

ETHNIC (IN)EQUALITY IN THE PUBLIC SERVICES OF KENYA AND UGANDA

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ABSTRACT

The unfair distribution of public sector jobs is a common grievance in many societies, but arguably more so in ethnically polarized ones. Using census data from Kenya and Uganda, two countries with a history of ethnic conflict, this paper examines how public employment is allocated in multi-ethnic societies by studying the correlates of holding public sector jobs. The results demonstrate that the public services of Kenya and Uganda are first and foremost educational elites with considerably higher average levels of educational attainment than across the labour forces at large. However, when education is controlled for, high-skilled women and candidates from less developed districts are more likely to work for the state than others. As a result, public sector jobs are more equitably distributed along gender, regional and ethnic lines than education alone would predict. I hypothesise that formal policies to promote regional equity in the provision of basic services in combination with affirmative action measures are contributing to creating comparatively inclusive public services.

HOW PUBLIC SECTOR JOBS ARE DISTRIBUTED is a contentious issue around the world, but perhaps particularly so in poor and socially fragmented societies. Whether on an ethnic, regional or socioeconomic basis, many believe that politicians will favour their own, by distributing public resources, such as public sector jobs, to their core constituencies.¹ Academic literature has formalized such ideas by demonstrating when and why it is politically rational for leaders to use public resources to reward voters or appease opponents, rather than deliver broad-based public services.²

These tendencies are thought to be particularly pronounced in ethnically polarized countries such as Kenya and Uganda. Voting in Kenyan elections is influenced by ethnicity, with candidates drawing their core support from their own ethnic communities. The disputed Kenyan 2007 election sparked an outbreak of ethnic violence that resulted in over a thousand deaths. Similarly, Uganda's history of conflict over the past half-century is often analysed

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¹ The 2014/15 Afrobarometer opinion poll found that 50% of Ugandans and 58% of Kenyans felt that their ethnic group was sometimes, often or always treated unfairly by the government: Afrobarometer, Round 6, 2014/15, <<http://www.afrobarometer.org/>> (29 August 2017); Carlson has used experimental methods in Uganda to show that voters expect members of their own ethnic groups to deliver more services to their communities: Elizabeth Carlson, 'Ethnic voting and accountability in Africa: A choice experiment in Uganda,' *World Politics* 67, 2 (2015), pp. 353–85.

² Philip Keefer and Stuti Khemani, 'Democracy, public expenditures, and the poor: Understanding political incentives for providing public services,' *The World Bank Research Observer* 20, 1 (2005), pp. 1–27; Mwangi S. Kimenyi, 'Ethnicity, governance and the provision of public goods,' *Journal of African Economies* 15, 1 (2006), pp. 62–99; Allen Hicken, 'Clientelism,' *Annual Review of Political Science* 14, 1 (2011), pp. 289–310; James A. Robinson and Thierry Verdier, 'The political economy of clientelism,' *The Scandinavian Journal of Economics* 115, 2 (2013), pp. 260–91.

through an ethno-regional prism.³ Leaders and policymakers in both countries have themselves linked such conflicts to unequal access to resources, and in their aftermath they have sometimes sought to address these grievances head-on. Kenya's 2010 constitution, written in the wake of the 2007/08 crisis, stipulates that the public service should be a 'representation of Kenya's diverse communities' and ensure equal opportunities to members of all ethnic groups.⁴ A 2016 diversity policy for the Kenyan public service recommended the use of affirmative action to ensure adequate representation of marginalised groups.⁵ Following the end of the Ugandan bush war the government began to use regional quotas in the army and police to address accusations of ethnic capture.⁶

But how accurate are the perceptions of public employment inequalities that fuel these grievances in the first place? Findings in behavioural economics have demonstrated that human beings are poor at making statistical inferences from casually observed patterns.⁷ Moreover, individual perceptions of employment inequalities are likely to be shaped by the distribution of jobs in a person's local community, which may not mirror the distribution at the national level. Reporting in the media and by politicians sometimes sensationalise statistical evidence by citing ethnic group shares in public sector employment without normalizing by population, labour force participation or educational attainment.⁸ Empirical academic studies on the topic are few and limited in scope. The existing academic papers about Kenya and Uganda have examined ethnic shares among a small number of senior offices, such as permanent secretaries,⁹ cabinet ministers¹⁰ and the army corps.¹¹ But such elite cadres may well differ in their ethnic composition from the public service rank and file.

This paper in contrast uses census microdata to study the features of the public sector labour forces of Kenya and Uganda in aggregate. While senior posts may shed important light on political alliances and settlements, the distribution of public sector jobs in total provides insight into how state resources are shared across the broader population. Unlike surveys that examine public servants in isolation, these datasets also allow us to examine the characteristics of public servants in relation to the populations from which they are drawn. This sheds light not only on the nature of inequalities in public employment, but also on the mechanisms that drive them.

³ Stefan Lindemann, 'Exclusionary elite bargains and civil war onset: The case of Uganda' (Crisis States Working Papers Series, London School of Economics, 2010).

⁴ Republic of Kenya, *Constitution of Kenya* (2010), Article 232.

⁵ Republic of Kenya. Public Service Commission, 'Diversity policy for the public service' (Republic of Kenya, Nairobi, 2016)

⁶ Apolo Robin Nsibambi, *National integration in Uganda 1962-2013* (Fountain Publishers, Kampala, 2014), p. 223.

⁷ Daniel Kahneman, *Thinking, fast and slow* (Farrar, Straus and Giroux, New York, 2011).

⁸ For instance: Samwel Born Maina, 'Three tribes take up half of all public sector jobs,' *Daily Nation*, 22 February 2014, <<http://mobile.nation.co.ke/news/Public-Service-Commission-Report-Tribes-Jobs/1950946-2218064-format-xhtml-iav0ek/index.html>> (6 October 2017); *Business Daily*, 'How ethnic groups have colonized the civil service,' (17 December 2015) <<http://www.businessdailyafrica.com/How-ethnic-groups-have-colonised-the-Civil-Service/-/539546/2999416/-/5tk6ox/-/index.html>> (6 October 2017).

⁹ Yusuf Bangura, 'Ethnic inequalities in the public sector: A comparative analysis,' *Development and Change* 37, 2 (2006), pp. 299–328.

¹⁰ Patrick Francois, Ilia Rainer, and Francesco Trebbi, 'How is power shared in Africa?,' *Econometrica* 83, 2 (2015), pp. 465–503.

¹¹ Lindemann, 'Exclusionary elite bargains'.

The paper finds that inequalities in access to public employment in Kenya and Uganda are less pronounced than what much of the secondary literature might have us believe. In both countries educational attainment sharply increases the probability of working for the state. Graduates from colleges and universities have historically, if less so today, faced little competition for public sector jobs. Among the highly educated, moreover, women and candidates from less developed parts of their respective country are more likely to work for the government than others. This has the effect of making the public service more socially, regionally and ethnically equitable than educational attainment alone would predict. Consequently, ethnic inequalities in public sector job access are not enormous. With one exception, the presidency of Daniel Arap Moi in Kenya, there is little evidence of an employment advantage for coethnics of past or current presidents. It follows that the number of people that would stand to benefit from a more ethnically or regionally equitable distribution of jobs is relatively small.

The paper is organised as follows. It first reviews the theoretical literature about public resource distribution in Africa. It then provides a brief sketch of the history of public sector employment and human resource institutions in the two countries. This is followed by an analysis of census data from the 2000s, which is used to examine educational, gender, ethnic and regional inequalities in job access in Kenya and Uganda. The last section concludes by relating these empirical findings to the theoretical predictions.

