

RESEARCH ARTICLE

JOURNAL OF
INTERNATIONAL DEVELOPMENT

WILEY

Opting out of public sector employment: Gender and occupational aspirations among university graduates in Sierra Leone

Jamelia Harris^{1,2} ¹Department of Politics and International Studies, University of Warwick, Coventry, UK²Fiscus Ltd. Summertown, Oxford, UK**Correspondence**

Jamelia Harris, Department of Politics and International Studies, University of Warwick, Coventry, UK.

Email: Jamelia.Harris@Warwick.ac.uk**Funding information**

International Growth Centre, Grant/Award Number: 39408

Abstract

Using primary data from Sierra Leone, this article explores the relationship between gender and occupational aspirations. Descriptive findings suggest largely similar desired occupational roles across gender; however, regression results show that the odds of females aspiring for public sector employment are half that of males. Lower ambition for public sector employment among females is associated with less favourable perceptions of public sector employment in key areas that are deemed important to graduates such as salary, status from employment, the ability to contribute to society, training opportunities and career progression. Such 'opting out' by university-educated women has implications for women's inclusion in national development.

KEYWORDS

employment aspirations, gender gaps, occupational choice, Sierra Leone, skilled labour, West Africa

1 | INTRODUCTION

In both developed and developing countries, advancing the outcomes of women in the labour market is of both academic and policy concern. Specific to developing countries, studies have sought to understand the determinants of female labour force participation (Bhalotra & Umana-Aponte, 2010; Heath & Jayachandran, 2016; Rendall, 2013; Verick, 2014), as well as the relationship between female labour force participation, gender equality and economic

All personal information that would allow the identification of any person or person(s) described in the article has been removed.

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2022 The Authors. *Journal of International Development* published by John Wiley & Sons Ltd.

growth and development (Duflo, 2012; Nandan & Mallick, 2020; Rendall, 2013; Verick, 2018). Though evidence suggests increasing female participation in many developing countries (Duflo, 2012; Espino et al., 2017; Rendall, 2013), differences in labour market outcomes persist. For example, women tend to be employed in more precarious jobs (Kidder & Raworth, 2004; Lo Bue et al., 2021; Luci et al., 2012), earn lower wages (Blau & Kahn, 2017; Gradín, 2021), work fewer hours—though this varies with education level (Espino et al., 2017; Jones & Ramchand, 2016), and have a lower probability of promotion throughout their careers (Addison et al., 2014). These findings paint an important picture of gender disparities after employment is secured (*ex post*). Complementary to this body of evidence is an understanding of aspirations (*ex ante*) at the point of entering the labour market before steady employment is secured. The present article aims to unpack this.

Discussions around differences in labour market outcomes often assume that aspirations are similar across gender. For example, women in developing countries still end up in 'bad' jobs with low pay, low security and limited social mobility, and in all regions of the world save for the least developed, the share of women in managerial position has increased since 2000 (Luci et al., 2012). Such differences in labour market outcomes may be driven by labour supply decisions specific to women, which often relate to (i) household responsibilities (Averett et al., 2018; Bhalotra & Umana-Aponte, 2010; Boushey, 2008; Espino et al., 2017; Lo Bue et al., 2021), (ii) human capital differences such as education and training (Duflo, 2012), (iii) barriers to career progression once employed—such as gender-based discrimination (Addison et al., 2014; Blau & Kahn, 2017; Gobillon et al., 2015), (iv) cultural and social norms which place restrictions on women (Jayachandran, 2021); or at the individual level, (v) overconfidence of men (relative to women) in the labour market (Roy et al., 2018; Santos-Pinto, 2012).

Another explanatory factor may relate to different aspirations when entering the labour market, which in turn may be influenced by existing gender disparities. In other words, taking differences in hours worked, education, the probability of promotion and confidence (among other factors) as given, the question remains as to whether there are fewer females in management positions (and/or other roles) in developing countries because female aspirations are constrained. Previous studies have elucidated relevant evidence on the types of jobs that women end up in, but little is known about their aspirations just before entering the labour market. This is an important question to better understand potential opting out of some occupations and sectors. The present article contributes to this discourse by studying aspirations of university graduates in Sierra Leone—a small, low-income post-conflict West African country.

The article focuses specifically on the relationship between gender and aspirations for public sector employment. As noted by the OECD (2013), female employment in the public sector is an important indicator of openness and fairness in public institutions, demonstrates diversity and representativeness and serves to improve social mobility of women. Moreover, including female voices in policymaking is integral to improving the quality of public policies and responsiveness of services (Bachelet, 2011; OECD, 2013; Shair-Rosenfield & Wood, 2017; Swiss et al., 2012). Understanding female aspirations for public sector employment is thus a pertinent question, as aspirations in turn influence career choices (Mello, 2008).

Gender differences in employment aspirations have been investigated in few studies, and these studies have primarily been conducted in developed countries (Azmat et al., 2020; Khan et al., 2020; Malin & Jacob, 2019; Powell & Butterfield, 2003; Powers & Wojtkiewicz, 2004). Specific to developing countries, recent studies provide evidence that aspirations of young females often lie below that of their male counterparts (Beaman et al., 2012; Priyanka, 2020; Roy et al., 2018). This study adds new evidence to this budding literature and contributes by documenting early career ambitions of high skilled women in a low-income, post-conflict context—currently an under-researched group. Such a setting requires its own enquiry as legacies of internal conflict have been shown to worsen gender disparities (Mitra & Bang, 2021).

The paper uses a mixed-methods approach, drawing on survey and focus group data, to address two research questions, namely: (i) Are there differences in career aspirations among males and females in relation to preferred roles and sectors of employment, and (ii) if such differences exist, what are the contributory factors in the Sierra Leonean context. The results show that 30% of female graduates aspire towards early career employment working in the public sector in comparison to 44% of males. The regression results show that the odds of a female choosing

employment in the public sector are half that of male respondents. Though there is a clear lower preference for public sector employment among females, desired occupational roles in themselves are largely similar between males and females, save for a higher ambition to become engineers and managers among males. Lower ambitions to work in the public sector among females are associated with less favourable perceptions of public sector employment in key areas that are deemed important to graduates such as salary, status from employment, the ability to contribute to society, training opportunities and career progression. Further to this, females bear additional costs of accessing public sector employment due to network-based recruitment practices. Together, these factors limit aspirations to be employed in the sector.

The results should be of concern to policymakers as the evidence suggests a phenomenon of female opting out of public sector employment. Arguably, female participation in the market for public sector employment is crucial to female empowerment in the labour market in itself. In addition to this, by having women in the civil service and at the policy table in developing countries, there are also implications for women's current and future inclusion in processes of national development and socio-economic change.

2 | CAREER ASPIRATIONS AND OCCUPATIONAL CHOICE—EVIDENCE AND THEORY

There is occupational segregation and gender pay gaps in both developed and developing countries as women end up in different types of jobs compared to men (Averett et al., 2018; Gradín, 2021). In developing countries, these jobs are often in the informal sector, with weak job security (Averett et al., 2018; Luci et al., 2012). Chang (2004, p. 126) analysed data from 16 developing countries and showed that on average, women were over-represented in jobs related to sales, services and clerical duties and under-represented in professional, managerial and production roles. The reason for this, as proposed by Chang (2004), is state policies—particularly those targeting maternity leave and anti-discrimination.

