal employment had other sources of income that would have raised their overall household income. Thus the formal sector shares in the top income brackets are likely to be under-estimated. As the wage brackets do not overlap perfectly with the income group brackets given by the IRS, I assume a linear distribution of employees within each bracket. Experimenting with alternative in-bracket distributions suggests that this simplification makes little difference to the overall results.

(4) Data on self-employed, high income households is taken from the income tax department annual report for 1974.⁴⁶⁴ It assumes that each tax unit is a household, and the reported taxable income their total household earnings for that year.

(5) Informal sector workers in the urban areas are estimated based on the 1975 informal sector survey (republished in Crawford and Thorbecke, Appendix B). This survey gives average earnings by industrial sub-group. These workers are assigned to income brackets on the basis of the average earnings in their respective industrial sub-group. I assume the same male share of workers as in the formal sector (85%) and thus subtract 15% from each bracket.

(6) The number of pastoral households is taken from Collier and Lal, 1980. They are assumed to be distributed evenly in the bottom four brackets. This is an arbitrary decision, but as they are unlikely to be found in the top decile or percentile, this is unlikely to affect the reported results.

(7) The missing rural households (presumed to be squatters or landless households) are calculated as a residual (based on the total population size) and distributed evenly in the bottom four brackets. This is an arbitrary decision, but as they are unlikely to be found in the top decile or percentile, this is unlikely to affect main the reported results.

The top 10% is calculated from the top two brackets, weighting the top bracket by 0.6 and the second by 0.4, thus capturing the top 10% of the distribution.

The top 1% estimate for 1975 is calculated solely from the income tax department annual report and enumeration of employees, assuming that all those with incomes that put them in the top 1% would pay taxes and making adjustments for women.

Appendix Table V.3. Composition of top 1% of households

	Public	Private	Self-employed	TOTAL
Source	EES	EES	Income tax statistics report	
# hhs earning >KSh.3000 / month	7	11	7	25
Share of total	29%	46%	25%	100%

⁴⁶⁴ KE TAX 1974

The 1994 and 2005/06 household surveys

Appendix Table V.4. Details of Kenyan surveys used in analysis

	Welfare Monitoring Survey 2, 1994*	Kenya Integrated Household Budget Survey 2005-2006
Coverage	National	National
Sample size (households)	11,279	13,430
Sampling frame	National Sample Surveys and Evaluation Programme (NASSEP III) sample frame, based on the 1989 Population and Housing Census	NASSEP IV sampling frame, based on the 1999 Population and Housing Census
Sampling	Three-stage sampling technique, sampling by enumeration area, cluster and household, for a total of 1,377 clusters and 11,279 households. Sampling was stratified by district and urban/rural status.	It covered 1,343 clusters, selected randomly on a district basis, and 13,430 households (10 selected randomly per cluster), stratified by district and urban/rural status.
Data collection time period	Started June 1994	May 2005 - May 2006
Data collection	Face to face interviews	Face to face interviews. Households kept diaries to record goods and services purchased and consumed by the household
Produced by	Kenya National Bureau of Statistics, with technical and financial support from the World Bank	Kenya National Bureau of Statistics Funded by: Government of Kenya, DFID, USAID and General Data Dissemination System (GDDS)

***Note:** the 1994 WMS was part of a series of three Welfare Monitoring Surveys (1992, 1994 and 1997). The 1994 survey was chosen for use in this paper because the quality of the survey was superior to that of 1992,⁴⁶⁵ and because it contained more detailed employment and earnings data than the 1997 survey.

Construction of main variables

Public sector-headed households: designated household head reports working in the public sector.

- 1994 WMS: Based on variables mainoccu & empsecto, excluding observations where respondents report zero income from public sector employment and removing those who worked less than 9 months of the preceding year (unless they were recent hires).
- 2005/06 KIHBS: Based on sector of employment, variable e17, excluding those not reporting any wage income.

A point to note is that in contrast to the EES the household surveys do not explicitly exclude the military, although they tend to be limited to private households and thus exclude army

⁴⁶⁵ World Bank, “Kenya Poverty Assessment” (Washington D.C., 1995)., Annex 1.

barracks. However, the military was only 8% of total public sector employment and their inclusion thus make only minor difference to the final results.

Main economic activity of household head:

- 1994 WMS: Based on variable empsecto
- 2005/06 KIHBS: Based on economic activity, variable e03. Paid employees were subsequently divided into public, private and informal sector on the basis of sector of employment (e17). In order to reduce the other category (where household head reports being retired, looking for job or gave no information), all households in this category which reported agricultural income or business incomes of 50% or more of household expenditure were re-categorized to the agricultural or business/informal sectors.

Total household consumption:

- 1994 WMS: Based on variable hh_expen (total household expenditure). Includes auto-consumption, but does not impute rent.
- 2005/06 KIHBS: Based on variable hhtexp.

It should be noted that I do not control for differences in cost of living in different localities. While price differences will significantly influence measures of poverty it should have less on an impact at the top of the distribution where a larger proportion of consumption is on goods and services marketed nationally.

Asset wealth (index constructed based on following variables)

- 1994 WMS: Electricity in home, piped water, flush toilet, cooking fuel (gas or electricity); flooring (whether tiles, wood or cement), modern walls and roof to home.
- 2005/06 IHBS: Electricity in home, piped water, flush toilet, cooking fuel (gas or electricity); flooring (whether tiles, wood or cement), car, TV, refrigerator, computer.
- 2009 CENSUS: Electricity in home, piped water, flush toilet, cooking fuel (gas or electricity); flooring (whether tiles, wood or cement), car, TV, refrigerator, computer.

Data Quality Discussion

- **Do the Kenyan household surveys underestimate the wealthy?**

Household surveys tend to underestimate the number of high income earners, both because they are few in number and because wealthier households often decline to partake in surveys.⁴⁶⁶ This may bias the results if we are missing a large share of the top of the distribution and if this top has different economic characteristics to those just below them in the distribution (for instance, if no household in the top 3% of the distribution agreed to be interviewed, and public servants comprised the majority of these respondents, then their exclusion would bias our public sector share decile results downwards). By comparing the household survey population estimates, stratified by characteristics associated with wealth, with census results, we can estimate the likely order of magnitude of this under-reporting. As all households are by law

⁴⁶⁶ Atkinson, *Inequality: What Can Be Done?*

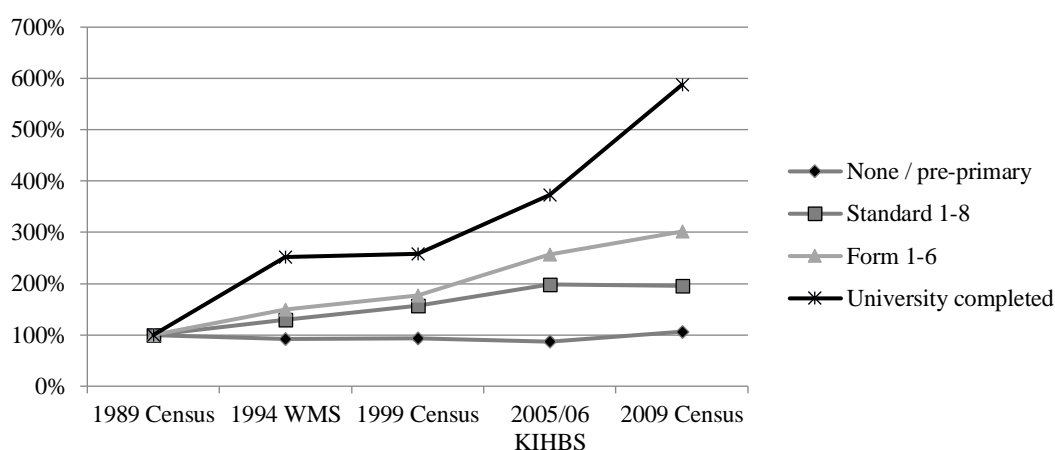
required to partake in censuses, and as the census questions do not contain questions on income, they should provide a reasonably accurate coverage of the entire population, including the elite.