Theories of public employment and inequality in Africa

Various theories have been put forward to explain how governments in Africa distribute public sector job and the inequalities that this generates. Literature from the early independence period framed the debate in class terms, asking whether high-earning public sector employees formed a nascent, exploitative class.¹² Some assumed that the institutional structures in postcolonial states would be shaped to suit the interests of its incumbents. Public servants would establish educational barriers to job access that limited entry to those with high educational attainment, ensuring that public services were staffed by the children of the existing educational elite. To the extent that wealth and educational attainment was unevenly distributed during the colonial era, this class-based structure would exacerbate existing structural inequalities between regions and ethnic groups.¹³

In more recent decades researchers have moved away from a class-based lens and instead characterised African bureaucracies as clientelist or patronage-based. This literature describes public employment as an instrument, controlled by politicians, that can be used to buy the support of politically influential individuals or groups. Kitschelt and Wilkinson and Hicken define clientelism as a ‘contingent exchange’, where a client is rewarded with a public sector job or other benefit in exchange for delivering votes or other forms of political

¹² Frantz Fanon, *The wretched of the earth* (Grove Weidenfeld, New York, 1963); P.C. Lloyd, *The new elite of tropical Africa* (International Africa Institute, Oxford, 1966); Issa G. Shivji, *Class struggles in Tanzania* (Heinemann, London, 1976).

¹³ For a discussion of the Kenyan case see: Donald Rothchild, ‘Ethnic inequalities in Kenya,’ *The Journal of Modern African Studies* 7, 4 (1969), pp. 689–711.

support.¹⁴ If the client does not deliver the requisite support, the patron can withdraw the job.¹⁵ Clientelism in Africa is thought to be organised along ethnic lines, as ethnicity provides the trust and social sanctioning mechanisms that enable the exchange.¹⁶ Ethnic leaders will use state resources to reward trusted members of their own ethnic groups who will in turn share resources with coethnics further down the chain, creating cascading, ethnically-based patron-client networks.¹⁷ Clientelism is expected to lead to a public service staffed by people ill-suited for their official responsibilities and skewed towards politically-influential individuals or groups, be it ethnic or otherwise.

A related literature considers ethnic favouritism. Although this literature often employs the term patronage, many use the concept in a loose sense to describe the targeting of state resources towards favoured ethnic, religious or regional groups, but without necessarily requiring that the patron targets specific individuals, monitors compliance or sanctions misbehaviour. Ethnic favouritism need therefore not be antithetical to merit. A politician may favour an ethnic group by placing schools, roads or factories in its geographic locality, but the benefits of said resource may be competitively allocated among all residents.¹⁸

In this vein, several recent papers have examined whether coethnics of past or present presidents in Africa have received a disproportionate share of public goods and services, be it education, health care or roads, and many find that indeed they do.¹⁹ The Kenyan government has even conducted 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 public sector institutions to determine whether jobs are distributed fairly.²⁰ It similarly found that the ethnic groups of past or present presidents are overrepresented relative to their population share, although because it used statistics from the public service, it lacked the broader population data against which to carefully normalize these ethnic shares.

In contrast to the expectation that leaders will reward their own supporters, others have suggested that precisely because of the explosive nature of ethnic and regional inequalities, multi-ethnic societies sometimes go to greater lengths than others to promote horizontal equity in access to state resources. Azam has 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-

¹⁴ Herbert Kitschelt and Steven I. Wilkinson, 'Citizen-politician linkages: An introduction,' in Herbert Kitschelt and Steven I. Wilkinson (eds), *Patrons, clients, and policies: Patterns of democratic accountability and political competition* (Cambridge University Press, Cambridge, 2007); Hicken, 'Clientelism'.

¹⁵ Robinson and Verdier, 'The political economy of clientelism'.

¹⁶ Ibid; Kimenyi, 'Ethnicity'.

¹⁷ For pyramidal structure of clientelism: Mushtaq H. Khan, 'Markets, states and democracy: Patron-client networks and the case for democracy in developing countries,' *Democratization*, 12, 5 (2005), pp. 704-724.

¹⁸ For this distinction between clientelism and club goods, see: Hicken, 'Clientelism,' Figure 1.

¹⁹ 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, 2 (2012), pp. 294-325; Burgess, Robin, Edward Miguel, Remi Jedwab, and Ameet Morjaria, 'The value of democracy: Evidence from road building in Kenya,' *American Economic Review* 105, 6 (2015), pp. 1817-51; Eric Kramon and Daniel N Posner, 'Ethnic favoritism in primary education in Kenya,' *Quarterly Journal of Political Science* 11, 1 (2016), pp. 1-58.

²⁰ Government of Kenya. National Cohesion and Integration Commission, 'Towards national cohesion and unity in Kenya: Ethnic diversity and audit of the civil service,' (Government of Kenya, Nairobi, 2011).

opt dissenters by redistributing to them.²¹ In his models this redistribution is mediated through the education system and public sector employment. Similarly, Francois, Rainer and Trebbi studied the ethnic composition of cabinets in Africa and found them to be surprisingly inclusive, with ministerial appointments allocated in proportion to the ethnic composition of the population.²² They interpret this as a strategy to stave off coups or revolutions and suggest that the members of these ethnically-inclusive cabinets will use the ministries over which they preside to extend flows of patronage to their respective ethnic groups. This may ensure a relatively equitable ethnic distribution of spending and employment in aggregate.

While Azam and Francois et al. invoke patronage to predict an ethnically even pattern of spending, it is also possible that governments will turn to formal means, be it regional allocation formulas or affirmative action policies, to achieve such results. There are plenty of examples from across the region of policies adopted to improve equity in access to resources and economic opportunities in the interest of national cohesion.²³ Kenya introduced a district quota system in its national secondary schools in the 1980s and began requiring provincial secondary schools to admit most of its candidates from the local area, thereby limiting competition in underperforming areas from students outside the locality.²⁴ Kenyan teacher training colleges also used district quotas, which lowered the bar for students from historically underserved regions. Since 2003, Uganda's government seeks to distribute roughly a quarter of university scholarships to candidates from underprivileged backgrounds,²⁵ while in Kenya the official grade-point cut-offs for government-sponsored university and college courses are lower for women, minority and marginalised groups and disabled applicants.²⁶ These governments have also used explicit hiring quotas and targets. In 2008 Kenya adopted the National Cohesion and Integration Act, which requires that 'all public establishments [...] seek to represent the diversity of the people of Kenya,' and prohibits public establishments from hiring more than 30 percent of their employees from a single ethnic community.²⁷ As mentioned earlier, following the civil conflict in Uganda, its government used district quotas in the army and police.²⁸

In sum, the existing literature makes a range of predictions about public sector hiring imperatives in postcolonial Africa and the resulting employment inequalities. The class-based literature assumes that those groups with an income and educational advantage will hold a disproportionate share of public sector jobs. Where economic and ethnic cleavages overlap, this may exacerbate inter-ethnic inequalities. Clientelist theories instead views public sector

²¹ Jean-Paul Azam, 'The Redistributive state and conflicts in Africa' 38, 4 (2001), pp. 429–44; Jean-Paul Azam, 'The Political Geography of Redistribution,' in Benno Ndulu et al. (eds), *The Political economy of economic growth in Africa, 1960-2000* (Cambridge University Press, Cambridge, 2008).

²² Francois, Rainer, and Trebbi, 'How is power shared'.

²³ See for instance: 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, 12 (2011), pp. 2115–33; W. T. S. Gould, 'Secondary school admissions policies in eastern Africa: Some regional issues,' *Comparative Education Review* 18, 3 (1974), pp. 374–87.

²⁴ Munene Mwaniki, 'Mother tongue education in primary teacher education in Kenya: A language management critique of the quota system,' *Multilingual Education* 4, 11 (2014).

²⁵ Connie V. Nshemereirwe, *The relationship between pre-university schooling and university grades in Uganda* (Unpublished PhD dissertation, University of Twente, 2014).

²⁶ The Kenya universities and colleges central placement service, 'Placement processing' (Nairobi, 2014).

²⁷ Government of Kenya, *National Cohesion and Integration Act* (2008). Section 7(2).

²⁸ Nsibambi, *National integration in Uganda*; Lindemann, 'Exclusionary Elite Bargains'.

jobs as rewards given to individuals or groups in exchange for overt political favours. The ethnic favouritism literature predicts that politicians will favour their own regions or groups, resulting in higher public employment shares among coethnics of the president. Others have argued that multi-ethnic societies will seek to prevent accusations of capture by dividing the cake into equal shares between regions or groups. These equal shares could be achieved through patronage (where leaders of each group are given control of a share of the spoils), or through formal rules and quotas. Large-scale microdata samples from the Kenyan and Ugandan censuses makes it possible to examine some of these hypotheses quantitatively. First however, to contextualize the analysis, the next section provides a historical overview of public sector employment in postcolonial Kenya and Uganda.