In addition to state policies, others have explored societal explanations of gendered occupational outcomes. Jayachandran (2021, pp. 580–581) put forward a framework to explore social norms as a barrier to female employment, focusing on norms related to (i) gender-based harassment and violence in public spaces, (ii) restrictions on social interactions and freedom of movement faced by women, (iii) primarily male control over household finances, (iv) notions of the male breadwinner and (v) primarily female responsibility for household chores and childcare. According to Jayachandran (2021), such norms create barriers to full and equal participation in the labour market by women in developing countries. Jayachandran's (2021) framework bears similarities to the 'psychology of working theory' proposed by social psychologists (Autin et al., 2017; Duffy et al., 2016). According to this theory, social class, privilege and freedom of choice are integral to career selection and fulfilment on the job, and it may often be the case that socio-cultural factors limit freedom of work choice.

Bruckauf and Chzhen (2018) assess path dependencies and provide evidence on the role of social norms. According to Bruckauf and Chzhen (2018), if time allocated to household work, study and leisure activities are gendered in childhood and youth, these in turn affect transition to productive activities in adulthood. The authors find evidence in support of this theory using Ethiopian data. It follows that in highly patriarchal societies, patriarchal norms and traditions influence women's labour market outcomes. Furthermore, if there are few women present in leadership roles due to patriarchal norms, this may limit female aspirations (Beaman et al., 2012; Priyanka, 2020). Patriarchal norms have been shown to affect employment rates in Muslim majority countries (Spierings, 2014), though there is heterogeneity in the result across the 28 countries studied. One reason for this variation across countries is likely differences in macroeconomic factors and institutions.

A common social explanation of women's labour market participation relates to household commitments. Participation has been shown to vary with marital status and whether or not women have children (Boushey, 2008). Women with less familial/household commitments are more likely to participate in the labour market. It follows that household commitments may influence not only the decision to participate but also how participation manifest in terms of

roles and occupations chosen. For example, female dental students reported a higher preference for occupations in the field, which allow work–life balance (Khan et al., 2020).

The evidence on social norms and female labour market outcomes have largely been assessed through a gender lens as discussed above—that is, norms around women's role in society versus that of males. On the other hand, there are broader non-gendered norms that can also affect female labour market outcomes. For example, in contexts where social networks are used in the labour market, an insider–outsider situation often arises where groups of outsiders are created based on race or gender for instance (Tassier & Menczer, 2008). Recent experimental results from Malawi showed that male candidates were less likely to refer women for employment opportunities and that women were less likely to refer qualified women who can convert the referral into successful employment (Beaman et al., 2018). In this case, informal referrals based on social networks disadvantage the employment outcomes of women. Where referrals provide a signal of ability (and are not purely based on social networks), the effect is to reduce information asymmetry and promote gender equity as women who use reference letters from previous employers increase their likelihood of being employed (Abel et al., 2017; Carranza & Pimkina, 2018).

Alongside social norms and institutional policies, individual-level factors also matter for both employment aspirations and eventual occupational choice. In the economics literature, Besley and Ghatak (2005) proposed a type of 'mission matching' where workers match to organisations based on the stated mission or philosophy of that organisation. It follows that individual preferences such as altruism (Bénabou & Tirole, 2006), financial motivation (Besley & Ghatak, 2005) and risk preferences (Falco, 2014) influence occupational choice, and as such, choice may look different for males and females as gender differences in preferences have long been established (Croson & Gneezy, 2009).

The above review provides evidence on gendered outcomes in relation to the decision to supply labour (or not), differences in employment outcomes conditional on being in the labour market and various explanations of factors that can give rise to observed differences. These findings paint an important picture of gender disparities after some exposure in the labour market (*ex post*). Complementary to this body of evidence is an understanding of aspirations at the period of entering the labour market (*ex ante*). The present article aims to unpack this.

Duffy et al. (2016) argue that people who are marginalised (based on race, ethnicity, social class and/or gender, say) and those forced to make involuntary work-based transitions often have occupational decisions driven by context. It follows that the choices we observe in the labour market *ex post* may not reveal *true* preferences of women who are marginalised in societies, but preferences that have been mediated by their context and realities and thus informed by strategy and responses to social norms, in addition to preferences. Understanding employment aspirations and ambitions brings us a step closer to unpacking employment preferences before prolonged exposure in the labour market. Moreover, evidence shows that aspirations matter for longer-term employment trajectory as youths with high employment ambitions are more likely to have a professional career later in life (Mello, 2008).

Studies on gender-based differences in employment aspirations have largely been focused on developed countries—mainly the United States. For instance, high school students tended to follow traditional patterns with males aspiring for operative occupations, while females aspired to service-related occupations (Powers & Wojtkiewicz, 2004); male graduate students have higher aspirations to top management positions than their female counterparts (Powell & Butterfield, 2003); and female lawyers have lower aspirations to become partner at the firm (Azmat et al., 2020). Differences in aspirations have been attributed to higher preferences among females for occupations that allow work–life balance (Khan et al., 2020) and differences in training and labour market opportunities that may constrain aspirations (Malin & Jacob, 2019). Specific to developing countries, recent evidence from India suggests that self-efficacy matters for employment aspirations among young women, where self-efficacy is defined as an individual's belief (in themselves) that they can accomplish a task and cope with given challenges (Roy et al., 2018). The authors showed that there is a strong correlation between individual self-efficacy, educational and employment aspirations and eventual attainments. Moreover, at the aggregate level, the presence of female role models in leadership positions has been shown to raise life aspirations in general (Beaman et al., 2012; Priyanka, 2020). Thus, a society with confident women and visible leadership roles is more likely to inspire younger generations to do similar.

3 | THE SIERRA LEONEAN CONTEXT: GENDER DYNAMICS IN THE LABOUR MARKET AND THE PUBLIC SECTOR EMPLOYMENT

Sierra Leone is a small West African country, with a population of approximately eight million and GDP per capita of about US\$500.¹ Developmentally, the country has been set back by civil war, which broke out in 1991 and ended in 2002. The war devastated institutions, infrastructure, the economy and lives, and the effects persist today. More recently, between 2014 and 2016, Sierra Leone was adversely affected by the Ebola outbreak and declining global commodity prices, which jointly led to a contraction in the economy.

Despite the existence of natural resources, the economy remains largely dependent on agriculture, and the majority of the labour force is employed in this sector. Based on the most recent labour force survey, female participation in the labour market in Sierra Leone is almost the same as men—65.7% among men in comparison to 64.7% among women (Statistics Sierra Leone, 2015, p. 5). Though participation is roughly the same, gender differences emerge in labour market outcomes as women are more likely to be unemployed than men and earn lower wages on average. Women in the labour force also have lower skills and educational attainment, and different types of skills; 54.4% of men can read and write in comparison to 32% of women (Statistics Sierra Leone, 2015, p. 9). This is likely to improve in the future as the gap in years of education attained between males and females has been narrowing for younger generations. This now stands at 7 months and can largely be attributed to girls getting pregnant at young ages, which in turn disrupt their education (Statistics Sierra Leone, 2015, p. 12). At the technical vocation level, there appears to be a gendered approach to skills acquisition as women primarily enrol in courses such as hairdressing, catering, tailoring and gara tie-dyeing, while men study carpentry, mechanics, masonry and welding, for example (Statistics Sierra Leone, 2015, p. 53). With respect to tertiary education, the most recent data reported in a 2013 World Bank study showed that participation in tertiary education was 6.1% for males and 4.8% for females, and specific to universities, about one third of the student population at the University of Sierra Leone and Njala University were female (World Bank, 2013, p. 11).