One such wealth proxy is educational attainment. Appendix Table V.5 compares the Kenyan population disaggregated by broad educational attainment level for each of the household surveys along with the 1989, 1999 and 2009 census results. It suggests a plausible growth in the level of educational attainment over time, with the secondary and tertiary stock growing considerably, the primary educated population growing until 2005/06 and then remaining constant, and the number of people without any education remaining roughly constant, (growth shown in Appendix Figure V.1, where all trends are indexed to 100 in 1989). The 1994 WMS measure of people with university degrees looks too high for the overall trend, and is likely explained by the inclusion of people in the university category who have some university education rather than a completed university degree. Presuming a strong correlation between income and education, it does not appear that under-enumeration has made a significant dent on the top 10% of the distribution. Given that university graduates are only around 1% of the population, and likely concentrated in the top income brackets, the fact that their number is not significantly underestimated suggests that the under-enumerated top of the distribution is likely to be quite small.

Appendix Table V.5. Kenya: number of people by educational attainment, household surveys and censuses compared

Level of education completed (<i>respondents</i> ≥ 10 years old)	1989	1994	1999	2005/06	2009
	<i>CENSUS 1989</i>	<i>WMS 1994</i>	<i>CENSUS 1999</i>	<i>IHBS 2005/06</i>	<i>CENSUS 2009</i>
None / pre-primary	4,065,300	3,727,437	3,818,800	3,530,151	4,321,240
Standard 1-8	7,594,460	9,844,807	11,900,920	15,069,541	14,831,710
Form 1-6	2,282,720	3,421,677	4,026,200	5,858,245	6,882,970
Trade tests / polytechnics	0	94,923	0		109,660
University completed	55,520	139,684	142,980	207,066	326,210
Other / not stated	67,720	236,637	0	102,357	443,190
Total	14,065,720	17,465,165	19,888,900	24,767,360	26,914,980

Appendix Figure V.1. Kenya: Growth in stock of people by level of education, household surveys and censuses compared (indexed, 1989=100%)



Another way to examine whether the top of the income distribution is under-represented is to compare assets or household characteristics associated with wealth. The results below show the percentage of households reporting household characteristics associated with income: whether the household has a flush toilet, access to electricity, and whether it uses gas as cooking fuel (as opposed to paraffin, wood etc.). The electricity series suggests a relatively even and plausible growth trajectory. The flush toilet measure shows both the 1994 and 2005/6 surveys to have shares below the census trends, and the measure of cooking gas similarly shows a very low level for 1994. These results suggest that there may be some under-representation of the elite but the missing share is likely quite small.

Appendix Table V.6. Percentage of population with elite characteristics, household survey and censuses compared

Household characteristics (% of households)	1989 CENSUS	1994 WMS	1999 CENSUS	2005/06 IHBS	2009 CENSUS
Toilet (flush/WC) (in dwelling)	9.7%	8.9%	10.0%	8.4%	
Electricity	8.9%	10.2%	13.8%	18.3%	22.2%
Gas as main cooking fuel	2.7%	1.5%	2.4%	3.6%	4.9%

- **The public sector sample: reliability of reported level of employment and income**

I also examine how well these surveys capture public sector workers compared to the Kenyan administrative and census data, as a possible under-enumeration of public sector employees could bias the results. As discussed in Appendix II, household surveys and censuses tend to over-estimate public sector employees compared to the administrative data. The 2005/06 survey is very close to the administrative data (it also has the most detailed questions about sector of employment), while the 1994 WMS and 2009 census significantly overestimate the size of the public service, even after excluding inconsistent entries.

A few percentage of this overestimation may be due to the inclusion of the military in the household surveys (even if barracks were not enumerated). Another possible explanation for this inconsistency is a looser definition of public sector employee in the household surveys, and possibly also a failure of the central government to properly account for all staff in its administrative records. Keep in mind that the EES captures data from employers while the household surveys interview employees. The question in the household survey is generally phrased “who does [RESPONDENT] work for?” One likely difference is that when posed the question, people who are not formally on the government payroll (contractors, consultants, short-term casual labourers), will also identify with a public sector employer, while the government’s administrative data uses a more stringent definition based on contract type.

Appendix Table V.7. Number of public sector employees, comparing household survey estimates with administrative data

# of public sector employees ‘000	1994	2005/06	2009
EES	688	650	612
Household survey/census	880	647	726
Difference	28%	0%	19%

Average earnings are reported as lower in the 1994 WMS, at Shs.4,111/month⁴⁶⁷ compared to Shs.4,607/month according to the EES (11% lower), which supports the hypothesis that the WMS is capturing more low-skilled and poorly remunerated casual workers, few of whom would be in the top consumption decile or percentile anyhow. Moreover, an overestimation of the public sector share works against the argument in this paper that the public sector share of the elite fell over time.

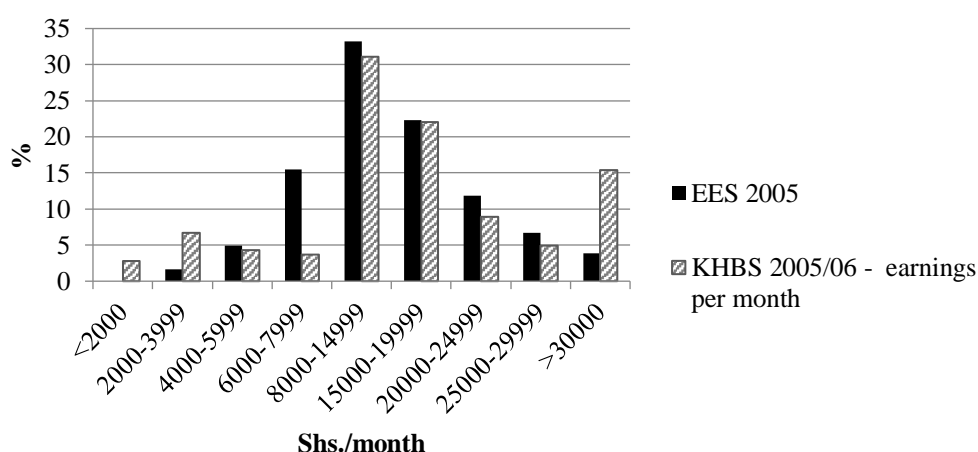
For 2005/06 we have the opposite and potentially more serious bias, as a possible under-enumeration of public sector employees could be accounting for some of the observed decline in public employment share between 1994 and 2005/06. The table below compares the 2005/06 IHBS survey results disaggregated by broad public sector division with the EES for 2005, and finds the estimates to be relatively consistent on both an aggregate and disaggregated basis.

Appendix Table V.8. Kenya: Estimates of public sector employees by branch of government, EES 2005 vs. KHBS 2005/6

	Number of employees		Average earnings		Standard deviation
	EES 2005	IHBS 2005/06	EES 2005	IHBS 2005/06	IHBS 2005/06
Central government	189,500	223,526	17,432	17,764	15,460
Local government	87,600	85,948	15,608	16,178	27,538
Teachers service commission	232,800	208,465	20,407	19,636	10,931
Majority-owned public companies	46,900	45,254	48,897	29,861	37,558
Parastatals/SOEs	97,500	83,399	37,015	21,343	36,868
Total	654,300	646,592			

Appendix Figure V.2 compares the wage distribution in the two datasets. It shows a reasonably consistent, if not perfect fit. If anything, it appears that the EES data rather than the household survey data, underestimates the right-hand tail.

Appendix Figure V.2. Kenya: public sector wage distribution, EES 2005 vs. KHBS 2005/06



⁴⁶⁷ Because the earnings data is collected so as to facilitate annual earnings, this estimate is based only on monthly earners and those daily and weekly earners who report working for the entire year.

Lastly, in Appendix Table V.9 I compare the public sector sample by educational attainment to the 2009 population and housing census - the only one of Kenya's recent censuses to provide data on sector of employment. Note that the EES does not provide a disaggregation of employment by educational attainment and therefore our only anchor is the 2009 census. The 1997 WMS is also added to give one further year of observation.

As already suggested, the 1994 survey appears to be over-estimating the number of unskilled and primary educated public sector employees, as shown by the rapid fall in these categories between the 1994 and 1997 WMS. In the higher educational categories (secondary and tertiary), the 1994 estimations look more plausible.