The history of public sector employment in Kenya and Uganda

The public sector human resource management systems in Kenya and Uganda have colonial roots. On paper at least, these institutional structures were designed to safeguard a meritocratic and rules-based recruitment system. Both colonies established independent public service commission in the late 1950s to manage the appointment, promotion and dismissal of public servants.²⁹ Further service commissions were created at later dates for specific sub-sections of the public service, such as the teaching service, police, army and judiciary. Each service has a unified salary scale and qualification requirements by pay grade. The degree of local government human resource autonomy has varied over time. Both countries centralised the state administration in the 1960s and reduced the share of local government hires, but then reversed these policies in the 1990s-2000s. Uganda decentralised human resource management to local governments in the 1990s, delegating appointments and dismissals to local district service commissions.³⁰ In Kenya the current constitution delegates the appointment of local government staff to local governments.³¹ Executive or autonomous agencies and public corporations, meanwhile, have the greatest degree of human resource management autonomy, although central governments retain some oversight over the creation of establishments and setting of salary scales.

While many of the late colonial human resource institutions remain in place in recognizable form, the shape and composition of the public services has changed markedly. At independence these public services had a dualistic structure with a small number of highly paid officers in grades historically reserved for Europeans, while Africans staffed the low-skilled and low-paid posts. The Kenyan public sector employed 160,000 people or roughly 4 percent of the labour force at independence in 1963, and the Ugandan public sector employed 95,000 people, or 3 percent of the labour force in 1962, the majority in the low-skilled subordinate services.³² Of these public sector employees, only 15 percent in Kenya (1972)

²⁹ D. N. Ndegwa, 'Report of the commission of inquiry: Public service structure and remuneration commission 1970-71,' (Kenya Public Services Structure and Remuneration Commission, Nairobi, 1971).

³⁰ Ole Therkildsen and Per Tidemand, 'Staff Management and organisational performance in Tanzania and Uganda: Public servant perspectives' (Copenhagen, 2007).

³¹ Republic of Kenya, *Constitution of Kenya* (2010), Article 234.

³² Calculated from: Government of Kenya, 'Statistical abstract' (Government of Kenya, Nairobi, 1974), Table 223; Government of Uganda, 'Statistical abstract' (Government of Uganda, Entebbe, 1966), Table UP.1; Labour force estimated at 85% of the working aged population (15-64).

and 16 percent in Uganda (1967) had a secondary school certificate or tertiary degree.³³ At independence in the early 1960s Africans held roughly a third of these mid- and high-level public sector positions.³⁴

Positions were Africanized rapidly thereafter. Already by the early 1970s less than a quarter of mid- and high-level positions were staffed by expatriates, and the share fell to negligible levels soon after.³⁵ In tandem the educational attainment of the public service increased dramatically. By the 2000s almost 80 percent of Kenyan, and 58 percent of Ugandan public sector employees had at least four years of secondary schooling, compared to a ratio in the labour force at large of 26 percent in Kenya and 10 percent in Uganda.³⁶ This was partly a consequence of the rapid growth in skills-intensive public services, such as education. Teachers today comprise 49 percent of general government employment in Kenya, and 57 percent in Uganda.³⁷ Moreover, because of the skills scarcity at independence, Kenya's and Uganda's public services developed a close relationship to institutions of higher learning. In the 1960s and 1970s both countries required graduates from publicly funded colleges and universities to work for the state for a number of years upon completion of their studies and offered a guarantee of public employment in return.³⁸ This also helped to tilt employment creation toward mid- and senior-level positions.

The level of public employment in both countries have oscillated, although they have always remained low by international standards.³⁹ Public employment grew rapidly from the mid-1960s until 1980s, with a near a doubling in the size of the (non-military) public service relative to the labour force.⁴⁰ In response to the fiscal crises of the 1980s, and with donor prodding, both countries implemented civil service reform programmes in the 1990s which reduced the size of the public service relative to population back to roughly the same level as

³³ Calculated from: Government of Kenya, 'Statistical abstract' (Government of Kenya, Nairobi, 1974), Table 221 and 233; Government of Uganda, 'High-level manpower survey' (Entebbe, 1970), Tables II-VI.

³⁴ Uganda 26% in 1962; Kenya 40% in 1965, calculated from: Uganda Protectorate, 'Report of the commissioners for Africanisation 1962, Part 1: Africanisation, retention of expatriates and scholarships' (Entebbe, 1962); Government of Kenya, 'High-level manpower requirements and resources in Kenya, 1964-1970' (Government of Kenya, Nairobi, 1965).

³⁵ Government of Kenya, 'Statistical abstract' (Government of Kenya, Nairobi, 1974), Tables 221 and 233; International Labour Organisation, 'Manpower assessment and planning, Uganda: Project findings and recommendations' (Geneva, 1979).

³⁶ Calculated from: Minnesota Population Center, 'Kenya 2009 population and housing census, Integrated Public Use Microdata Series, International: Version 6.3 [Machine-readable database]' (University of Minnesota, Minneapolis, 2014); Uganda Bureau of Statistics, 'Uganda National Household Survey 2005/06 [data set]' <<https://openmicrodata.wordpress.com/2010/02/12/uganda-national-household-surveys-ihs-unhs/>> (April 2016).

³⁷ Calculated from: Government of Kenya, 'Statistical abstract' (Government of Kenya, Nairobi, 2013), Table 182(b); Uganda Bureau of Statistics, 'Statistical abstract' (Government of Uganda, Kampala, 2014), Table 2.3H.

³⁸ For discussion see: Government of Kenya, 'Economic management for renewed growth,' (Sessional Paper, Nairobi, 1986); International Labour Organisation, 'Wages, income policies and employment in Uganda: Agenda for institutional reform,' (ILO, Addis Ababa, 1989).

³⁹ For a regional comparison see: Salvatore Schiavo-Campo, Giulio de Tommaso, and Amitabha Mukherjee, 'Government employment and pay: A global and regional perspective,' (Policy Research Working Papers, World Bank, Washington D.C., 1997).

⁴⁰ Calculated from: Government of Kenya, 'Statistical abstract' (Nairobi), vols. 1960-2010; Government of Uganda, 'Statistical abstract' (Entebbe), vols. 1960-1974; Uganda 1990 estimate: Mary Goretti Sendyona, 'Public service restructuring and pay reform,' in Florence Kuteesa, et al. (eds) *Uganda's economic reforms: Insider accounts* (Oxford University Press, Oxford, 2010).

at independence.⁴¹ The public sector share of the labour force is today roughly 4 percent in Kenya (roughly 620,000 people) and 2.5 percent in Uganda (roughly 260,000 people).⁴²

Public sector wages followed an inverse trend to that of employment. Average real earnings in the public sector fell sharply between the 1970s and early 1990s while the salary scale was compressed, lowering the differentials between low and high skilled.⁴³ With the structural reforms of the 1990s earnings began to recover and earnings differentials increased once more.

Throughout the period, however, public servants remained a comparatively privileged strata of the labour force.⁴⁴ Whether this was solely a consequence of their higher educational attainment or represents a public sector wage premium remains debated. A 2013 Kenyan study comparing public and private sector earnings conclude that public servants in senior roles and professional cadres receive a wage premium, while those in lower-level professional posts (particularly education and health) face a wage penalty.⁴⁵ A study from Uganda argued that in comparison with the informal sector, which is the most likely alternative employment sector for many public sector employees, the public service offers a better total package, particularly once benefits, pensions and working conditions are considered.⁴⁶ Who then, occupy these privileged positions in the public sector? Has the face of the public service changed over successive cohorts as the employment and wage conditions changed? Using available census data we can examine this quantitatively.