Holding other characteristics constant including skills levels, men still earn nearly three times as much as women in wage employment, more than 2.5 times in nonfarm self-employment and nearly double in agricultural self-employment (Statistics Sierra Leone, 2015, p. 9). This suggests that there is a premium to simply being male in the Sierra Leonean labour market. Such disparity in the labour market reflects wider norms of gender inequality in Sierra Leone (McFerson, 2012).

Moving from the national labour force to government employment, gender disparities are again present. The public sector (including central government, local government, parastatals and state-owned enterprises) employs 4.2% of all workers or 39% of estimated formal sector jobs (Statistics Sierra Leone, 2015, p. 25). The public sector has been described as having relatively few professional and technical staff at the middle and senior levels as over 87% of personnel were in the lowest ('blue-collar') grades 1 to 5 in 2011 (Srivastava & Larizza, 2013, p. 462).

On average, between 2010 and 2015, females comprised 30% of public sector employees. This is slightly below the sub-Saharan Africa average of 32%, but above the private sector average (21%) for Sierra Leone for the same period.² With respect to elected officials, women are under-represented in the legislature as less than 20% of elected positions are held by women, though women make up 52% of the total population (USAID, 2019). Though, in principle, the civil service is independent from the legislature and appointments and promotions made by the Public Service Commission or Human Resource Management Office, the practice of patronage-based and politically influenced appointments, promotions and remuneration has been well documented (Harris, 2020; Mcleod & Ganson, 2018; Roseth & Srivastava, 2013; Srivastava & Larizza, 2013). Such patronage in public sector employment has the potential to have gendered implications for labour market choices, and by extension outcomes, if patronage-based recruitment affects males and females differently.

¹Estimates based on data from the World Bank's World Development Indicators.

²Estimates based on data from the World Bank's Worldwide Bureaucracy Indicators.

4 | DATA AND METHODS

The data for this study were collected between August and December 2017 and in August 2018 in the capital, Freetown. Freetown is the urban centre of Sierra Leone and allows for sample heterogeneity as students hail from all over the country and the tertiary institutions in Freetown offer a wide range of programmes.

Three hundred ninety-two university students from the faculties of arts, engineering, pure and applied sciences and social sciences were sampled out of a total estimated population of 4000 at Fourah Bay College, University of Sierra Leone.³ The sample comprises final-year students who are just about to graduate. The sample was purposely restricted to final-year students as they are about to enter the labour market and more likely to be engaged in job search. With this restriction, the population reduces to just over 1000 students, implying a sampling proportion of 39.2%. It is assumed that reported labour market aspirations/choices of final-year students are more salient than those of students in lower years who may update their preferences closer to graduation. Students enrolled in medical courses have been excluded from the sample as the employment trajectory of most medical graduates is relatively fixed.

The survey was conducted at the university campus during term-time. Table 1 summarises the composition of the sample. The sample proportions for gender and faculty of enrolment are comparable to population estimates for tertiary education from previous national studies (World Bank, 2013). Table 1 shows that women are under-represented in science, technology, engineering and mathematics (STEM) and over-represented in the arts and social sciences faculties. If gender was independent of faculty of enrolment, we would expect approximately 3.2% and 5.5% of the sample (comprising females) to be enrolled in engineering and pure and applied sciences. Instead, we observe 1.3% and 3.3%, respectively. With reference to women only, we would expect 9.2% and 15.8% of women to be enrolled in engineering and pure and applied sciences, but instead observe 3.7% and 9.6%, respectively.

In sampling for the study, an enumerator approached a group of students on campus and invited one of the students to participate. If the student refused, another student would be selected and so on. The survey lasted between 45 min to 1 h. The main data of interest in this paper are responses to the questions: (i) *What type of job would you like when you graduate?* (ii) *Which type of organisation do you imagine working for?* and (iii) *How would you rank the public sector (relative to the private sector, development/NGO sector and self-employment) based on each of the following: (a) salary, (b) status, (c) contribution to society, (d) stability, (e) training opportunities and (f) career progression.* The first is purely qualitative (open-ended) and has been analysed using content analysis and word clouds (based on word counts). The second (also an open-ended question) has been coded by sector (public or other) and analysed quantitatively. The third is also quantitative (based on a ratings scale) and was developed based on the six factors

TABLE 1 Sample composition by gender and faculty of enrolment in percentages (n = 392)

	Arts	Engineering	Pure and applied sciences	Social sciences	Total
Male	16.1 (17.3)	7.9 (6.0)	12.5 (10.3)	28.8 (31.7)	65.3
Female	10.5 (9.2)	1.3 (3.2)	3.3 (5.5)	19.6 (16.8)	34.7
	26.5	9.2	15.8	48.5	100

Note: Expected percentages based on university-wide relative shares of males and females are given in parentheses. Based on expected shares, women are under-represented in STEM areas such engineering and pure and applied sciences and over-represented in the arts and social sciences faculties.

Source: Author-collected survey data.

³Fourah Bay College is the oldest and most reputable university college in the country (World Bank, 2013).

that respondents reported as most important when choosing employment. These data are analysed against gender, as well as other relevant socio-demographic factors.

Following the survey, a subset of 36 respondents from the sample of 392 were contacted and invited to six focus group discussions. Twenty-nine of those invited attended. This was complemented by another eight focus group discussions with 36 respondents who did not form part of the survey and had between 1 and 10 years' experience in the labour market. Twenty-four of this 36 were contacted via snowball sampling based on previous links with the National Youth Commission (NAYCOM) and 12 based on established contacts of the researcher. Data from these 65 focus group participants (42 males and 23 females) form the basis of the qualitative data analysis.⁴ Both the quantitative and qualitative data have been jointly analysed using an integrative mixed-methods approach.⁵

5 | EMPIRICAL RESULTS AND DISCUSSIONS

Three main empirical results emerge from the data. First, there are differences in aspirations with respect to desired occupation. Second, there is reduced preference for public sector employment by females. And third, aspirations and choice are likely affected by sector-specific perceptions and reports of network-based recruitment. The latter (network-based recruitment) matters for both genders, but affects women differently. Each is presented below, and together, the results give evidence of gender differences in occupational aspirations among university graduates in Sierra Leone.