Of greater worry is the underestimation of university graduates in the 2005/06 sample compared to 1997 and 2009. While the number of university graduates was rising rapidly over this time, the discrepancy within the public sector sample is larger than that for the labour force as a whole, which suggests that a disproportionate share of the most highly educated and thus highly paid civil servants were excluded from the sample. The biggest discrepancy are in Nairobi and the Central province, which are also the areas which are comparatively under-sampled (weights are considerably higher for these two provinces). This may bias our estimates of the public sector share of the top decile downwards.

By estimating the number of missing entries of university educated public sector employees we can provide some rough parameters for the possible size of the bias that this may be imposing on the results reported in Table 3.10. Between 1999 and 2009 the stock of university graduates grew by roughly 6% per year; assuming a similar rate of growth in the number of public servants with university education puts the corrected 2005/06 number at 75,000 instead of 45,000, i.e. 30,000 more. Assuming that all of these graduates are household heads and that all have incomes that place them in the top decile (a generous assumption), raises the public sector-headed household share of the top decile from 17% to 20%. While not insignificant, this does not change the broader trend; even with such a correction the 2005/06 public sector middle class share still represents a considerable decline compared to 1994 (30%).

Appendix Table V.9. Kenya: Number of public sector employees by educational attainment, different surveys

<i>Age above 25</i>	1994 WMS	1997 WMS	2005/06 IHBS	2009 CENSUS
None / pre-primary	45,064	20,595	23,661	14,020
Standard 1-8	231,753	134,152	100,251	78,430
Form 1-6 and college	541,812	466,076	472,926	446,680
University	45,593	52,302	45,561	94,740
Other	53,668	41,242	24,842	8,010
TOTAL	917,890	714,367	667,241	641,880
<i>Percentage terms</i>				
None / pre-primary	5%	3%	4%	2%
Standard 1-8	25%	19%	15%	12%
Form 1-6 and college	59%	68%	71%	70%
University	5%	7%	7%	15%
Other	6%	6%	4%	1%

V.II. Tanzanian data sources

The 1969 distribution

The 1969 estimate was derived by comparing the 1969 national income distribution (on a cash basis) with the salaries of public and formal private sector employees (TZ EES 1969, Table 26). As in the Kenyan analysis, this comparison rests on the assumption that gross public sector cash earnings are a good approximation of the total income of public sector-headed households. This will underestimate earnings somewhat, as the 1969 survey results showed that employees in the services industry (primarily government) earned on average 82% of household cash earnings from wages and salaries and the other 18% from a variety of sources (crops, trade and business).

Possibly biasing the public sector share upward instead however, is that the income data in the national distribution table excluded production for own-consumption and therefore underestimates the incomes of rural households. This should have less of an impact on incomes among the top 10% and top 1%, as own-production of food is presumably a fairly small share of total consumption at these income levels.

Appendix Table V.10. Employment by wage group, reproduced from TZ EES 1969

TSh./annum	TSh./month	All employees (adult male)	Government (adult male)	Parastatal (adult male)	Public (total) (adult male)	Private sector (adult male)
<1200	<100	11,987	1,457	387	1,844	10,143
1200 - 1499	100-124	24,091	11,947	1,063	13,010	11,081
1500 - 1800	125-149	28,041	10,000	3,614	13,614	14,427
1800 - 2400	150 - 199	68,767	33,450	8,359	41,809	26,958
2400 - 3600	200-299	50,402	21,990	10,212	32,202	18,200
3600 - 4800	300-399	26,411	13,212	5,633	18,845	7,566
4800 - 6000	400-499	10,583	5,033	1,488	6,521	4,062
6000 - 9000	500-749	17,900	9,048	2,261	11,309	6,591
9000 - 12000	750-999	5,642	2,570	1,278	3,848	1,794
>12000	>1000	9,607	4,082	2,070	6,152	3,455
	Total	253,431	112,789	36,365	149,154	104,277

Note: shaded cells denotes income thresholds common to both the EES and the household survey

Appendix Table V.11. Tanzania 1969: Estimated public sector share by household income bracket, EES (grey), total households from 1969 household income survey

TSh. /year	% of hhs	Total hhs	General govt	Para-statal sector	Public sector (total)	Private sector	Govt empl. % of income group	Parastatal emp. % of income group	Public sector % of income group	Private sector % of income group
0-1499	78%	2,184,000	13,404	1,450	14,854	21,224	1%	0%	1%	1%
1500-3599	16%	448,000	65,440	22,185	87,625	59,585	15%	5%	20%	13%
3600-5999	4%	112,000	18,245	7,121	25,366	11,628	16%	6%	23%	10%
6000-11999	1%	41,720	11,618	3,539	15,157	8,385	28%	8%	36%	20%
>12000	1%	14,560	4,082	2,070	6,152	3,455	28%	14%	42%	24%
Total		2,800,280	112,789	36,365	149,154	104,277				

Tanzania household surveys, 1993, 2000/01 and 2011/2

Appendix Table V.12. Details of Tanzanian surveys used in analysis

	1993 Human Resource Development Survey	2000/01 National Household Budget Survey	2011/12 National Household Budget Survey
Coverage	National, including Zanzibar (excl. for this analysis)	Mainland Tanzania	Mainland Tanzania
Sample size (households)	4,953	22,178	10,186
Sampling frame	National Master Sample frame	National Master Sample frame, based on 1988 census	National Master Sample frame, based on 2002 census
Sampling	Drew from all of the 222 clusters of the National Master Sample frame, although two had to be excluded due to inaccessibility.	two-stage sampling on the basis of the National Master Sample; 1,161 primary sampling units were selected (621 urban and 540 rural), and within these, 24 households from each PSU	Households drawn from 400 clusters (120 from Dar es Salaam, 120 from other urban areas, and 160 from rural areas).
Response rate	Not known.	The replacement rate (where the originally selected households could not be located or contacted) was relatively high, at 12%.	The response rate (for originally selected households) was 94% (out of a planned sample of 10,400), and a further 398 replacement households were added to increase the sample size to 10,186 ⁴⁶⁸
Data collection time period	Sept-Oct 1993	May 2000 – June 2001	October 2011 and October 2012
Data collection	Not known.	Each household was visited regularly throughout a month, to assemble monthly data on household expenditures (two households a month in each PSU).	Expenditure and consumption was tracked over a 28 day period, with each household member above the age of 5 given a diary to record purchases and consumption.
Produced by	University of Dar es Salaam with support from British Overseas Development Administration, the Government of Japan and the World Bank	National Bureau of Statistics	National Bureau of Statistics

⁴⁶⁸ Tanzania, “Household Budget Survey Main Report, 2011/12” (Dar es Salaam, 2014).

Construction of variables

Public sector-headed households: designated household head reports working in the public sector.

- 1993 HRDS: Based on economic activity, variable i24, but excluding households that do not report public sector income as a most important or second most important household income. This additional exclusion criteria was added because the HRDS appears to be capturing a lot of part-time and casual public sector employees compared to other contemporary sources. However, this added exclusion criteria only accounts for 2-3% of households in the top 10%.
- 2000/01 HBS: Based on main activity, variable s2q08a. Those who reported zero employment income were excluded.
- 2011/12 HBS: Based on main economic activity, variable S12Q20. Inconsistent entries were removed (roughly 5% of entries); those that reported a public sector employer but not paid employment as an activity, nor any income from this employer.

A point to note is that in contrast to the EES the household surveys do not explicitly exclude the military, although they tend to be limited to private households and thus exclude army barracks.

Main economic activity of household head:

- 1993 HRDS: Based on economic activity, variable i24. Those who reported public sector employment but did not report income from this source have been recoded on the basis of their main reported source of income.
- 2000/01 HBS: Based on main activity, variable s2q08a.
- 2011/12 HBS: Calculated based on S12Q9, S12Q10A and S12Q20.

Total household consumption/expenditure:

- 1993 HRDS: Variable constructed based on data on reported weekly, monthly and annual data on expenditure. Dataset contained no aggregate variables so these were constructed (multiplying weekly exp with 52 and monthly with 12). Includes in-kind (barter) trade but excludes consumption of own-production.
- 2000/01 HBS: Based on exp_adeq.
- 2011/12 HBS: Based on totc. Includes consumption of own-production. Unlike other surveys it also includes imputed rent.

As in the Kenyan case, I do not control for differences in cost of living in different localities. While price differences will significantly influence measures of poverty it should have less on an impact at the top of the distribution where a larger proportion of consumption is on goods and services marketed nationally.