Method and data

The census data allows us to compare the characteristics of public sector employees against the entire labour force. I use census data from Kenya (2009)⁴⁷ and Uganda (2002)⁴⁸, obtained from the Minnesota Population Center's Integrated Public Use Microdata Series (IPUMS), which makes available a 10 percent representative sample from these censuses for use by researchers. As a quality check I also present some results from the smaller Ugandan 2006 national household survey.⁴⁹ Unfortunately, the most recent Ugandan census data (2014) has not yet been released to researchers, and this analysis therefore builds on data from the early 2000s. However, Ugandan politics of patronage or elite reproduction are presumably not new phenomena, and should still be valuable to study for an earlier period.

⁴¹ Sendyona, 'Public service restructuring'; I. M. Mbeche and H. M. Kataka, 'The downsizing model in the Kenya civil service: Does it work?', *Business Management Review* 4, 2 (1997), pp. 32-47.

⁴² In 2010, calculated from: Government of Kenya, 'Statistical abstract' (Government of Kenya, Nairobi, 2013), Table 182; Government of Uganda, 'Statistical abstract' (Government of Uganda, Kampala, 2014), Table 2.3H.

⁴³ Damiano Kulundu Manda, 'Incentive structure and efficiency in the Kenyan civil service,' (Discussion Paper, UNU/WIDER, 2001); Sendyona, 'Public service restructuring.'

⁴⁴ Rebecca Simson, 'The rise and fall of Africa's bureaucratic bourgeoisie: Public employment and the income elites of postcolonial Kenya and Tanzania,' (International Inequalities Institute Working Paper Series, London, 2017).

⁴⁵ Kenya Institute for Public Policy Research and Analysis, 'A comparative study on public-private sector wage differentials in Kenya,' (KIPPRA Policy Paper, Nairobi, 2013).

⁴⁶ Therkildsen and Tidemand, 'Staff Management'.

⁴⁷ Minnesota Population Center, 'Kenya 2009 population and housing census'.

⁴⁸ Minnesota Population Center, 'Uganda 2002 population and housing census'.

⁴⁹ Uganda Bureau of Statistics, 'Uganda national household survey 2005/06'.

With this data I construct a binary logistic model that specifies the (log) odds of holding a public sector job, conditional on the following variables:

$$\log(P(y_i = 1)/P(y_i = 0)) = \alpha + \beta_1 x_{1i} + \beta_2 x_{2i} \dots + \beta_k x_{ki}$$

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

I limit the sample to Kenyan/Ugandan-born labour force participants between the ages 25 – 55, who have completed their schooling.⁵⁰ Labour force participants are defined as those engaged in an economic activity, whether in the formal or informal sector, or who are unemployed and seeking work. Within this sample I seek to identify all individuals who work for the public sector. In the Kenya case this is a straightforward exercise as the Kenyan census asked respondents about their sector of employment. Respondents could select between four different public service categories: central government, local government, teacher's service and state-owned enterprises. The Ugandan census lacks a sectoral breakdown of employment but the respondent's 'industry of employment' include the categories 'public service', 'education' and 'health', and a detailed occupational classification allows further differentiation between teachers, health workers, soldiers and policemen. I treat the composite of these groups as a proxy for public employment. Note however that this measure excludes parastatal employees and those government employees in the agricultural or construction sectors, and includes some private sector teachers and health workers. I therefore use the smaller 2006 national household survey, which contains a precise public sector employment variable, to corroborate some of the main results.

In this model age is treated as a measure for likely year of entry into the public service as this allows us to examine how employment opportunities have changed over time. 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. The Kenyan 1994 household survey shows a strong correlation between age and years in current employment among public sector employees (R=0.76).⁵¹ Studies of the public services of East Africa also highlight that dismissals or resignations are relatively uncommon, with people usually leaving the public service at retirement or death.⁵²

⁵⁰ An age floor of 25 was used to exclude cohorts where many have still to complete their formal education, and a ceiling of 55 because this was until recently the official public sector retirement age.

⁵¹ Author's calculation based on: Kenya National Bureau of Statistics. 'Welfare monitoring survey 1994, second round [data set]' (Nairobi, 2012).

⁵² Therkildsen and Tidemand, 'Staff management'.

Ethnic identity is extrapolated from the census data. The Ugandan census data coded individuals by ethnic group. The analysis considers the 12 largest Ugandan ethnic groups individually (~75 percent of the population) and a composite group of all remaining smaller ethnic groups. The Kenyan census sample does not include an ethnic variable so respondents' counties of birth are used to construct an ethnicity proxy.⁵³ Respondents are assigned to the ethnic group that dominates his or her county of birth.⁵⁴ If no group constitutes more than 50 percent of the county population it is coded as 'mixed' instead (see Appendix B). The ethnic dummy variable thus covers 11 different ethnic categories, the mixed group, as well as a group of all smaller ethnicities. Note that the mixed category is predominantly comprised of respondents born in the two main urban centres, Nairobi and Mombasa.

Following the literature on ethnic favouritism in Africa, we are 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 with coethnic presidents in the postcolonial era: The Kikuyu (Presidents Kenyatta and President Kibaki) and the Kalenjin (President Moi).

With the restrictions just discussed we are left with a sample of roughly 940,000 labour force participants in Kenya and 440,000 in Uganda.⁵⁵ Of these, 6 percent and 7 percent worked in the public sectors of Kenya and Uganda respectively. In both countries the public services are male dominated; women comprise 37 percent of Kenyan and 30 percent of Ugandan public sector employees. Public servants also have a higher average educational attainment than the labour forces at large. The average Kenyan in our sample has a primary school degree, while the average for the public service sample lies between a secondary and college education. The average Ugandan labour force participant has less than a primary school degree while the average public servant has a secondary school education. More discussion of the variables and details of their construction are provided in Appendix B.

To what extent do educational qualifications determine public sector job access?

Given these educational differences between public and private labour forces, how does education affect the probability of working in the public sector? Figure 1 estimates this probability by educational level and age cohort while the full regression results are given in Appendix A, Table 2. Unsurprisingly the results show that level of educational attainment makes a big difference to a person's likelihood of working for the state, particularly among the older respondents. In 2009, a 55-year old university-educated Kenyan had a 57 percent probability of holding a job in the public sector while a Ugandan had a 52 percent probability (2002). Put a different way, this model predicts that for every 100 university educated Kenyans born in the mid-1950s who remained active in the labour force in 2009, 57 of them worked for the state. Workers with college certificates (many of whom are teachers), are also

⁵³ Data on county ethnic composition from: U. Wiesmann, B. Kiteme, and Z. Mwangi, 'Socio-economic atlas of Kenya: Depicting the national population census by county and sub-location,' (KNBS, CETRAD, CDE, Nairobi, Nanyuki, Bern, 2014), p. 57.

⁵⁴ This approach is similar to that of: Burgess et al., 'The value of democracy.'; Lara Tobin, *Essais sur l'urbanisation en Afrique Subsaharienne* (Paris School of Economics, Unpublished PhD dissertation, 2015).

⁵⁵ Summary statistics are available in Appendix A, Table 1.

very likely to hold a public sector job, with estimated probabilities of 58 percent in Kenya and 45 percent in Uganda for this same age cohort. Among those with lower educational attainment the likelihood of working in the public sector drops substantially. Among the secondary educated roughly one in five are employed in the public sector (19 and 18 percent probability in Kenya and Uganda respectively), and among those with only primary education the ratio drops to below one in twenty (4 percent probability in both countries).

In Kenya the share of workers employed in the public sector is smaller among younger employees. While 57 percent of university educated Kenyans born in mid-1950s worked in the public sector, only around 30 percent of labour force participants born around 1980 did. This pattern is also evident among college and secondary school graduates. This is likely the result of the rationalisation of public sector employment in the 1990s as the education system continued to expand, which increased the number of qualified candidates in relation to the state's absorption capacity.

In Uganda the likelihood of working for the public sector differs less with the age of the respondent. This probably reflects 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 find public sector jobs.⁵⁶ It seems likely, however, that more recent censuses will reveal a pattern akin to the Kenyan one. Since the 1990s Uganda's tertiary education system has expanded at a considerably faster pace than the public service.