5.1 | Gender and occupational aspirations

Figure 1a,b shows word clouds that visually illustrate the types of occupations respondents wish to hold after graduating based on the survey of 392 university finalists. The word clouds are separated by gender and based on

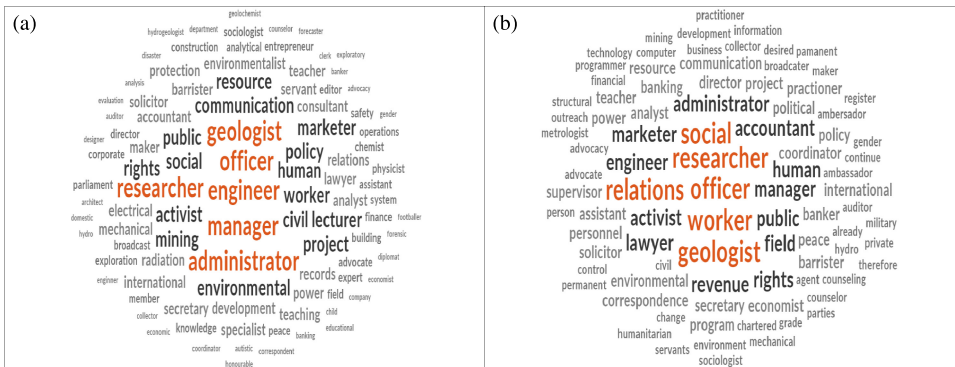


FIGURE 1 Reported occupational aspirations for (a) males and (b) females. The word clouds visually illustrate the types of occupations respondents wish to hold after graduating based on the survey of 392 university finalists. The word clouds are based on responses to the survey question: What type of job would you like when you graduate? They have been constructed in NVivo and set to group root words. For example, 'doing research', 'conducting research', and 'research' and 'researcher' are illustrated as 'researcher'. Frequently cited roles appear bigger in the illustration. Source: Author-collected survey data

⁴Due to snowball sampling for the focus group discussions, approximately 37% of focus group participants were connected to the National Youth Commission in some way. One can argue that those who seek out opportunities and information from the National Youth Commission have some common underlying traits, so the sample may be more homogeneous than desired. This is a common criticism of snowball sampling, but it remains a useful method in social science research as the costs of the method are outweighed by the practical advantages (Bickman & Rog, 2008).

⁵See Morse (2010) for more in integrative mixed-method approaches.

responses to the open-ended survey question: *What type of job would you like when you graduate?* Frequently cited roles appear bigger in the illustration. As shown, jobs cited are largely similar across gender and include occupation titles such as researcher, administrator, officer and geologist, and fields such as human resources, public relations and marketing. Comparing Figure 1a,b, there are two noteworthy differences in occupational ambitions that reinforce previous findings in the literature.

First, more females mentioned a role that involved some 'social' element in comparison to their male counterparts, and males cited roles related to 'engineering' more than females. This difference in aspiration stems from differences in training and skills acquisition. As shown in Table 1, women are under-represented in STEM areas such as engineering and pure and applied sciences and over-represented in the arts and social sciences faculties. Malin and Jacob (2019) have similarly shown that differences in training and resultant labour market opportunities directly influence aspirations. This separation between men and women across fields of training and consequently early career ambitions has the potential to widen the gap in earnings, as STEM areas of training accrue higher earnings (Statistics Sierra Leone, 2015).

Second, males aspire for more senior roles in comparison to females. The title of 'manager' was more frequently cited by male respondents than females, and conversely, females more frequently cited wanting the more junior title 'worker' in their desired role. These findings corroborate previous findings where women had lower aspirations for management positions (Azmat et al., 2020; Powell & Butterfield, 2003).

Sierra Leone has relatively few women in senior roles (Statistics Sierra Leone, 2015), and evidence from other developing countries suggests that the presence (or absence) of female role models in leadership positions has bearings on female aspirations (Beaman et al., 2012; Priyanka, 2020).

5.2 | Opting out?: The relationship between gender and choosing public sector employment

The empirical analysis in this section draws on the formative works of McFadden (1973) and Manski (1977) and more recent formulations in Freese and Long (2006). Logistic regression models are used to estimate the relative odds—that is, the odds ratio of choosing the public sector over other sectors, conditional on various individual specific attributes (x_i). The estimated model is given by

$$\text{probability}(\text{public sector}|x_i) = \Phi(\beta \text{gender}_i + \gamma x_i)$$

The main variable of interest is gender—a binary variable that takes the value of 1 if the respondent is female. The y variable (public sector) is also binary and has been derived from classifying responses to the open-ended survey question: *Which type of organisation do you imagine working for?* This hypothetical question is used as an indicator of early career sectoral occupational aspirations and has been validated against an incentivised short-term internship programmes (see Table A1). The controls (x_i) include being married/cohabiting and having children, as the literature has established that these factors matter for female labour supply decisions (see, e.g., Bhalotra & Umana-Aponte, 2010; Espino et al., 2017; Lo Bue et al., 2021).

Before turning to the regression results, a simple chi-squared test shows an association between gender and choosing the public sector for early career employment among university graduates (Table 2). Descriptively, 30% of female graduates opt for early career employment working in the public sector in comparison to 44% of men. If gender and sector choice were not associated, we would expect approximately 9% more women to have chosen the public sector (53 women instead of the observed 41).

Table 3 gives the odds ratio of choosing the public sector from the logistic regression. Four models are presented. Model 1 is a bivariate regression between gender and aspiring for public sector employment. Model 2 adds being married/engaged/cohabiting and having children as controls. And models 3 and 4 further augment the first model to include interaction effects between gender (being female) and the two controls previously mentioned. From all four

TABLE 2 Sector choice by gender ($n = 392$)

	Males	Females	Total
Public sector	112 (43.75)	41 (30.15)	153 (39.03)
Other sector	144 (56.25)	95 (69.85)	239 (60.97)
	256	136	

Note: Pearson $\chi^2(1) = 6.9062$, $Pr = 0.009$. Relative shares in parentheses (in percentages).

Source: Author-collected survey data.

TABLE 3 Odds ratios: Occupational choice of university graduates

Model	Logistic regression odds ratios			
	1	2	3	4
Female	0.555*** (0.778)	0.534*** (0.122)	0.444*** (0.116)	0.403*** (0.119)
Married/cohabiting		1.163 (0.365)	0.82 (0.316)	1.195 (0.375)
Children		1.87** (0.482)	1.943** (0.505)	1.43 (0.438)
Female \times Married/cohabiting			2.426 (1.378)	
Female \times Children				2.16 (1.04)
N	392	390	390	390
LR χ^2	7.03***	16.53***	18.96***	19.10***

Note: The odds of females choosing the public sectors are approximately half that of males, ranging from 0.403 to 0.555. Results are significant at 1% level. Degrees of freedom for LR χ^2 = no. of regressors.

* $p < 0.1$.

** $p < 0.05$.

*** $p < 0.01$.

Source: Author-collected survey data.

models, being female is consistently associated with lower odds of aspiring for public sector employment—ranging from an odds ratio of 0.403 (model 4) to 0.555 (model 1). The results are statistically significant at 1% level. In essence, the odds of females holding ambitions to work for the public sector upon graduating are about half the odds of males making the same choice.

The results are robust to various specifications of the model (see Table B1). As Table B1 shows, the female-to-male odds ratio is consistently less than 1 and significant, indicating that women are less likely to aspire to public sector employment even after controlling for a selection of other variables that have been highlighted as pertinent in the existing literature. For instance, including other demographic factors like age and ethnicity gives a female-to-male odds ratios of 0.63; including social status (as per the psychology of working theory; Autin et al., 2017; Duffy et al., 2016) gives a female-to-male odds ratio of 0.55; type of training (in line with previous evidence from authors such as Malin & Jacob, 2019) gives a female-to-male odds ratio of 0.56; and individual preferences and latent traits such as financial motivations, risk and time preferences, prosocial behaviour and cognitive ability (as per the mission

matching literature; Bénabou & Tirole, 2006; Besley & Ghatak, 2005; Falco, 2014) give a female-to-male odds ratio of 0.51. All results are statistically significant at 5% level or lower (Table B1).