Asset wealth (index constructed based on following variables)

- 1993 HRDS: Electricity in home, piped water, flush toilet, cooking fuel (gas or electricity); flooring (whether tiles, wood or cement), TV, refrigerator, bank account.

- 2000/01 HBS: Electricity in home, flush toilet, cooking fuel (gas or electricity); flooring (whether tiles, wood or cement), car, TV, refrigerator, bank account.
- 2011/12 HBS: Electricity in home, flush toilet, cooking fuel (gas or electricity); flooring (whether tiles, wood or cement), car, TV, refrigerator, air conditioning.

Data quality discussion

- **Do the Tanzanian household surveys underestimate the wealthy?**

As discussed in the case of Kenya, household surveys tend to underestimate the number of high income earners, which could downward bias the public sector measures of the top 10% and 1%, if public sector employees make up a disproportionate share of the under-sampled strata.

In Appendix Table V.13 the population (above age 10) is disaggregated by educational attainment across our household survey samples and the national censuses (which act as anchors). While some of the inconsistencies across years are due to differences in classification (as the surveys provide inconsistent classifications for qualifications such as diplomas, post-secondary certificates etc.), there are some signs of under-reporting, particularly amongst university graduates. The 1993 HRDS did not capture a single respondent with a university degree (although with only 0.3% of household heads holding such a degree and a sample size of 5,000 households, this is not entirely implausible). The 2000/01 and 2011/12 household surveys also estimate a lower share of university graduates than the corresponding censuses, which provides further indication of under-reporting. In all cases, however, the household surveys over-estimate the post-secondary category compared to the census, which may also suggest some classification inconsistencies. Either way, the extremely low share of university graduates and diploma/certificate holders suggests that this bias will be fairly small. Treating the full discrepancy in university graduates between the 2002 census and 2000/01 household survey as missing entries would only add 0.3% to the total number of respondents, while assuming that the university graduate discrepancy between the 2011/12 household survey and 2012 census are the missing elite would add around 0.75%. The effect on our measures of the top 10% would thus be marginal, although this suggests the need to treat the top 1% estimates with caution.

Appendix Table V.13. Tanzania: population estimates by highest level of education achieved (aged 10 and above), household surveys and censuses compared

Educational attainment	1988 CENSUS	1993 HRDS	2000/01 HBS	2002 CENSUS	2011/2 HBS*	2012 CENSUS*
None or some primary	10,187,140	9,098,559	12,004,522	12,453,990	3,057,718	682,855
Primary (St.7 and above)	4,811,062	6,612,419	8,930,758	8,924,994	8,930,758	11,230,000
Secondary (Form IV and above)	261,682	507,327	699,634	850,823	1,713,794	1,745,016
Post-secondary (incl. diploma courses)	68,379	87,359	96,192	72,878	249,155	114,922
University	21,634		32,759	117,588	146,197	324,000
Other / unknown	25,567	514,236		2	12,088,245	
Total	15,375,464	16,819,900	21,763,865	22,420,275	26,185,867	14,096,793
In percentage terms						
None or some primary	66%	54%	55%	56%	12%	
Primary (St.7 and above)	31%	39%	41%	40%	34%	
Secondary (Form IV and above)	2%	3%	3%	4%	7%	
Post-secondary (incl. diploma courses)	0.4%	0.5%	0.4%	0.3%	1.0%	
University	0.1%	0.0%	0.2%	0.5%	0.6%	
Other / unknown	0.2%	3.1%	0.0%	0.0%	46%	

*Note: only provides data on respondents who have completed their studies; for post-secondary graduates this should not provide any major bias, but means the 'none' and 'primary' categories are significantly smaller than in other years. Percentile may be less accurate.

Appendix Table V.14 repeats this exercise using household characteristics indicative of wealth. It compares the share of households reporting high status household characteristics across the household surveys and censuses. While there are some inconsistencies that are likely due to data quality problems (it is unlikely that electricity access fell between 1993 and 2002 for instance), on the whole the trends are reasonably accurate. The household surveys underestimate the share of households with flush toilets marginally, while overestimating access to electricity. On the whole the margin of error is in the order of 1-2%. While not conclusive, this does suggest that we are capturing a broadly representative share of the top decile, although our measures of the top percentile may be less accurate.

Appendix Table V.14. Tanzania: indicators of household wealth, household surveys and censuses compared

Assets/characteristics, % households	1988 census	1993 HRDS	2000/01 HBS	2002 census	2011/12 HBS	2012 census
Flush toilet	4%	2%	2%	3%	8%	13%
Electricity	6%	11%	10%	9%	18%	21%
'Modern' cooking fuel (electricity, gas or kerosene)		3%	6%	5%	4%	5%

- **The public sector sample: reliability of estimated level of public employment**

Unlike for Kenya, we lack a consistent and reliable source of administrative data against which to compare the household survey public sector estimates. Comparing the general government estimates from the three surveys against the payroll estimates (see Appendix II) shows a reasonably consistent overestimation of ~30%. Given that the payroll is an incomplete measure

(excludes casual workers, autonomous agencies and some other categories of staff), the household surveys results seem reasonably accurate.

Appendix Table V.15. Number of public sector employees estimated in surveys compared to payroll

# of public sector employees, '000	1993	2000/01	2011/12
Household surveys – public employment	597	433	507
Household surveys – government employment	479	325	442
Payroll	355	257	~340*
Difference	35%	26%	30%

*Estimate

None of the Tanzanian censuses include a sectoral disaggregation of employment, which prevents the kind of comparison of educational attainment across the public sector samples carried out for Kenya. However, some of the census industrial classifications are public sector-oriented, and thus provide a partial way of comparing the datasets. In Appendix Table V.16 I compare the educational attainment of all employees in the educational sector (of which roughly 80% work in the public sector), between the 2011/12 household survey and 2012 census. While the overall employment estimates are relatively similar across datasets, the census estimates a higher share of university graduates and a lower share of diploma or certificate-course completers. This is likely a classification problem, with some diploma holders classified as university-educated in the census; in sum these two educational categories give reasonably consistent estimates across datasets. However, even if we attribute the university deficit in the 2011/12 survey to poor enumeration of the wealthy, this omission is a relatively small number compared to the number of households in the top 10%.

Appendix Table V.16. Educational attainment of employees in the educational sector, 2011/12

Educational attainment	2011/12 HBS	2012 CENSUS
None or some primary	2,008	14,569
Primary (St.7 and above)	44,876	47,347
Secondary (Form IV and above)	147,018	116,665
Post-secondary (incl. diploma courses)	64,111	30,536
University	25,784	53,032
Other / unknown		
Total	283,797	262,149

V.III. Ugandan data sources

Ugandan household surveys, 1992 and 2006

Appendix Table V.17. Details of Ugandan surveys used in analysis

	1992-93 Integrated Household Survey	2005-06 National Household Survey
Coverage	National (all districts)	National
Sample size (households)	9,924	7,426
Sampling frame	Enumeration Area frame	Uganda Population and Housing Census Frame for 2002
Sampling	Stratified two-stage sampling design except in some districts where the sample was selected in three stages due to lack of an Enumeration Area (EA) frame. EA frame based on 1991 census.	Two-stage sampling design; (1) Enumeration Areas (EAs) drawn with Probability Proportional to Size; (2) households drawn using Simple Random Sampling.
Data collection time period	March 1992 – March 1993	2005-06
Data collection	Two stage collection (to avoid seasonality patterns in consumption/income data)	No known.
Produced by	Statistics Department of the Ministry of Planning and Economic Development, with support from United Nations Development Programme and the World Bank.	Uganda Bureau of Statistics (UBOS), Economic Policy Research Centre (Makerere University), Population Secretariat (Ministry of Finance, Planning and Economic Development), World Bank

Construction of variables

Public sector-headed households: designated household head reports working in the public sector (government or parastatal).

- 1992 IHS: Based on main economic activity in last 30 days, variable s6bq2a.
- 2006 NHS: Main employment status in last 7 days, variable h7bq2.

Note that these surveys also include a separate variable giving economic activity in the past 12 months. Using this variable instead would raise the public sector employment estimates by roughly 10%.