The model also provides some interesting results in regard to gender. 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. 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.⁵⁷

As discussed above, the Ugandan results rely on an imprecise measure of public employment that captures only employees in public administration, education, health and security. As a quality check I therefore replicate this analysis using data from household survey samples from 2006 where the public sector variable is precisely defined (see Figure 1). Although this raises the confidence intervals considerably as the sample is smaller, it gives estimates roughly consistent with the census results.

Another potential concern with these results is that they do not account for effects of migration. It is possible that those skilled graduates who failed to secure government employment instead chose to emigrate. But an examination of the emigration data suggests that migration was not on a large enough scale to substantially alter these ratios. Appendix C provides details on migration to Europe and North America, presumably the preferred destinations for the highly educated.

⁵⁶ Sendyona, 'Public service restructuring'.

⁵⁷ Asaf Levanon, Paula England, and Paul Allison, 'Occupational feminization and pay: Assessing causal dynamics using 1950-2000 U.S. census data,' *Social Forces* 88, 2 (2009), pp. 865-91.

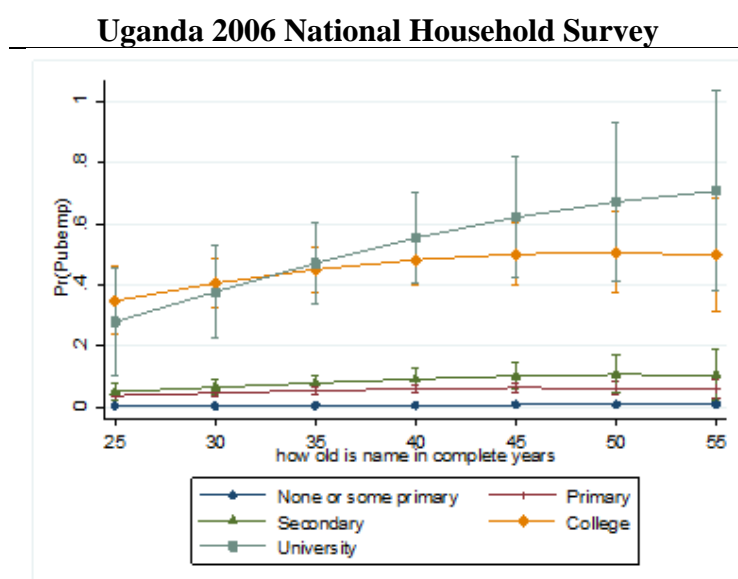
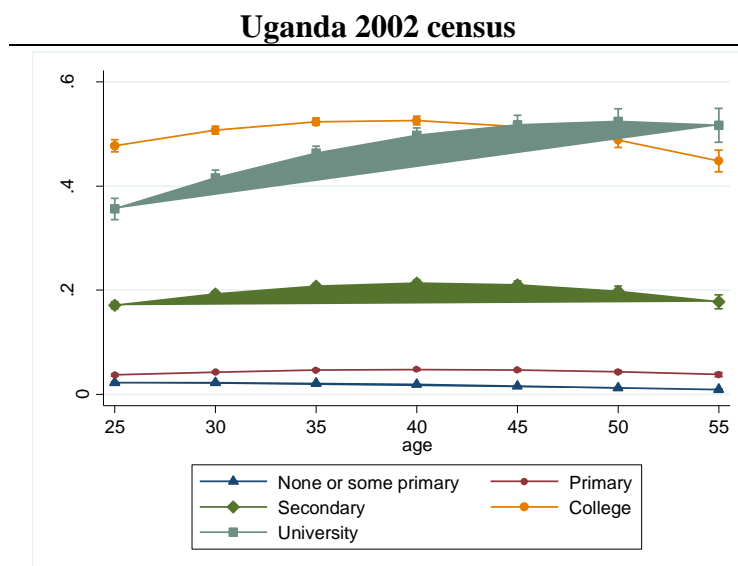
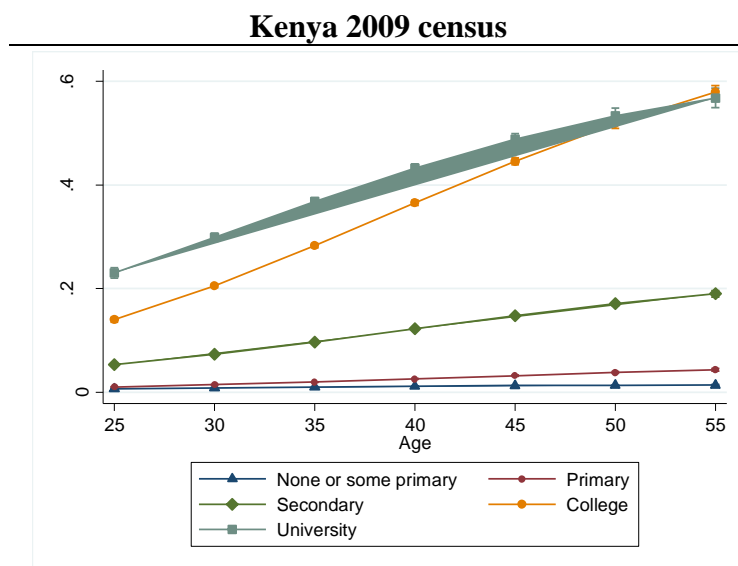


Figure 1. Estimated probabilities of being employed in the public sector by educational attainment and age (95% confidence interval)

Using migration data in combination with the UK and US censuses give rough back-of-the-envelope estimates of the number of skilled migrants. It suggests that in the order of 5 percent of university graduates born in Kenya and Uganda may have left the sub-region during the 1960s – 2000s. This is not enough to significantly alter the results above. Ugandans also migrated to Kenya in large numbers, but Ugandan graduates in Kenya were only around 1 percent of the Ugandan university stock in 1999.

For certain skill segments of the East African labour market then, the likelihood of working in the public sector is high, albeit more so among older cohorts than among recent graduates. Assuming that politicians sought to deliver patronage through the distribution of jobs, this emphasis on formal educational criteria severely limited their choice of candidates for mid- and high-level posts, throwing doubt on the relevance of clientelist explanations the broader distribution of skilled public sector jobs. In more recent years however, competition may have grown fiercer, potentially increasing patronage pressures. Given this, how have ascriptive factors such as ethnicity influenced access to public sector jobs?

Ethnic inequalities in public sector employment

Ethnic inequalities in the Kenyan public service are given in Figure 2a, which calculates the share of all working adults in each ethnic group⁵⁸ that are public sector employed, ordered from highest to lowest.⁵⁹ It shows that while almost 8 percent of all labour force participants born in Kenya's ethnically mixed districts (including Nairobi and Mombasa) work for the public sector, less than 2 percent of those born in predominantly Turkana districts do. This wide range is largely due to two outliers with extremely low public employment shares, the Turkana and Somali. Yet their low shares seem likely to reflect structural inequalities rather than explicit discrimination. These groups both have large pastoral populations, low educational attainment, and in the Somali case was the site of a secessionist war in the 1960s. Among the remaining ethnic groups the shares vary a lot less; among 10 of the 13 groups, public employment shares range from 7.1 percent for the Kalenjin, to 5.1 percent of the Mijikenda, compared to a mean of 6 percent.

In Figure 2b I examine the relationship between education and ethnic group public sector shares by limiting the sample to secondary-educated respondents. The figure measures the share of the secondary-educated members of each group that work for the public sector. This reverses the rank order and the Turkana and Somali public employment shares are now the highest. Thirty-three percent of all secondary educated Turkana respondents and 31 percent of all secondary educated Somali respondents are employed in the public sector, compared to a national average of 17 percent. 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.

⁵⁸ These categories will be referred to as ethnic groups, but keeping in mind that the Kenyan groupings are based on ethnic shares in the district in which the respondent was born rather than self-reported ethnic identity.

⁵⁹ Appendix A, Table 6 provides the detailed data underlying these figures. Appendix A, Table 3 provides regression results that include ethnic group dummies, which shows that these ethnic differences are for the most part statistically significant.