5.3 | The relationship between perception, networks and public sector aspirations

The regression results show that gender is a robust predictor of occupational choice among university graduates in Sierra Leone when choosing between the public sector and other sectors. The regression analysis, though beneficial for highlighting correlation, does not fully capture why female aspirations indicate a degree of opting out of public sector employment. Additional survey data and qualitative data from focus group discussions help to shed light on the observed correlation.

First, there is a statistically significant difference in perceptions of the public sector across gender. Respondents were asked to rank the public sector (against the private sector, development/NGO third sector and self-employment) with respect to salary, status, the ability to contribute to society, stability, training opportunities and career progression—with 1 being the best rating and 4 the worse. As shown in Table 4, on average, the public sector was perceived less favourably (as evidenced by a worse rating) by females in comparison to males for all six measures. The differences in ratings are significant at 1% level for perceptions on status, training opportunities and career progression in the public sector and at 5% level for contribution to society. Differences in perceptions on salary are only weakly significant (10% level), while there is no statistically significant difference in perceptions related to stability of employment in the public sector. The latter is expected as the public sector has a strong reputation of contract stability.

As noted by authors such as DellaVigna (2009), perceptions and subjective beliefs shape decision making. Differences in reported perceptions of the benefits of being employed in the public sector may therefore be one explanation for the observed lower aspirations for public sector employment among women.

TABLE 4 Perceptions of the public sector by gender (averages)

	Male	Female	Difference
Salary	3.27 (0.05)	3.43 (0.07)	-0.17*
Status	2.34 (0.08)	2.76 (0.10)	-0.41***
Contribution to society	1.72 (0.06)	1.99 (0.09)	0.26**
Stability	1.85 (0.06)	1.90 (0.08)	-0.05
Training opportunities	2.03 (0.07)	2.35 (0.08)	-0.32***
Career progression	2.12 (0.7)	2.48 (0.10)	-0.37***
N	256	136	

Note: On average, the public sector was perceived less favourably (as evidenced by a worse rating) by females in comparison to males for all six measures.

* $p < 0.1$.

** $p < 0.05$.

*** $p < 0.01$.

Source: Author-collected survey data.

Second, a dominant theme arising in the focus group discussions was the use and what some described as the over-use of social, political and ethnic networks in the labour market. The quote below is an illustrative example of this phenomenon.

If the boss is not a Fourahbite, and you went to Fourah Bay College, you would be discriminated against. Same with tribalism. They can tell by your surname. They will not hire you because they think you will spy. The Muslims that wear the hijab. They say we are Al Shabab covering our brains.

(Female, BSc Adult Education and Community Development⁶)

The quote above is particularly salient as it gives voice to the multiplicity of networks that graduates perceive supersede qualifications in the recruitment process. The respondent's story is not unique as several respondents revealed stories of jobs being advertised as a formality, though many organisations would ultimately recruit from within their networks. This was particularly the case for the public sector as many respondents reported being sidelined for a position due to political interference from highly connected government officials, often referring to 'letters from State House'—the Office of the President—with instructions on which candidates to select. According to one respondent who applied for an entry-level economist position with central government:

Last year they advertised vacancies for Economists. I was called to do an exam. They said that those who did the best in the exam would be interviewed first. My interview was on the first day. Then my friend who works there told me I was successful. She sent me a WhatsApp with my name on the list. I was so happy. I went and bought new clothes for the job. But then I did not hear from them officially. Then I saw on Facebook other people were posting photos who had started the job. I say *eh-bo*. When I called my friend, she said a new list came from above. What can I do. I have to look for another job.

(Male, BSc Economics⁷)

Though network-based recruitment affects the entire labour market, the examples reported by respondents reveal that the practice is perceived to be most prevalent in the public sector. Though respondents are attracted by the stability of public sector employment, several expressed an aversion to applying for vacancies due to perceived nepotistic recruitment over merit. This type of network-based recruitment transcends an information sharing/signalling role as in other studies (Abel et al., 2017; Carranza & Pimkina, 2018) and instead is indicative of patronage in public sector recruitment as other studies in Sierra Leone have highlighted (Harris, 2020; M'cleod & Ganson, 2018; Roseth & Srivastava, 2013; Srivastava & Larizza, 2013). This phenomenon has been argued to have negative effects on the functioning of the labour market as jobseekers modify search behaviour, and specific to graduates, there is a consequent push to the development/NGO sector that is perceived to be fairer (Harris, 2020).

Ethnicity has historically been politicised in Sierra Leone, with the Temnes (and some other Northern ethnic groups) being associated with the All People's Congress (APC) political party and Mendes (and some other Southern and Eastern ethnic groups) being associated with the Sierra Leone People's Party (Casey, 2015; Kandeh, 1992). Using ethnicity as a proxy for networks, the quantitative results also corroborate the qualitative findings. Including ethnicity in the logistic regression from before, all other ethnic groups have lower odds of choosing the public sector relative to Temnes—bearing in mind the APC party was in government at the time of data collection. The lower odds ratio of Mendes, the ethnicity associated with the main opposition party at the time, the SLPP, stands out as this result is statistically significant. Gender remains a significant predictor of choosing the public sector in this model (column 2 of Table B1).

⁶Focus group discussion 2, 10 October 2017. Respondent graduated in 2018.

⁷Focus group discussion 10, 8 August 2018. Respondent graduated in 2012.

Descriptions of nepotistic practices in the public sector were not gendered as both men and women reported instances of being overlooked in favour of more connected applicants as documented in the two quotes above. However, women reported additional 'costs' in accessing networks, as oftentimes, such patronage-based appointments included a transactional element. Based on the qualitative data, the typical benefits to the referee who enables access to employment via networks included (i) status to that person or being seen as 'powerful', (ii) a reduction in the financial support from the referee to candidate (often if the relationship is based on familial networks) and/or (iii) a purely transactional 'kickback' to the referee in the form of a monetary payment from the salary of the referred if they are successfully employed. For women, there is sometimes an additional cost in the form of sexual favours as reported by participants. This is summed up by one respondent when reflecting on applying for a position at a government ministry:

Sometimes they say they will help you to get the job. But for ladies, you have to lie with the boss as a condition.

(Female, BSc Linguistics⁸)

In essence, this is equivalent to a difference in the price of the services provided by networks across gender. For many women, sexual favours as a quid pro quo for employment are not an acceptable trade as the cost borne is too high. The strategy for these women is then to seek employment based on merit, where networks matter less, or to use networks that do not impose such conditions. Many female participants cited a preference for the development sector as a result.

6 | CONCLUSIONS

Previous studies have observed gender disparities in labour market outcomes. This study has provided evidence that disparities in aspirations also exist before entering the labour market. The results show that although males and females desire largely similar occupational roles, the odds of females aspiring for public sector employment are half that of males.