Main economic activity of household head:

- 1992 IHS: Based on main economic activity in last 30 days, variable s6bq2a in combination with industry variable s6bq2b, used to separate out agricultural from non-agricultural self-employed.
- 2006 NHS: Based on employment status, variables hh7q2-4 and h7bq2 (for detailed disaggregation of wage employees). Additional variables hh7q5-9 used to disaggregate those not in employment.

Total household consumption/expenditure:

- 1992 IHS: Based on total monthly expenditure, measure constructed by producers of the dataset (xtot) divided by adults (15 and above) in household.
- 2006 NHS: Based on variable ‘welfare’, measure constructed by producers of the dataset (consumption per adult equivalent in real terms). Converted from a per adult equivalent measure to an adult-only basis.

Asset wealth (index constructed based on following variables)

- 1992 HIS: Electricity in home, piped water in home, flush toilet, cooking fuel (gas or electricity); flooring (whether tiles, wood or cement), phone, radio, car, TV, camera, electric iron.
- 2006 NHS: Electricity in home, piped water in home, flush toilet, cooking fuel (gas or electricity); flooring (whether tiles, wood or cement), mobile phone, car, household appliances, other electronic equipment.

Data quality discussion

- **Do the Ugandan household surveys underestimate the wealthy?**

Following the method used in the Kenyan and Tanzanian cases above, Appendix Table V.18 compares educational attainment of respondents in the household budget surveys against the census results. The primary and secondary estimates are reasonably consistent across the 1992 IHS and 1991 census, but the university educated respondents are 25% lower in the latter of the samples (~10,000), suggesting a slight under-sampling of the elite. However, these ‘missing’ university-educated respondents would account for less than 0.3% of households. They thus make very little impact on the top decile measures, but may skew the top percentile measure somewhat.

Appendix Table V.18. Uganda: population estimates by highest level of education achieved (aged 10 and above), household surveys and censuses compared

	1991 census	1992 IHS	2002 census	2005/06 HBS
None or some primary	8,587,745	9,025,808	11,686,730	11,522,577
primary	1,732,616	1,814,201	3,269,150	4,823,500
secondary	561,900	589,089	977,710	1,219,530
postsecondary			358,830	358,103
university	31,860	23,792	132,610	213,081
Unknown	45,136			1,988,651
Total	10,959,257	11,452,890	16,425,030	20,125,442

- **The public sector sample: reliability of estimated level of public employment**

Appendix Table V.19 compares the 1992 and 2005/06 survey estimates of the total size of the public service against the administrative data on Uganda’s civil service. For 2005/06 it is not possible to disaggregate general government employment from the full public sector. With these results suggest that the 2005/06 survey estimates are reasonably consistent with the administrative data while the 1992 estimates are high.

Unfortunately there is no census data or administrative data against which to benchmark the educational attainment of public sector employees in the two household survey samples. Appendix Table V.20 compares the two datasets and shows a sharp rise in the share of tertiary educated public sector employees between 1992 and 2005/06 and a big absolute drop in employees with primary education or less. This is consistent with the descriptions of Uganda's civil sector reform programme over this period, which rationalised the casual 'group employees' in particular. This also helps to explain why there is no decline in the public sector share of the top 10% over this period; not only were salaries rebounding but the educational attainment of the public service was increasing rapidly.

Appendix Table V.19. Number of public sector employees, comparing household survey estimates with administrative data

# of government employees '000	1992	2005/06
Household survey/census	306	299 (incl. parastatals)
Administrative data (civil service)	213 (1993)	239
Difference	43%	25%

Appendix Table V.20. Public sector employees by educational attainment, 1992 and 2005/06

	1992 HIS	%	2005/06 HBS	%
None or some primary	72,586	21%	27,133	9%
primary	119,240	35%	105,822	35%
secondary	69,045	20%	35,499	12%
postsecondary	66,432	20%	93,553	31%
university	13,174	4%	44,217	14%
	340,477		306,224	

Appendix VI. Additional regression tables for Chapter 4

Appendix Table VI.1. Kenya, Tanzania and Uganda: Regression results with educational attainment in district/region of birth

VARIABLES	(K.3) pubemp	(K.4) pubemp	(T.3) pubemp	(T.4) pubemp	(U.3) pubemp	(U.4) pubemp
Age controls	YES	YES	YES	YES	YES	YES
Gender controls	YES	YES	YES	YES	YES	YES
Education controls	NO	YES	NO	YES	NO	YES
Average years of schooling in district/region of birth	0.127*** (0.00241)	-0.111*** (0.00289)	0.541*** (0.0100)	0.0812*** (0.0118)	0.0585*** (0.00474)	-0.200*** (0.00533)
Constant	-7.287*** (0.0999)	-5.544*** (0.134)	-10.05*** (0.176)	-7.064*** (0.271)	-3.904*** (0.131)	-2.773*** (0.159)
Observations	909,186	909,186	870,772	870,772	431,560	431,560
Pseudo R ²	0.0263	0.2351	0.0363	0.2788	0.0127	0.2842

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table VI.2. Kenya: regression tables including ethnic group dummies

VARIABLES	(K.E.1) pubemp	(K.E.2) pubemp	(K.E.3) pubemp
Age & age#age	NO	YES	YES
Sex	NO	YES	YES
Education	NO	YES	YES
Development index (district of birth)			-0.0128*** (0.000454)
Ethnicity (base = Kikuyu)			
Luhya	-0.0909*** (0.0147)	0.301*** (0.0160)	0.131*** (0.0436)
Kalenjin	0.146*** (0.0151)	0.586*** (0.0167)	0.644*** (0.0387)
Luo	0.0313* (0.0162)	0.434*** (0.0179)	0.967*** (0.0402)
Kamba	0.0223 (0.0164)	0.280*** (0.0179)	1.058*** (0.0475)
Somali	-0.891*** (0.0352)	0.680*** (0.0393)	0.137*** (0.0170)
Kisii	-0.0194 (0.0195)	0.179*** (0.0211)	0.389*** (0.0181)
Mijikenda	-0.189*** (0.0255)	0.647*** (0.0282)	0.256*** (0.0190)
Meru	-0.175*** (0.0212)	0.231*** (0.0233)	0.176*** (0.0183)
Turkana	-1.357*** (0.0584)	0.417*** (0.0623)	0.00562 (0.0459)
Embu	0.0879*** (0.0310)	0.274*** (0.0340)	0.0822*** (0.0214)
Mixed	0.261*** (0.0191)	0.160*** (0.0211)	0.336*** (0.0302)
Other	-0.130*** (0.0279)	0.549*** (0.0311)	0.0472* (0.0242)
Constant	-2.687*** (0.00921)	-6.510*** (0.133)	-5.841*** (0.135)
Observations	909,186	909,186	909,186
Pseudo R ²	0.0060	0.2359	0.2378

Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Appendix Table VI.3. Uganda: regression tables including ethnic group dummies