Taken together, this evidence suggests that ethnic inequalities in job access are largely a function of unequal educational attainment. But conditional on educational attainment ethnic groups with low educational attainment are overrepresented in public employment, partially off-setting the unequalizing effect of education.

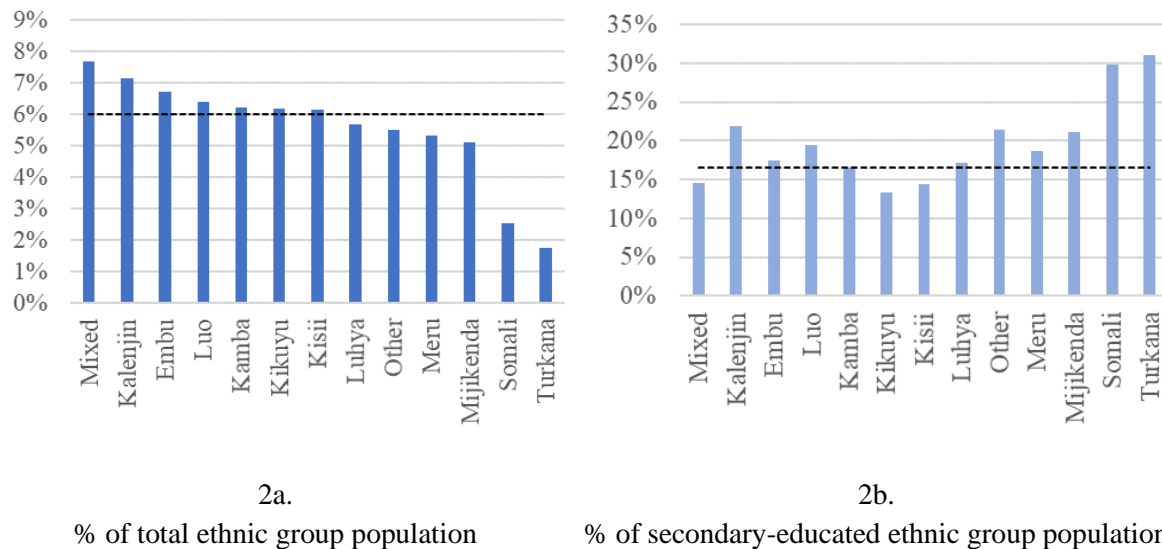


Figure 2. Kenya: percentage of working population in public employment by ethnic group

The differences in public employment share across Uganda's 12 largest ethnic groups are smaller than in Kenya (Figure 3a).⁶⁰ Nine of the 13 groups have public employment shares within one percentage point of the mean. The outliers are two ethnic groups with unusually large shares: the Acholi and Iteso. Acholiland and Teso were sites of uprisings against the Museveni government in the 1980-90s and suffered from continued insecurity in the early 2000s.⁶¹ In 2001 it was estimated that three-quarters of the residents of Gulu and Kitgum (who are predominantly Acholi) were displaced and living in camps or protected villages, as were a third of the residents of Katakwi (predominantly Iteso).⁶² The presence of internally displaced people's camps coupled with an international relief effort is likely to have increased government demand for workers in these districts, which may explain these unusually high public employment shares. Rather than withholding resources from regions that had historically supported the opposition (as the ethnic favouritism literature would predict), the government appears to have spent more on staffing in these conflict-affected regions. President Museveni's coethnics in contrast, the Banyankole, have a public employment share below the national mean.

Restricting the sample to secondary educated respondents reduces the measured inequality slightly, suggesting that educational differences explain some of the variation, although we do not see the same strong inverse relationship as in Kenya (Figure 3b). The

⁶⁰ See Appendix A, Tables 4 and 7 for detailed data.

⁶¹ There were several waves of conflict in these regions, but in 2002 displacement in Gulu and Kitgum was largely due to attacks by the Lord's Resistance Army (LRA), while residents in Katakwi were displaced by cattle raids by the Karamojong, see: Norwegian Refugee Council and Global IDP Project, 'Profile of internal displacement: Uganda' (Global IDP Database, Geneva, April 2002).

⁶² Norwegian Refugee Council and Global IDP Project, 'Profile of internal displacement', p.6 & p.14.

group with the lowest shares are the Baganda, Uganda's largest and best educated group, whose secondary completers have an unusually low probability of working for the state.

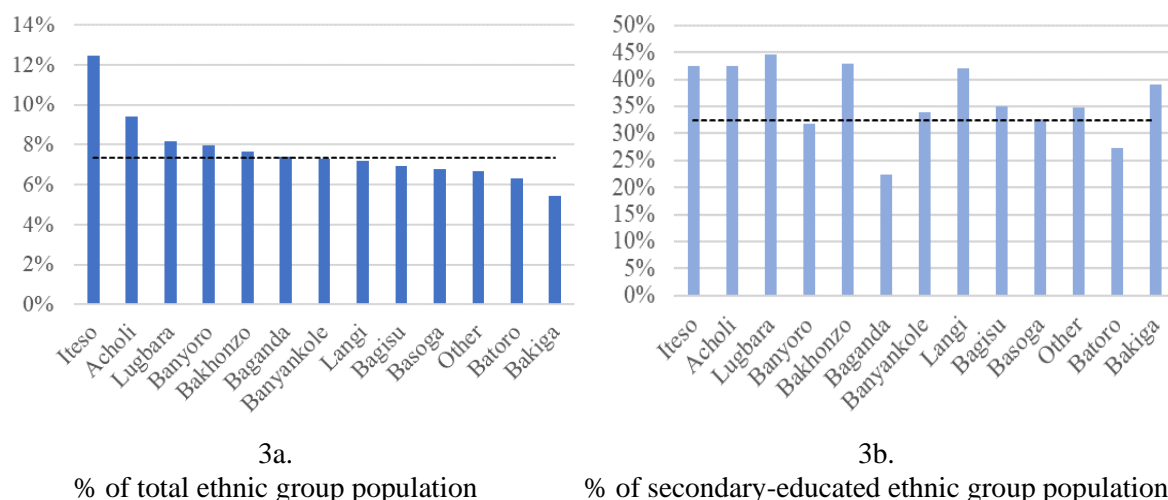


Figure 3. Uganda: percentage of working population in public employment by ethnic group

We can also examine these ethnic group differences for different segments of the Kenyan and Ugandan public service, to see if these ethnic groups inequalities are more pronounced within the teaching force, general government, or other sub-sector alone.⁶³ This analysis shows the rank order to be relatively stable across different segments of the service. In Kenya ethnic inequalities were lowest in the central government, followed by the teaching service, local government, and lastly the state-owned enterprises. In Uganda the education and health sectors have the most ethnically equitable staffing compositions, while the security sector is the most ethnically unequal.

By assuming that age is a good predictor of a person's likely year of entry into the public service, we can also examine whether ethnic group composition has changed over time. I calculate ethnic group shares separately across three birth cohorts: people born between 1954-63, 1964-73 and 1974-84 in Kenya, and people born between 1947-56, 1957-66 and 1967-77 in Uganda.⁶⁴ In Kenya the ethnic group rank order has remained relatively steady across these decennial cohorts, apart from the 'mixed' group which has risen in share, presumably driven by migration into the main cities. In Uganda the rank order has not changed substantially. In both countries the public service has grown more ethnically equitable over time, as shown by the lower coefficient of variation among the youngest cohorts.

Ethnic group shares can also be segmented by gender.⁶⁵ In both countries the distribution of public sector jobs is more ethnically equitable among men than among women. As women are disproportionately found in the higher-skilled positions, and because ethnic groups with higher educational attainment are also those with a higher relative proportion of qualified women, the female public sector workers are more likely to hail from the educationally advantaged groups and regions. In effect then, gender and ethnic equality

⁶³ Appendix Tables 6 and 7.

⁶⁴ Appendix Tables 8 and 9.

⁶⁵ Appendix Tables 8 and 9.

pull in opposite directions. An increase in the female employment share will, all else being equal, increase ethnic inequalities and vice versa.