The evidence provides three important findings for the literature. First, lower ambitions for public sector employment among females is associated with less favourable perceptions of public sector employment in key areas that are deemed important to graduates such as salary, status from employment, the ability to contribute to society, training opportunities and career progression. This suggests that although women, in general, have more precarious labour market outcomes (Kidder & Raworth, 2004; Lo Bue et al., 2021; Luci et al., 2012) and earn lower wages (Blau & Kahn, 2017; Gradín, 2021), highly educated women may have higher personal aspirations than previously understood. The women in this study value jobs that will provide a good salary, training opportunities, status and career progression, and they may be willing to moderate sectoral aspirations (away from the public sector) to meet these desires. Second, it has been established that individual attributes such as altruism, financial motives and risk preferences (Bénabou & Tirole, 2006; Besley & Ghatak, 2005; Falco, 2014) influence occupational choice, and individual preferences can be gendered (Croson & Gneezy, 2009). The results here show that perceptions also matter for occupational aspirations, and perceptions of sectors are also different across genders. The latter requires further enquiry as to how perceptions are formed and why such differences exist between males and females. And third, lower female aspirations for public sector employment interplay with patronage/networked-based recruitment in the public sector, relative to other sectors, which affect women differently. Jayachandran (2021) describes social norms that create barriers to full and equal participation in the labour market by women in developing countries. Here, we see this manifesting with women modifying aspirations to avoid the possible scenario of being asked for

⁸Focus group discussion 2, 10 October 2017. Respondent graduated in 2018.

sexual favours as a quid pro quo for employment—an outcome perceived to be more likely in the public sector. As Autin et al. (2017) and Duffy et al. (2016) note, socio-cultural factors can limit freedom of work choice, which can negatively affect fulfilment on the job.

The findings may point to path dependencies. Previous evidence has shown that aspirations in youth affect longer-term career trajectory (Mello, 2008). It is thus possible that lower ambitions for early career employment in the public sector may lead to a continued pattern of fewer females relative to males entering the public sector upon graduation. This would then imply that fewer women progress to senior management positions as the pool of females is smaller. This may then result in fewer female role models in leadership positions, which may negatively affect aspirations of junior level females (Beaman et al., 2012; Priyanka, 2020). If networks continue to be a feature of recruitment, the consequence is fewer women in the public sector to refer other women. All in all, this may negatively affect the representation of women in public administration and at the policy table and thus their input into decisions that affect national development. According to Michelle Bachelet, the former Chilean president and former executive director of United Nations Women, in her 2011 address at the Word Peace Festival, Berlin:

In governance, if women were engaged in policy decision making and employed in public administration, we would see more diversity expressed in policy making and more attention to community and family needs.

Bachelet's words emphasise the importance of diversity in decision making. Empirical evidence also points to developmental gains from female representation in the public sector and legislature. For example, female representation in the national legislator is beneficial to maintaining peace in post-conflict settings, as women tend to prioritise social welfare spending over military spending and female involvement improves public perceptions of good governance and credibility (Shair-Rosenfield & Wood, 2017). Women's representation has also been shown to be positively correlated with improvements in child immunisation and increased life expectancy in developing countries (Swiss et al., 2012).

In sum, there is need to address the lower observed ambition for public sector employment by female graduates. This likely has implications for existing and future goals around female empowerment and parity in the labour market, as well as broader developmental goals. Relaxing the constraints on female ambitions should be a key concern for policymakers. Further research should endeavour to understand these issues across broader skills groups, as this study has focused on a subset of the labour market—highly skilled university graduates.

ACKNOWLEDGEMENTS

This work would not have been possible without the financial support from the International Growth Centre (IGC)—project number 39408; my Sierra Leone team Abass Kargbo, Mousa Sesay, Sidi Saccogh, Umaro Tarawalie, Kabineh Kpukumu, Juliana Mahaye and Alpha Jalloh; and my research participants who gave their time. I am also grateful for the comments and feedback from those who read the various versions of this paper, in particular Alex Jones; and to the taxpayers of Trinidad and Tobago, who funded my doctoral studies.

CONFLICTS OF INTEREST

No potential conflicts of interest to declare.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Jamelia Harris  <https://orcid.org/0000-0002-8437-3386>

REFERENCES

- Abel, S. M., Burger, R., & Piraino, P. (2017). *The value of reference letters*. Policy Research Working Paper WPS 8266. World Bank Group. <http://documents.worldbank.org/curated/en/632421513000919521/The-value-of-reference-letters>
- Addison, J. T., Ozturk, O. D., & Wang, S. (2014). The role of gender in promotion and pay over a career. *Journal of Human Capital*, 8(3), 280–317. <https://doi.org/10.1086/677942>
- Adler, N., & Stewart, J. (2007). *The MacArthur Scale of Subjective Social Status*. The MacArthur Research Network on Socioeconomic Status and Health. <https://macses.ucsf.edu/research/psychosocial/subjective.php>
- Autin, K. L., Douglass, R. P., Duffy, R. D., England, J. W., & Allan, B. A. (2017). Subjective social status, work volition, and career adaptability: A longitudinal study. *Journal of Vocational Behavior*, 99(April), 1–10. <https://doi.org/10.1016/j.jvb.2016.11.007>
- Averett, S., Argys, L. M., & Hoffman, S. D. (2018). *The Oxford handbook of women and the economy*. Oxford University Press.
- Azmat, G., Cuñat, V., & Henry, E. (2020). *Gender promotion gaps: Career aspirations and workplace discrimination*. IZA Discussion 12902. Institute for the Study of Labor. <https://ftp.iza.org/dp12902.pdf>
- Bachelet, M. (2011). Greeting to the World Peace Festival, August 20–27, 2011, Berlin, Germany. https://www.youtube.com/watch?v=zh0lcNjmlQ0&index=19&list=PLxWil8G-73_J5d-tvX3l-vaNfJemwjR_I
- Beaman, L., Duflo, E., Pande, R., & Topalova, P. (2012). Female leadership raises aspirations and educational attainment for girls: A policy experiment in India. *Science*, 335(6068), 582–586. <https://doi.org/10.1126/science.1212382>
- Beaman, L., Keleher, N., & Magruder, J. (2018). Do job networks disadvantage women? Evidence from a recruitment experiment in Malawi. *Journal of Labor Economics*, 36(1), 121–157. <https://doi.org/10.1086/693869>
- Bénabou, R., & Tirole, J. (2006). Incentives and prosocial behavior. *American Economic Review*, 96(5), 1652–1678. <https://doi.org/10.1257/aer.96.5.1652>
- Besley, T., & Ghatak, M. (2005). Competition and incentives with motivated agents. *American Economic Review*, 95(3), 616–636. <https://doi.org/10.1257/0002828054201413>
- Bhalotra, S. R., & Umana-Aponte, M. (2010). *The dynamics of women's labour supply in developing countries*. IZA Discussion 4879. Institute for the Study of Labor. <https://ftp.iza.org/dp4879.pdf>
- Bickman, L., & Rog, D. J. (2008). *The SAGE handbook of applied social research methods*. SAGE Publications.
- Blau, F. D., & Kahn, L. M. (2017). The gender wage gap: Extent, trends, and explanations. *Journal of Economic Literature*, 55(3), 789–865. <https://doi.org/10.1257/jel.20160995>
- Boushey, H. (2008). "Opting out?" The effect of children on women's employment in the United States. *Feminist Economics*, 14(1), 1–36. <https://doi.org/10.1080/13545700701716672>
- Bruckauf, Z., & Chzhen, Y. (2018). Youth transitions to productive activities in Ethiopia: Gendered path dependencies and reciprocal links in adolescents' time allocation over time. Centre for the Study of African Economies (CSAE) Conference Paper.
- Carranza, E., & Pimkina, S. (2018). *Overcoming behavioral biases in job search: The value of action planning*. Gender Innovation Lab Policy Brief; No. 23. World Bank. <https://openknowledge.worldbank.org/handle/10986/29745>
- Casey, K. (2015). Crossing party lines: The effects of information on redistributive politics. *The American Economic Review*, 105(8), 2410–2448. <https://doi.org/10.1257/aer.20130397>
- Chang, M. L. (2004). Growing pains: Cross-national variation in sex segregation in sixteen developing countries. *American Sociological Review*, 69(1), 114–137. <https://doi.org/10.1177/000312240406900107>
- Crosen, R., & Gneezy, U. (2009). Gender differences in preferences. *Journal of Economic Literature*, 47(2), 448–474. <https://doi.org/10.1257/jel.47.2.448>
- DellaVigna, S. (2009). Psychology and economics: Evidence from the field. *Journal of Economic Literature*, 47(2), 315–372. <https://doi.org/10.1257/jel.47.2.315>
- Duffy, R. D., Blustein, D. L., Diemer, M. A., & Autin, K. L. (2016). The psychology of working theory. *Journal of Counseling Psychology*, 63(2), 127–148. <https://doi.org/10.1037/cou0000140>
- Duflo, E. (2012). Women empowerment and economic development. *Journal of Economic Literature*, 50(4), 1051–1079. <https://doi.org/10.1257/jel.50.4.1051>
- Espino, A., Isabella, F., Leites, M., & Machado, A. (2017). Do women have different labor supply behaviors? Evidence based on educational groups in Uruguay. *Feminist Economics*, 23(4), 143–169. <https://doi.org/10.1080/13545701.2016.1241415>
- Falco, P. (2014). Does risk matter for occupational choices? Experimental evidence from an African labour market. *Labour Economics*, 28(June), 96–109. <https://doi.org/10.1016/j.labeco.2014.03.005>
- Falk, A., Becker, A., Dohmen, T. J., Huffman, D., & Sunde, U. (2016). *The preference survey module: A validated instrument for measuring risk, time, and social preferences*. SSRN Scholarly Paper ID 2725035. Social Science Research Network. <https://papers.ssrn.com/abstract=2725035>
- Freese, J., & Long, J. S. (2006). *Regression models for categorical dependent variables using Stata*. Stata Press.
- Gobillon, L., Meurs, D., & Roux, S. (2015). Estimating gender differences in access to jobs. *Journal of Labor Economics*, 33(2), 317–363. <https://doi.org/10.1086/678495>