	(U.E.1)	(U.E.2)	(U.E.3)	(U.E.4)	(U.E.5)	(U.E.6)
VARIABLES	pubemp	pubemp	pubemp	pubemp	pubemp	pubemp, excl. teachers
Age & age#age	NO	YES	YES	YES	YES	YES
Sex	NO	YES	YES	YES	YES	YES
Education	NO	YES	YES	YES	YES	YES
Development index			-0.0102*** (0.000668)	-0.0095*** (0.000671)	-0.0066*** (0.000713)	0.004*** (0.00090)
Conflict affected (1 = >100 conflict deaths; 0 <100 conflict deaths)				0.263*** (0.0231)	0.0188 (0.0335)	
Migrant (1 = district migrant, 0 = non- migrant)					0.323*** (0.0203)	0.912*** (0.0235)
Ethnic minority (1 = minority, 0 = majority)					-0.0578* (0.0347)	0.116** (0.0477)
Migrant#minority interaction					-0.115 (0.0789)	-0.276*** (0.0549)
Ethnicity (base = Baganda)						
Banyankole	-0.0411* (0.0225)	0.410*** (0.0260)	0.250*** (0.0279)	0.260*** (0.0279)	0.284*** (0.0296)	0.524*** (0.0397)
Basoga	-0.117*** (0.0244)	0.430*** (0.0278)	0.284*** (0.0292)	0.295*** (0.0293)	0.335*** (0.0307)	0.450*** (0.0417)
Bakiga	-0.351*** (0.0273)	0.417*** (0.0315)	0.246*** (0.0333)	0.253*** (0.0334)	0.217*** (0.0375)	0.301*** (0.0518)
Langi	-0.0692*** (0.0265)	0.591*** (0.0307)	0.397*** (0.0330)	0.156*** (0.0393)	0.474*** (0.0466)	0.793*** (0.0478)
Iteso	0.556*** (0.0239)	1.139*** (0.0287)	0.965*** (0.0307)	0.849*** (0.0325)	1.140*** (0.0408)	1.508*** (0.0440)
Bagisu	-0.0879*** (0.0298)	0.380*** (0.0341)	0.227*** (0.0355)	0.237*** (0.0355)	0.276*** (0.0369)	0.490*** (0.0512)
Acholi	0.238*** (0.0280)	0.913*** (0.0329)	0.744*** (0.0346)	0.516*** (0.0401)	0.756*** (0.0478)	1.162*** (0.0474)
Lugbara	0.0756** (0.0307)	0.763*** (0.0360)	0.570*** (0.0380)	0.364*** (0.0423)	0.625*** (0.0486)	0.889*** (0.0547)
Banyoro	0.0480 (0.0356)	0.359*** (0.0408)	0.202*** (0.0420)	0.151*** (0.0424)	0.229*** (0.0487)	0.579*** (0.0647)
Batoro	-0.188*** (0.0403)	0.186*** (0.0462)	0.0449 (0.0471)	-0.0939* (0.0488)	0.0702 (0.0523)	0.539*** (0.0609)
Bakhonzo	0.0130 (0.0384)	0.853*** (0.0450)	0.695*** (0.0462)	0.457*** (0.0507)	0.837*** (0.0594)	1.281*** (0.0649)
Other	-0.136*** (0.0186)	0.644*** (0.0216)	0.475*** (0.0241)	0.434*** (0.0244)	0.376*** (0.0474)	0.586*** (0.0579)
Constant	-2.471*** (0.0135)	-4.267*** (0.158)	-4.032*** (0.158)	-4.054*** (0.158)	-4.081*** (0.183)	-6.140*** (0.246)
Observations	431,560	431,560	431,560	431,560	328,721	318,070
Pseudo R ²	0.0053	0.2868	0.2927	0.2884	0.2976	0.2128

Appendix Table VI.4. Kenya and Uganda: regression results measuring presidential favouritism

VARIABLES	(K.E.7) pubemp	(U.E.7) pubemp
Sex	YES	YES
Education	YES	YES
Development index	YES	YES
Ethnicity	YES	YES
Dummies for age cohorts corresponding to each past president	YES	YES
Kalenjin#Moi era match dummy	0.102*** (0.0312)	
Kikuyu#Kibaki era match dummy	-0.215*** (0.0260)	
Langi#Obote era match dummy		0.0829 (0.0766)
Banyankole#Museveni match dummy		0.0504 (0.0521)
Constant	-3.485*** (0.0343)	-3.997*** (0.0325)
Observations	864,437	437,503
Pseudo R ²	0.2348	0.2917

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table VI.5. Uganda and Kenya: Probability of being in the top wealth decile, conditional on ethnicity

VARIABLES	(K.E.8)	(K.E.9)	VARIABLES	(U.E.8)	(U.E.9)
	top 10%	top 10%		top 10%	top 10%
Age controls	YES	YES	Age controls	YES	YES
Education controls	YES	YES	Education controls	YES	YES
Urban/rural	YES	YES	Urban/rural	YES	YES
District of residence controls	YES	YES	District of residence controls	YES	YES
Ethnicity (base = Kikuyu, Kenyatta & Kibaki)			Ethnicity (base = Baganda)		
Luhya	-0.174*** (0.0659)	-0.429*** (0.115)	Banyankole (Museveni)	-0.0572 (0.0996)	0.290* (0.173)
Kalenjin (Moi)	-0.0278 (0.0693)	0.0292 (0.144)	Basoga	-0.0847 (0.110)	0.254 (0.194)
Luo	-0.116* (0.0701)	-0.188 (0.119)	Bakiga	-0.150 (0.127)	0.568** (0.268)
Kamba	-0.347*** (0.0711)	-0.350*** (0.115)	Langi (Obote)	0.465*** (0.149)	0.589** (0.280)
Somali	0.334** (0.158)	0.526* (0.286)	Iteso	0.0588 (0.109)	0.316 (0.208)
Kisii	-0.175** (0.0826)	-0.385*** (0.138)	Bagisu	-0.232* (0.136)	0.449 (0.280)
Mijikenda	-0.559*** (0.116)	-0.214 (0.311)	Acholi	0.264* (0.137)	0.592** (0.287)
Meru	0.150 (0.102)	0.334 (0.214)	Lugbara	0.253 (0.176)	0.376 (0.315)
Turkana	-0.153 (0.322)	-0.0832 (0.804)	Banyoro	-0.0320 (0.155)	1.173*** (0.420)
Embu	-0.215 (0.133)	-0.365 (0.258)	Batoro	0.179 (0.193)	0.128 (0.305)
Mixed	0.425*** (0.0714)	0.536*** (0.129)	Bakhonzo	-0.219 (0.181)	-0.333 (0.393)
Other	-0.122 (0.122)	-0.646** (0.264)	Other	-0.0302 (0.0817)	0.302** (0.144)
Constant	-4.284*** (0.151)	-2.727*** (0.291)	Constant	-4.108*** (0.613)	-0.612** (0.281)
Observations	31,148	4,651	Observations	19,618	3,096
Pseudo R ²	0.3059	0.1884	Pseudo R ²	0.4194	0.1177

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table VI.6. Uganda: Parental educational attainment and the probability of being publically employed

	U.S.1	U.S.2	U.S.3	U.S.4
	1992	1992	2005/06	2005/06
VARIABLES	Prob of govt employment	Prob of govt employment	Prob of govt employment	Prob of govt employment
Age	YES	YES	YES	YES
Sex	YES	YES	YES	YES
Respondent's education	YES	YES	YES	YES
Father's education (base = none or some primary)				
Primary	-0.128 (0.156)		-0.180 (0.211)	
Secondary	-0.279 (0.238)		-0.434* (0.235)	
Post-secondary	0.314 (0.515)		N/A	
University	-0.715 (0.584)		-0.732* (0.410)	
Mother's education (base = none or some primary)				
Primary		-0.116 (0.226)		-0.275 (0.227)
Secondary		-0.554 (0.407)		-0.622** (0.305)
Post-secondary		2.553** (1.056)		N/A
University		-2.522** (1.151)		0.100 (1.112)
Constant	-5.853*** (0.395)	-5.837*** (0.388)	-7.301*** (1.083)	-7.007*** (0.826)
Observations	11,742	11,857	6,842	7,500
Pseudo R ²	0.3374	0.3357	0.4574	0.4466

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix Table VI.7. Kenya and Tanzania: Parental educational attainment and the probability of being publically employed

VARIABLES	K.S.1	T.S.1
	Probability of public employment Kenya	Probability of public employment Tanzania
Age	0.226*** (0.0655)	0.174** (0.0748)
age#age	-0.00228*** (0.000788)	-0.00134 (0.000907)
Sex (base = male)	0.0248 (0.110)	0.543*** (0.118)
Respondent's education (base = none or some primary)		
Primary	0.818*** (0.170)	2.342*** (0.212)
Secondary	2.420*** (0.152)	4.384*** (0.227)
College	3.991*** (0.160)	4.196*** (0.359)
University	3.801*** (0.196)	4.832*** (0.352)
Mother's education (base = none or some primary)		
Primary	-0.429*** (0.165)	0.495** (0.224)
Secondary	-0.928*** (0.279)	0.192 (1.278)
College	-0.611* (0.353)	OMITTED
University	-1.332* (0.788)	0.763 (0.669)
Constant	-9.344*** (1.334)	-9.875*** (1.548)
Observations	8,180	17,665

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Appendix Table VI.8. Regression results: Probability of being in the top 10%/1% of asset wealthy households