Ethnic favouritism for Presidential coethnics?

Among the Kenyan groups, however, the Kalenjin group appears as something of an outlier with unusually high public employment shares in relation to its educational attainment. Given that former Kenyan President Moi is a Kalenjin, 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. For example, do Kalenjin respondents who entered the labour market while President Moi was in power have a higher relative probability of working in the public sector than those Kalenjin who entered when the president was of a different ethnicity to their own? To do this I construct a 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).⁶⁶ This dummy is added to the logistic model, in addition to the usual controls as well as dummies for each presidential era (Appendix A, Table 5).

This exercise shows that only the Kalenjin dummy is significant and of the right sign. The Kalenjin entering the labour market at roughly the time of their coethnic's presidency had a 14 percent 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 roughly 1.2 percent of all public sector jobs in Kenya were unfairly allocated to Kalenjin candidates in 2009. While not insignificant, presidential favouritism appears to have had a marginal rather than dominant effect on the broader composition of the Kenyan public sector labour force.

Birth place and access to public sector employment

So far we have considered public employment inequalities on an ethnic group basis, but given that ethnic groups are geographically concentrated, the results are similar, if not even more marked, on a geographic basis. On average, being born in more central and developed regions of each respective country increases the likelihood of working for the government. But when regional differences in educational attainment are taken into account, this pattern is reversed. Figure 2 provides a heat map that shows the share of secondary educated workers employed in the public sector by district or county of birth. In both countries the levels are strongly 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 than those born in the capital cities.

⁶⁶ This approach is similar to that used by Kramon and Posner, 'Ethnic favouritism', with regard to education.

Distance from the capital in both Kenya and Uganda is correlated with the level of development in the region. In a series of additional regression models, I add other proxies for district level development in a respondent's birth district. These measures include the average years of schooling, population density and the level of private wage employment by district (see Appendix Tables 3 and 4). In all three models the likelihood of public employment is higher for those born in less developed districts, once the respondent's educational attainment is controlled for.

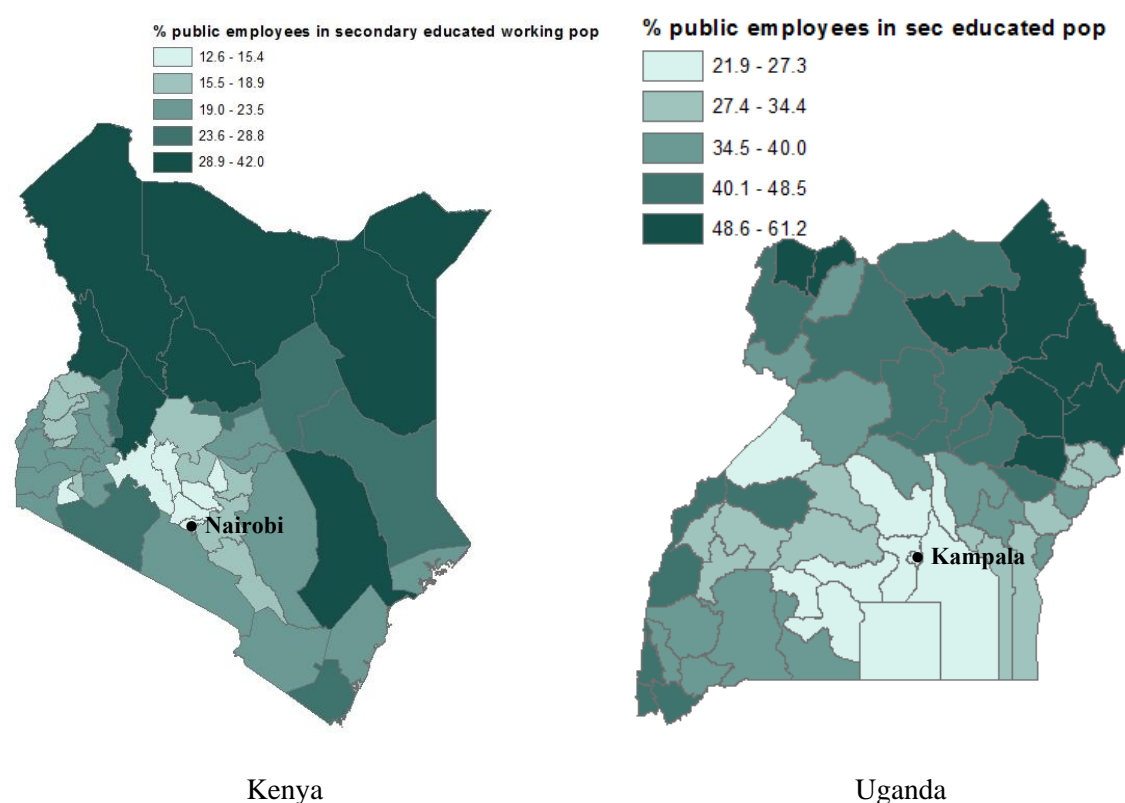


Figure 4. Percent of secondary educated population in public employment, by district/county of birth

Drivers of the distribution of public sector jobs

What explains this higher propensity for candidates from economically disadvantaged districts and ethnic groups to enter the public service? One likely driver of this pattern in the geographic distribution of public services and by extension public sector jobs. In both countries public employment opportunities are more equitably distributed than formal private employment, generating jobs even in remote regions where non-natives to the area are unlikely to settle. As illustrated in Figure 3, across Kenya's eight former provinces and Uganda's four regions and capital city, the public employment to population ratio is reasonably even, apart from higher levels in the capital cities and a low level in Kenya's North-Eastern Province. Table 1 calculates the range and coefficient of variation in public and private employment shares across districts and demonstrates that this variation is lower in the public sector. In other words, the district-level density of private sector activity is more uneven than that of public sector activity.

In the absence of local private sector demand for educated employees in less developed districts, a higher share of secondary school graduates will likely pursue public sector careers. In more economically developed regions in contrast, promising students have a broader range of career options. Furthermore, while graduates from remote parts of the country often migrate to the centre, the reverse is less common.⁶⁷ As a result, candidates born in the urban centres face competition from migrants as well as other locals, while candidates in peripheral regions face little migrant competition.

In both Kenya and Uganda the coefficient of variation is lowest among teachers. Consistent with this argument, the teaching force is unusually geographically dispersed as teaching services are delivered close to the population. Furthermore, as the first few years of primary schooling are often taught in local languages, local candidates may automatically be privileged over candidates from other language groups, which may account for a particularly equitable distribution of teaching jobs.⁶⁸

Lastly, although not tested in this paper, it is also possible that greater discrimination in the private sector drives people from less privileged backgrounds into the public sector. Evidence from North America and Europe suggests that women and racial minorities are often over-represented in public employment and that pay discrimination is lower in the public sector,⁶⁹ possibly because hiring and remuneration policies are more transparent and more likely to include affirmative action objectives. If members of more privileged ethnic groups or regions have a higher probability of gaining a more lucrative private sector job than others, then this will reduce the extent to which they compete for public sector jobs in the first place.

Quantifying the effects of these different drivers of public employment inequality is beyond the scope of this paper. The hypotheses discussed above are merely meant to show that typical public sector policy objectives, such as geographic equity in public service distribution or policies on primary school language of instruction, would result in precisely the employment patterns we observe. Further research is needed to firmly establish the causal mechanisms.

⁶⁷ Separate analysis of the data shows a strong correlation between the degree of district remoteness and the share of public servants that were born in the district.

⁶⁸ Mwaniki, 'Mother tongue education'; 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, 3 (2012), pp. 435-50.

⁶⁹ Robert G. Gregory and Jeff Borland, 'Recent developments in public sector labor markets,' in O. O. Ashenfelter and D. Card (eds), *Handbook in labor economics*, (Elsevier, 1st ed., 1999), pp. 3573-3630.