- Gradin, C. (2021). Occupational gender segregation in post-apartheid South Africa. *Feminist Economics*, 27(3), 102–133. <https://doi.org/10.1080/13545701.2021.1906439>
- Harris, J. (2020). Understanding the effects of a large development sector on the labour market of a small low-income country: Evidence from Sierra Leone. Doctoral Thesis. <https://ora.ox.ac.uk/objects/uuid:3ab10948-6449-45c4-993a-7d3c936c1e65>
- Heath, R., & Jayachandran, S. (2016). *The causes and consequences of increased female education and labor force participation in developing countries*. Working Paper 22766. National Bureau of Economic Research. <https://doi.org/10.3386/w22766>
- Jayachandran, S. (2021). Social norms as a barrier to women's employment in developing countries. *IMF Economic Review*, 69(3), 576–595. <https://doi.org/10.1057/s41308-021-00140-w>
- Jones, G. W., & Ramchand, D. S. (2016). Closing the gender and socio-economic gaps in educational attainment: A need to refocus. *Journal of International Development*, 28(6), 953–973. <https://doi.org/10.1002/jid.3051>
- Kandeh, J. D. (1992). Politicization of ethnic identities in Sierra Leone. *African Studies Review*, 35(1), 81–99. <https://doi.org/10.2307/524446>
- Khan, S., Ibrahim, S., Butt, R., Ahmed, B., & White, W. (2020). The influence of gender on career aspirations of University of Birmingham dental students and junior trainees in the West Midlands. *British Dental Journal*, 228(12), 933–937. <https://doi.org/10.1038/s41415-020-1704-6>
- Kidder, T., & Raworth, K. (2004). 'Good jobs' and hidden costs: Women workers documenting the price of precarious employment. *Gender and Development*, 12(2), 12–21. <https://doi.org/10.1080/13552070412331332150>
- Lo Bue, M. C., Ngoc Le, T. T., Silva, M. S., & Sen, K. (2021). Gender and vulnerable employment in the developing world: Evidence from global microdata. WIDER Working Paper 2021/154 Helsinki: UNU-WIDER. <https://doi.org/10.35188/UNU-WIDER/2021/094-8>
- Luci, A., Jütting, J., & Morrisson, C. (2012). Why do so many women end up in 'bad jobs'? A cross-country assessment for developing countries. *The European Journal of Development Research*, 24(4), 530–549. <https://doi.org/10.1057/ejdr.2011.54>
- Malin, L., & Jacob, M. (2019). Gendered occupational aspirations of boys and girls in Germany: The impact of local VET and labour markets. *Journal of Vocational Education & Training*, 71(3), 429–448. <https://doi.org/10.1080/13636820.2018.1517128>
- Manski, C. F. (1977). The structure of random utility models. *Theory and Decision*, 8(3), 229–254. <https://doi.org/10.1007/BF00133443>
- McFadden, D. L. (1973). Conditional logit analysis of qualitative choice behavior. In P. Zarembka (Ed.), *Frontiers in econometrics*. Academic Press.
- McFerson, H. M. (2012). Women and post-conflict society in Sierra Leone. *Journal of International Women's Studies*, 13(1), 46–67. <http://vc.bridgew.edu/jiws/vol13/iss1/4>
- McCleod, H., & Ganson, B. (2018). *The underlying causes of fragility and instability in Sierra Leone*. LSE-Oxford Commission on State Fragility, Growth and Development, International Growth Centre. https://www.theigc.org/wp-content/uploads/2018/04/Sierra-Leone-Report_Nov-2018_2.pdf
- Mello, Z. R. (2008). Gender variation in developmental trajectories of educational and occupational expectations and attainment from adolescence to adulthood. *Developmental Psychology*, 44(4), 1069–1080. <https://doi.org/10.1037/0012-1649.44.4.1069>
- Mitra, A., & Bang, J. T. (2021). Gender disparities in post-conflict societies: A cross-national analysis. *Feminist Economics*, 27(3), 134–160. <https://doi.org/10.1080/13545701.2021.1901128>
- Morse, J. (2010). Procedures and practice of mixed method design: Maintaining control, rigor, and complexity. In A. Tashakkori & C. Teddlie (Eds.), *SAGE handbook of mixed methods in social & behavioral research* (pp. 339–352). SAGE Publications, Inc. <https://doi.org/10.4135/9781506335193.n14>
- Nandan, A., & Mallick, H. (2020). Does gender equality matter for regional growth and income inequality? An empirical analysis for the Indian states. *Journal of International Development*, 32(4), 439–469. <https://doi.org/10.1002/jid.3460>
- OECD. (2013). Women in general government employment. In *Government at a glance 2013*. OECD Publishing. https://doi.org/10.1787/gov_glance-2013-40-en
- Powell, G. N., & Butterfield, D. A. (2003). Gender, gender identity, and aspirations to top management. *Women in Management Review*, 18(1/2), 88–96. <https://doi.org/10.1108/09649420310462361>
- Powers, R. S., & Wojtkiewicz, R. A. (2004). Occupational aspirations, gender, and educational attainment. *Sociological Spectrum*, 24(5), 601–622. <https://doi.org/10.1080/02732170490448784>
- Priyanka, S. (2020). Do female politicians matter for female labor market outcomes? Evidence from state legislative elections in India. *Labour Economics*, 64, 101822. <https://doi.org/10.1016/j.labeco.2020.101822>
- Rendall, M. (2013). Structural change in developing countries: Has it decreased gender inequality? *World Development*, 45(May), 1–16. <https://doi.org/10.1016/j.worlddev.2012.10.005>