VARIABLES	Kenya 2009		Tanzania 2002		Uganda 2002	
	Top 10%	Top 1%	Top 10%	Top 1%	Top 10%	Top 1%
Public sector-headed household (base = other)						
Public sector headed	1.497*** (0.101)	1.864*** (0.460)	1.217*** (0.131)	2.089*** (0.414)	1.349*** (0.0605)	1.246*** (0.268)
Public sector-education interaction (base = none)						
pubemp#primary	-0.545*** (0.115)	-0.995* (0.557)	-0.304** (0.138)	-1.123** (0.463)	-0.476*** (0.0786)	-0.719** (0.325)
pubemp#secondary	-0.755*** (0.104)	-1.711*** (0.468)	-0.732*** (0.140)	-1.936*** (0.460)	-0.934*** (0.0723)	-0.777*** (0.282)
pubemp#college	-1.498*** (0.106)	-2.260*** (0.468)	-0.841*** (0.190)	-0.277 (0.765)	-1.568*** (0.0731)	-1.522*** (0.283)
pubemp#university	-1.692*** (0.112)	-2.311*** (0.464)	-1.084*** (0.230)	-2.483*** (0.690)	-1.268*** (0.0982)	-1.381*** (0.277)
Education and age controls	YES	YES	YES	YES	YES	YES
urban/rural control	YES	YES	YES	YES	YES	YES
Regional controls	YES	YES	YES	YES	YES	YES
Constant	-6.733*** (0.228)	-14.77*** (1.142)	-6.901*** (0.310)	-10.02*** (1.647)	-3.815*** (0.0823)	-11.48*** (0.377)
Observations	373,206	373,206	446,860	446,860	303,278	303,278
Pseudo R-squared	0.3817	0.4312	0.3924	0.1733	0.4023	0.4608

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Appendix VII. Construction of variables used in Chapter 4

Public employment

The public employment variable is constructed from the IPUMS sector of employment variable for Kenya, and industry and occupational variables for Uganda, as per the table below.

Appendix Table VII.1. Construction of public employment variable

	Kenya	Uganda	Tanzania
IPUMS VARIABLE	KE2009A_EMPSECT	UG2002A_IND & UG2002A_OCC	TZ02A_IND
Pubemp (Y = 1)	Central government Local authorities Teachers service commission State-owned enterprises	Public service Education Health Defence and related	Public administration and education
Not in pubemp (Y = 0)	All other sectors of employment	All other industries of employment	
Other inclusion/exclusion criteria	Kenyan born, 25-55	Ugandan born, 25-55	Tanzanian citizen, only from and working in mainland, 25-55 Excluded respondents not classified as employees and wage/salary worker

The table below shows which categories from the industrial and occupational classifications have been included in the Ugandan public sector variable. In sum these four sub-categories make up the public sector employment variable.

Appendix Table VII.2. Uganda: detailed definition of public employment variable

	Industrial classification	Occupational classification
	UG2002A_IND	UG2002A_OCC
Public service	Public service <i>(excluding any observations already covered in edu, health or security below)</i>	<i>If not included in public service, these occupations added:</i> Legislators Senior government officials Traditional chiefs
Teachers		teachers college, uni teachers secondary teachers training institutes teachers woodworking teaching professional primary teachers only post-primary teaching pre-primary teaching special ed. Teaching teaching associates teaching experienced personal care workers

Health workers		nursing and midwifery other health professional medical doctors veterinary doctors nurses and midwives medical assistants dental assistants life science experienced
Security and defence	Defence and related activities	Policemen Soldiers
'Private'	Residual, all other industries or occupations of employment	

Education

Educational attainment is classified somewhat differently in the different datasets. The following categories were created, drawing from the national classifications as described in the table below.

Appendix Table VII.3. Construction of educational attainment variable

	Kenya (2009 census)	Tanzania (2002 census)	Uganda (2002 census)
VARIABLE NAME	educke	edattand	educug
None or some primary	None Standard 1-6	No schooling Standard 1-6	None Standard 1-6
Primary	Standard 7-8 and Form 1-3	Primary 7, courses after primary, Secondary grade 1-3	Primary 7, technical grade 1-3, Secondary grade 1-3
Secondary	Form 4-6	Secondary grade 4-6	Secondary grade 4-6, vocational incomplete
College	College	Courses after secondary	Vocational certificate Vocational diploma
University	University, undergrad University, Masters or PhD	University complete	University, no degree Incomplete university Completed university

	Tanzania (2000 LFS)	Uganda (2006 NHS)
VARIABLE NAME	Educa + typtrain	h4q2 + h4q4
None or some primary	No schooling Primary up to std. 6	No schooling (h4q2) p.1 – p.6
Primary	Primary std.7 - 8 Secondary Form 1-3	p.7 – s.3 post-primary specialized training
Secondary	Secondary Form 4-6 (excl. those with diplomas or certificates)	s.4 – s.6
College	Secondary Form 4-6 + certificate (2yrs +) or diploma (2yrs +)	Post-secondary specialized training
University	University degree 1 or degree 2	Completed degree and above

District development index

This index is constructed from the following variables, calculated on a district or regional basis. Factor analysis is then used to determine the weight for each variable. The predicted level for each district or region is then normalized to produce an index from 0 to 1.

Appendix Table VII.4. Construction of district development index

Indicator	Notes
Distance to capital city (county basis) (km)	Distance from capital to main town/city in district/region. In Kenya calculated on a county basis. (from http://distancecalculator.globefeed.com)
Population density (people per km ²) (log)	District/region size taken from national statistical sources.
% of households with electricity	Calculated from censuses
% labour force in private wage employment	Calculated from censuses In Kenya the private employment (incl. NGOs and faith-based organisations) variable is used (from KE09A_EMPSECT). In Uganda, this is calculated by subtracting 'public sector employees' and agricultural sector from total wage employees.

Asset wealth index

This index is constructed from the following categorical variables, calculated on a household basis. Factor analysis is used to determine the weight for each variable. I then impute predicted asset wealth score for each household based on these weights. This score is then normalized to produce an index from 0 to 100.

Household 'wealth' measures included in index:

- Motor vehicle (Kenya and Uganda only)
- Television (Kenya and Uganda only)
- Refrigerator (Kenya only)
- Computer (Kenya only)
- Landline telephone (Uganda and Tanzania only)
- Electricity in the home
- Piped water in the home
- Flush toilet in the home
- Cooking fuel (whether gas or electricity)
- Flooring (whether tiles, wood or cement)

Administrative Divisions of Uganda

The Ugandan district level variables use the 2002 district divisions, as given by unharmonized district division in the 2002 census (56 districts, including Kampala). This is the greatest level of geographic granularity that the 2002 microdata set will allow. Uganda's government has continued to subdivide the country into smaller districts. In 1960 the country had 16 districts; by 1992 this had risen to 38, and by 2002 to 56. As of 2016 the country had 111 districts and one city (Kampala).

Administrative Divisions of Tanzania

The Tanzanian regional variables use the 2002 regional divisions, as given by the census. Only the mainland is considered, thus all the Zanzibari regions are removed from all the calculations leaving 21 regions. Since 2002 the number of regions in the mainland has increased to 25.

Administrative Divisions of Kenya

As discussed in Appendix III, prior to the 2013 constitution, Kenya was divided into 8 provinces, which were further subdivided into districts. Under President Moi and President Kibaki the number of districts in Kenya proliferated, and as a result the censuses contain an increasing number of districts (69 in 1999, 158 in 2009). However, a High Court ruling in 2009 deemed 210 of the then existing 256 districts illegal, and reverted the administrative structure back to the 46 districts and Nairobi as set out in the Districts and Provinces Act of 1992. When the 2010 Constitution came into effect in 2013, these districts were converted into 47 counties, which form the basis for the devolution envisaged under the new constitution. The 2009 districts (as listed in the census) map cleanly onto the present-day counties, and thus where necessary, the census divisions have been recoded to match the current county divisions.

Some data is thus calculated on a county basis (see 'district development index' above). Where I use indicators constructed from within the dataset itself (e.g., years of schooling or access to electricity), the 2009 district divisions are used in order to maximize the number of units of analysis.

Kenyan ethnic dummies

Ethnicity and place of birth are strongly correlated, as the original district divisions were shaped by the location of ethnic areas. Tobin using 1989 census data, estimates that the mean share of the main ethnic group at district level is 73%, rising to 80% at division level and 89% at sub-location level.⁴⁶⁹

⁴⁶⁹ Lara Tobin, "Essais Sur L'urbanisation En Afrique Subsaharienne" (Paris School of Economics, 2015), 95.