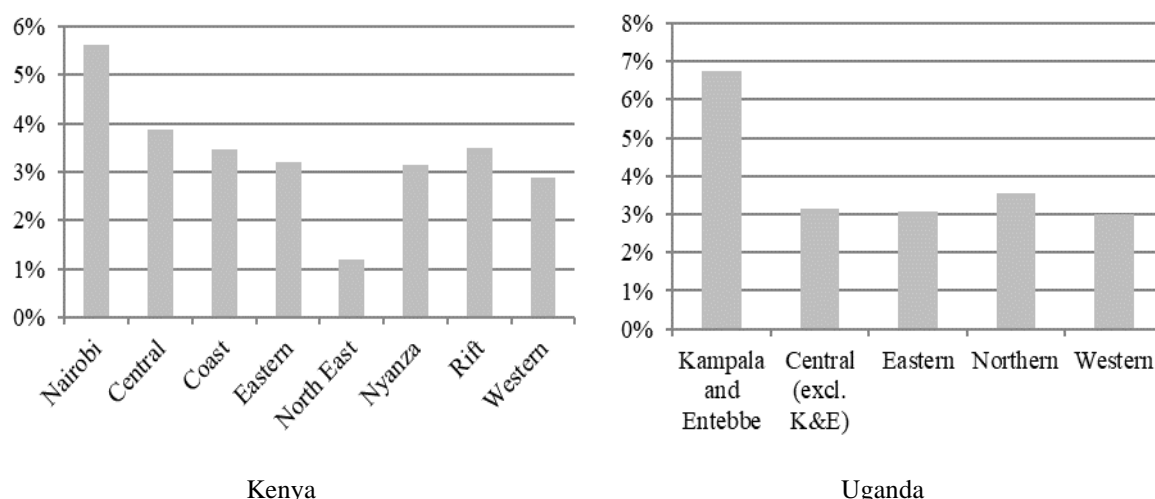


Figure 5. Percentage of adult population (15-65) in public sector employment, by province/region

Table 1. Variation in density of public and private sector wage employment across counties/districts

% adult population (18-65) in employment	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
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: based on those classified as paid employees, excl. public sector industries and agriculture.

Conclusion

The preceding sections have examined how education, age, gender, ethnicity and place of birth influences the likelihood of working for the public services of Kenya and Uganda. What does this tell us about the politics of public employment and the inequalities it generates?

The first, and perhaps in hindsight obvious, observation is that the average educational attainment of Kenyan and Ugandan public sector employees is well above that of the labour force at large, as most public sector employees are teachers, nurses, administrators and other comparatively skilled professionals. We would expect, therefore, that long-standing regional and ethnic group inequalities in educational attainment should have a pronounced effect on relative access to public sector jobs. In the Kenyan case this is indeed the case. Inequalities in ethnic and regional public employment shares are correlated with educational attainment. The two lagging groups, the Turkana and Somali, have exceptionally low

secondary school attainment. Yet public employment inequalities are less pronounced than educational attainment alone would predict, as groups with low educational attainment send a larger share of those educational high achievers into the public sector. Structural inequalities matter, but not as much as might be expected.

In Uganda the educational attainment differences across the 13 groups included in the analysis are smaller than in Kenya, as are the differences in ethnic group public employment shares. But as in Kenya there are some signs that the educationally-high performing groups have a smaller share of their educated members working in the public sector.

This strong relationship between educational attainment and public employment access sheds doubt on clientelist explanations for the distribution of public sector jobs. The results show that once we control for the educational attainment required for mid-level and senior posts, the government has historically had few qualified candidates to choose between. Among Kenyans and Ugandans born in the 1950s and 1960s 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. In effect then, such candidates were selected into public sector careers in the course of their academic progression. Assuming that the examination system that determined academic progression was broadly fair, this means that candidates were filtered on the basis of criteria that politicians did not directly control. This is antithetical to the type of personalised, *quid pro quo* clientelism described by Hicken, Kitschelt and Wilkinson and Robinson and Verdier, as it curtails the ability of politicians to hire and fire freely.

Since the 1990s competition for graduate jobs may have gotten fiercer as the public sector's ability to absorb graduates declined. While this could conceivably have created more opportunities for patronage, there are no signs that the ethnic or regional composition of the public sector labour force has changed markedly since. Ethnic group differences in public employment shares are in fact lowest among the youngest and thus most recently hired cohorts.

A different strand in the literature argues that public sector resources are used to reward favoured ethnic groups or regions, without targeting specific individuals within these groups. This is expected to lead 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 are not particularly pronounced and have not fluctuated notably across cohorts. 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, are there strong signs of presidential favouritism. Yet the results suggest that this unfair Kalenjin advantage accounted for only around 1 percent of all public sector jobs in 2009. Although this overrepresentation may be more apparent in some subsectors of the public service than others and at the height of President Moi's presidency, it seems doubtful that the average person could accurately gauge an unfair advantage of this magnitude. Moreover, given that the

Kalenjin had comparatively low educational access during the colonial era, this may be a specific type of case, where ethnic favouritism was fuelled by a sense of historical injustice.⁷⁰

Lastly, a fourth strand in the literature argues that ethnically polarized societies favour ethnically inclusive settlements, where jobs and other resources are allocated in rough proportion to the population's different ethnic or regional groupings to avoid stoking conflict. This prediction is relatively consistent with the observed results. Both governments appear to be promoting some regional balance in service provision and by extension public employment. But while some of this literature takes for granted that this settlement is mediated through patron-client networks, I argue that formal rules and policies provide equally plausible mechanisms. Regional quotas, affirmative action and local language policies in schools could give the same ethnic employment patterns.

This does not rule out the existence of ethnic skews at the highest echelons of the public service, as has been found in several studies about Kenya and Uganda.⁷¹ In such cases though, it is important to distinguish between politically appointed posts, such as ministers and commissioners, which are designed to give leaders the freedom to appoint party loyalists to strategic positions, versus the career civil service, which is officially meritocratic.⁷² Many of the posts considered in these earlier studies are appointed ones. Furthermore, much of the literature on patronage assumes that voters support coethnic politicians because they expect that doing so will bring benefits to themselves or their local communities.⁷³ The findings in this paper suggest that conflicts and settlements among ethnic elites may not have much bearing on the broader distribution of public sector jobs.⁷⁴ Thus the presumed economic consequences of political ethnic polarization may need more careful interrogation.

These findings also point to a possible incongruence between perception of inequality and their true manifestations. Such perceptions may fuel resentment and political mobilization, or conversely, unduly increase support for leaders on the unfounded expectation that they will privilege their own community members. They can also create the unrealistic expectation that greater equity in job allocation would ameliorate local unemployment problems, even when an improved distribution of resources would benefit very few. To illustrate, one can calculate the share of public sector jobs that would need to be redistributed to achieve perfect equity in job access across the 13 ethnic categories used in this paper. In both Kenya and Uganda, roughly 6 percent of jobs would need to be reallocated from over- to under-represented groups to achieve ethnic parity. This is equivalent to less than half a percent of the labour force. In other words, this hypothetical redistribution would benefit one in 200 workers.

⁷⁰ 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.'

⁷¹ Lindemann, 'Exclusionary elite bargains'; Bangura, 'Ethnic inequalities'.

⁷² For a discussion of the institutional logic of political appointments, see: Merilee S. Grindle, *Jobs for the boys: Patronage and the state in comparative perspective* (Harvard University Press, Cambridge, 2012)

⁷³ Carlson, 'Ethnic voting'.

⁷⁴ For the argument that patronage in Africa is limited to elites, see: Nicolas van de Walle, 'Meet the new boss, same as the old boss? The evolution of political clientelism in Africa,' Herbert Kitschelt and Steven I. Wilkinson (eds), *Patrons, clients, and policies: Patterns of democratic accountability and political competition* (Cambridge University Press, Cambridge, 2007).

For the average Kenyan or Ugandan, particularly those with little formal education, the likelihood of being employed by the public sector is extremely low in any case. Ethnic group differences make a small absolute difference to an individual's likelihood of gaining such a job. It follows from this that an improved ethnic distribution of public sector jobs alone is unlikely to diffuse ethnic tensions. A sober discussion of the actual allocation patterns that highlights the institutional mechanisms for promoting fairness may prove a more fruitful approach to managing popular expectations.