- Roseth, B., & Srivastava, V. (2013). *Engaging for results in civil service reforms: Early lessons from a problem-driven engagement in Sierra Leone*. Policy Research Working Paper No. 6458. World Bank. <https://openknowledge.worldbank.org/handle/10986/15563>
- Roy, S., Morton, M., & Bhattachary, S. (2018). Hidden human capital: Self-efficacy, aspirations and achievements of adolescent and young women in India. *World Development*, 111, 161–180. <https://doi.org/10.1016/j.worlddev.2018.07.002>
- Santos-Pinto, L. (2012). Labor market signaling and self-confidence: Wage compression and the gender pay gap. *Journal of Labor Economics*, 30(4), 873–914. <https://doi.org/10.1086/666646>
- Shair-Rosenfield, S., & Wood, R. M. (2017). Governing well after war: How improving female representation prolongs post-conflict peace. *The Journal of Politics*, 79(3), 995–1009. <https://doi.org/10.1086/691056>
- Spierings, N. (2014). The influence of patriarchal norms, institutions, and household composition on women's employment in twenty-eight Muslim-majority countries. *Feminist Economics*, 20(4), 87–112. <https://doi.org/10.1080/13545701.2014.963136>
- Srivastava, V., & Larizza, M. (2013). Working with the grain for reforming the public service: A live example from Sierra Leone. *International Review of Administrative Sciences*, 79(3), 458–485. <https://doi.org/10.1177/0020852313491513>
- Statistics Sierra Leone. (2015). Sierra Leone 2014 labor force survey report. https://www.statistics.sl/images/StatisticsSL/Documents/Publications/2014/sierra_leone_labour_force_survey_report_2014-1.pdf
- Swiss, L., Fallon, K. M., & Burgos, G. (2012). Does critical mass matter? Women's political representation and child health in developing countries. *Social Forces*, 91(2), 531–558. <https://doi.org/10.1093/sf/sos169>
- Tassier, T., & Menczer, F. (2008). Social network structure, segregation, and equality in a labor market with referral hiring. *Journal of Economic Behavior & Organization*, 66(3–4), 514–528. <https://doi.org/10.1016/j.jebo.2006.07.003>
- USAID. (2019). *Gender equality and women's empowerment—Sierra Leone*. U.S. Agency for International Development. <https://www.usaid.gov/sierra-leone/gender-equality-and-womens-empowerment>
- Verick, S. (2014). Female labor force participation in developing countries. *IZA World of Labor*, 87, 1–10. <https://doi.org/10.15185/izawol.87>
- Verick, S. (2018). Female labor force participation and development. *IZA World of Labor*, 87v2, 1–11. <https://doi.org/10.15185/izawol.87.v2>
- World Bank. (2013). *Republic of Sierra Leone higher and tertiary education sector policy note*. Report ACS4393. The World Bank. <http://documents.worldbank.org/curated/en/857591468302730070/Sierra-Leone-Higherand-tertiary-education-sector-policy-note>

How to cite this article: Harris, J. (2022). Opting out of public sector employment: Gender and occupational aspirations among university graduates in Sierra Leone. *Journal of International Development*, 1–18. <https://doi.org/10.1002/jid.3712>

APPENDIX A: CORRELATION BETWEEN IMMEDIATE INTERNSHIP AND ASPIRATIONS

Four internships were created to ascertain immediate occupational choice. The internships were spread across the wage-employed private sector, the public sector, working for an international NGO or shadowing someone who had set up their own business. All internships were entry level with similar administrative tasks, were paid and lasted 3 months. Remuneration was the same across the internships, and all internships were with organisations based in the capital, Freetown, though respondents were not aware of the specific company at the time of choosing a sector for placement. The incentive is therefore designed to tease out desire for a given sector, while motivating truthful revelation by offering a highly desirable paid internship. Such internships are not readily available, and in cases where they exist, Sierra Leonean graduates use internships to enter the labour market. Four interns were selected (one per sector), and all successfully completed their placement.

Table A1 compares choosing the public sector for an internship in the experiment and identifying the public sector in the survey question: *Which type of organisation do you imagine working for?* The bivariate comparison shows a statistically significant relationship between the two, suggesting some path dependency where respondents with aspiration for public sector employment are more likely to opt for an internship in that sector.

TABLE A1 Sector choice by gender (n = 392)

	Public sector (aspirations)	Other sector (aspirations)	Total
Public sector (internship)	98	50	148
Other sector (internship)	55	189	244
	153	239	392

Note: Pearson $\chi^2(1) = 73.84$, $Pr = 0.000$. There is a significant association between aspiring for public sector employment and opting for the public sector in the incentive internships.

Source: Author-collected survey data.

APPENDIX B: ROBUSTNESS CHECKS

The results presented are robust to various specifications of the model, including (i) other demographic factors like age and ethnicity in column 2 of Table B1 and social status in column 1—as per the psychology of working theory (Autin et al., 2017; Duffy et al., 2016); (ii) type of training in column 3—in line with previous evidence from authors such as Malin and Jacob (2019); and (iii) individual preferences and latent traits in column 4—as per the mission matching literature (Bénabou & Tirole, 2006; Besley & Ghatak, 2005; Falco, 2014).

Standard multiple price lists were used to measure risk preferences (the willingness to take risks) and time preferences (the desire to bring forward future benefits) (see Falk et al., 2016, for more on these methods). Prosocial behaviour was elicited using a standard dictator game. Subjective social status was measured using anchored McArthur's ladders (see Adler & Stewart, 2007, for a general summary of McArthur's ladder). Cognitive ability was measured using Raven's matrices. All experimental measures were financially incentivised to motivate truthful preference revelations.

TABLE B1 Odds ratios: Occupational choice of university graduates

Model	1	2	3	4
Female	0.551*** (0.125)	0.630** (0.147)	0.558** (0.129)	0.507*** (0.117)
Social status	1.039 (0.0778)			
Age		1.072*** (0.029)		
Ethnicity—Krio		0.462* (0.216)		
Ethnicity—Mende		0.553** (0.161)		
Ethnicity—Limba		0.438* (0.2)		
Ethnicity—Fullah		0.543 (0.21)		
Ethnicity—Other		0.712 (0.218)		
Engineering			0.860 (0.365)	
Pure and applied sciences			2.337** (0.783)	
Social sciences			1.555* (0.406)	
Reservation wage				1.000 (0.0004)
Risk-taking behaviour				1.18 (0.181)
Present bias				0.94 (0.241)
Prosociality				2.344 (1.759)
Cognitive ability				1.01 (0.141)
N	392	388	392	390
LR χ^2	7.30**	21.63***	25.55***	12.19***

Note: The odds of females choosing the public sectors are slightly more than half that of males, ranging from 0.507 to 0.63. Results are significant and robust to different specifications. Degrees of freedom for LR χ^2 = no. of regressors.

* $p < 0.1$.

** $p < 0.05$.

*** $p < 0.01$.

Source: Author-collected survey data.