The 2009 census collected data on ethnic identity, with respondents self-reporting their ethnic identity. While ethnic data was not released as part of the microdata sample, the socio-economic atlas of Kenya reports ethnic shares by county drawing from the 2009 census.⁴⁷⁰

Respondents are coded as belonging to the dominant ethnic group in their county of birth, where the ethnic group share in that county exceeds 50%. All respondents in counties where no ethnic group exceeds 50% of the population are coded as ‘mixed’, or excluded from the analysis. These respondents are primarily born in Nairobi or Mombasa and are therefore a somewhat anomalous group. Only the ten largest ethnicities are included and all smaller groups are classified as ‘Other’.

Appendix Table VII.5. Kenya: Ethnic group share by county of birth (based on Wiesmann, Kiteme and Mwangi, 2014)

County	Largest ethnic group	Share of largest ethnic group in county population	People born in county, ethnic classification for regression analysis
Nairobi	Kikuyu	29%	Mixed
Mombasa	Mijikenda	30%	Mixed
Kwale	Mijikenda	83%	Mijikenda
Kilifi	Mijikenda	86%	Mijikenda
Tana River	Pokomo	28%	Mixed
Lamu	Swahili	30%	Mixed
Taita Taveta	Taita	63%	Taita
Garissa	Somali	80%	Somali
Wajir	Somali	99%	Somali
Mandera	Somali	100%	Somali
Marsabit	Gabra	28%	Mixed
Isiolo	Borana	37%	Mixed
Meru	Meru	92%	Meru
Tharaka Nithi	Meru	66%	Meru
Embu	Embu	50%	Embu
Kitui	Kamba	97%	Kamba
Machakos	Kamba	91%	Kamba
Makueni	Kamba	98%	Kamba
Nyandarua	Kikuyu	96%	Kikuyu
Nyeri	Kikuyu	94%	Kikuyu
Kirinyaga	Kikuyu	95%	Kikuyu
Murang'a	Kikuyu	91%	Kikuyu
Kiambu	Kikuyu	81%	Kikuyu
Turkana	Turkana	94%	Turkana
West Pokot	Kalenjin	95%	Kalenjin
Samburu	Samburu	79%	Other

⁴⁷⁰ U. Wiesmann, Kiteme, and Mwangi, “Socio-Economic Atlas of Kenya: Depicting the National Population Census by County and Sub-Location.” Data is also republished by Dominic Burbidge, “Democracy versus Diversity: Ethnic Representation in a Devolved Kenya” (unpublished, 2015).

Tranz Nzoia	Luhya	52%	Luhya
Uasin Gishu	Kalenjin	58%	Kalenjin
Elgeyo Marakwet	Kalenjin	93%	Kalenjin
Nandi	Kalenjin	77%	Kalenjin
Baringo	Kalenjin	92%	Kalenjin
Laikipia	Kikuyu	63%	Kikuyu
Nakuru	Kikuyu	52%	Kikuyu
Narok	Maasai	51%	Other
Kajiado	Kalenjin	41%	Mixed
Kericho	Kalenjin	88%	Kalenjin
Bomet	Kalenjin	96%	Kalenjin
Kakamega	Luhya	94%	Luhya
Vihiga	Luhya	92%	Luhya
Bungoma	Luhya	83%	Luhya
Busia	Luhya	57%	Luhya
Siaya	Luo	95%	Luo
Kisumu	Luo	89%	Luo
Homa Bay	Luo	88%	Luo
Migori	Luo	60%	Luo
Kisii	Kisii	97%	Kisii
Nyamira	Kisii	97%	Kisii

Appendix VIII. Migration (supplement to Chapter 4)

One point to consider is whether the public sector share of employment is artificially inflated by migration – i.e., if those with skills but lacking the political connections to obtain jobs domestically chose to migrate abroad instead (thereby biasing the ethnic or region of birth composition of the domestic sample). Brain drain did likely matter for particular types of professionals and particular ethnic groups (particularly those of Asian or European descent), but for Africans it does not appear to have made a major dent on the overall stock of graduates in country. The data below lists the number of migrants by main destination outside of Africa from Kenya and Uganda. In total roughly 320,000 Kenyan-born, 92,000 Tanzanian-born and 109,000 Ugandan-born people today reside in North America, Europe and Australia. Migration to other non-African countries appears to have been small.

Appendix Table VIII.1. Emigrants from Kenya, Tanzania and Uganda in main non-African destination countries (2013) (thousands)

Origin	UK*	US	Canada	Australia	Rest of Europe	Total
Kenya	136	113	27	16	27	319
Tanzania	35	19	23	4	11	92
Uganda	64	19	13	3	10	109

Sources:

Excl. UK: Migration Policy Institute, 'Maps of Immigrants and Emigrants Around the World,' *Data Hub*, 2013, <http://migrationpolicy.org/programs/data-hub>.

UK (2011): Office of National Statistics, 'Table 1.3: Overseas-born population in the United Kingdom, excluding some residents in communal establishments, by sex, by country, Jan-Dec 2011', <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/datasets/populationoftheunitedkingdombycountryofbirthandnationality>

For the US and UK migrants, detailed data from the UK and US censuses, made available by the Minnesota Population Center and the UK allows a closer look at the composition of these migrant populations.⁴⁷¹ Available samples are small and subject to considerable sampling error, but may nonetheless give a rough indication of patterns. For East African migrants in the US in 2010, 61% of Tanzanian, 63% of Ugandan and 79% of Kenyan migrants were of African background ('black'); of these only about half arrived in adulthood (and thus likely to have been educated in East Africa);⁴⁷² and fewer still were secondary or tertiary educated. Our population of interest, ethnically African, university educated and migrating in adulthood,⁴⁷³ there are roughly 9,000 from Kenya, 3,200 from Tanzania and 2,600 from Uganda. A similar exercise for the UK suggests that there are roughly 5,600 Kenyan-born, 2000 Tanzanian-born and 2,700 Ugandan-born university graduates of African descent in the UK in 2011.⁴⁷⁴

⁴⁷¹ USA CENSUS 2010; UK CENSUS 2011.

⁴⁷² As the UK only gives year of arrival in decade-long intervals, this exercise can only be done roughly, and errs on the side of caution.

⁴⁷³ I also exclude those currently in education, and limit the sample to those arriving before 2009 in Kenya and 2002 in Uganda, in line with the university stock measures from the corresponding EA censuses.

⁴⁷⁴ Census microdata complemented with data from: UK Office of National Statistics, "LC2804EW - Country of Birth by Year of Arrival in the UK (Computer File)," *Nomis*, 2015,

A back of the envelope calculation, assuming a similar migrant composition in Canada, Australia and the rest of Europe, suggests that in the order of 19,000 Kenyans, 9,000 Tanzanians and 7,000 Ugandans fitting the criteria above left the continent between the 1960s and early-mid 2000s. This is around 5.4% of the Kenyan, 3.2% of Tanzanian and 5% of Ugandan university educated populations (in 2009, 2012 and 2002 respectively). Note that these are probably over-estimates as it is not possible to say with precision whether the respondent was educated in East Africa or in their new country of residence.

In the Ugandan case there was also considerable migration to Kenya, which represented by far the biggest recipient of Ugandan emigrants.⁴⁷⁵ Using the Kenyan 1999 census, the closest in time to the 2002 Ugandan census, I follow the same process of exclusion to estimate the number of Ugandan graduates in Kenya.⁴⁷⁶ This exercise suggests a stock of roughly 1,600 Ugandans with university education (not currently studying) living in Kenya in 1999, or roughly 1% of the Ugandan university stock. It was not possible however, to identify which of these arrived in adulthood; some of these migrants are likely to have arrived in childhood and received their education in Kenya.

A 2003 Ugandan tracer survey of 500 graduates from Makerere (graduating between 1980 and 1999), found a somewhat higher rate of migration, with 10% of their sample residing abroad at the time the tracer survey was conducted, although it only captured students from the most prestigious of Uganda's tertiary institutions. Among a similar sized sample of secondary school graduates, 1% had migrated.⁴⁷⁷

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