Being a woman versus working with women: structural discrimination and employment quality in the South African labour market

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Abstract
This study examines the complex interplay between individual identity and structural inequality in shaping employment quality in the South African labour market. Using nationally representative labour force data and an Employment Quality Index (EQI), the analysis explores how both individual characteristics and the demographic composition of occupation groups—particularly the representation of African women—is associated with job quality. The findings show that over-representation of African women within an occupation group is associated with lower employment quality for all workers, while more evenly gender-distributed occupation groups yield better outcomes across the board. The results underscore the need to distinguish between individual and structural interventions in policy design and caution against treating women as a homogenous category. This work contributes to intersectional and stratification economics literature by showing how structural discrimination persists through occupational sorting and how it affects both subordinate and privileged group members.

Keywords: Structural discrimination; stratification economics; occupational crowding; intersectionality; labour market inequality; employment quality

1 Introduction

A variety of exclusionary and sexist practices results in women and men being sorted systematically across occupations and industries (Alonso-Villar and del Río 2017; Salardi 2012; Gradín et al. 2011). Additionally, women's disproportionate responsibility for unpaid work in the household is a key explanatory factor for their inability to positively gain from the labour market to the same extent men do, affecting the types of jobs they are able to secure and reproducing their disadvantage in a multitude of ways (Mackett 2022). This is in large part why the gender wage gap and horizontal and vertical occupational segregation have persisted. Studies on quality of work have revealed that disparities in wages and location in the labour market are intricately linked to the disparities in the quality of work men and women experience; with African[1] women often experiencing the worst types of discrimination and exclusion within the labour market (Solberg and Laughlin 1995; Ntuli and Wittenberg 2013).

In the South African context, many labour market policies are aimed at ensuring *individual* mobility of members from subordinate groups, which consequently leaves the subordinate group stagnant in its positioning within the labour market and by extension society. This

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[1] In South Africa, population groups are historically split into four, based on apartheid-era classification. These include African, Indian, white, and Coloured. Although in contemporary South African policy, Indian, Coloured, and African individuals are collectively referred to as 'Black'. Where reference is made to 'African' individuals in this article, it thus specifically refers to Black Africans, i.e., excluding Coloured and Indian individuals.

introduces an interesting dilemma for those designing policies aimed at greater equity within the labour market. This individualist approach not only creates stratification within groups (for instance, when advancing exceptional African women through the labour market into a different class strata), but also fosters complex dynamics in the interests which individuals may pursue to protect their advantage (for example, class position) or engage in strategies which may further their subordinate group's (for example, race category) interests. This requires a more nuanced discussion in the aftermath of the implementation of many affirmative action (and similar) policies around the world and what continued discrimination means not only for those who form part of subordinate groups, but also the privileged individuals who exist in close proximity to disadvantaged groups.

The literature on systemic discrimination has traditionally focussed on the plight of disadvantaged individuals who are lumped *with* their disadvantaged groups (for instance, women working in feminised occupations), but less is known about how discrimination may affect more privileged individuals. Using an employment quality index as the outcome variable, this study sought to investigate whether the disadvantage of individuals from subordinate groups was associated with their individual characteristics or whether structural factors within the labour market were more strongly associated with their labour market outcomes. It additionally examined the position of privileged individuals in relation to their proximity to subordinate groups, showing that men tended to have better quality job in occupation groups over-represented with women, but not so in occupation groups crowded with African women. These penalties could, however, also be related to the ranking of the various occupation groups within the occupational classification. There are a variety of explanations which could potentially assist our understanding of group and individual privilege and disadvantage in the labour market. Some of these are explored in the theoretical debates considered in the next section.

2 Theoretical debates

Women and men have traditionally tended to do different types of work and the ways in which this gendered division of labour has been theorised in the labour market are plentiful. The human capital theory, for instance, claims that people will be rewarded according to their skill levels and that men and women tended to invest in and subsequently possess different sets of skills. Human capital theorists further posited that discrimination (deviating from the aforementioned process) would be costly for employers, but that it would be rational for them to carry this additional cost (Tomaskovic-Devey and Skaggs 2002; Becker 1962). As this theory was focussed on describing individual outcomes, it did not advance an understanding, however, about why women, as a group, tended to be systematically employed in certain occupations, nor why those occupation groups happened to earn lower wages. The occurrence of having men and women employed in certain types of occupations had become theorised as 'the crowding effect'.

The crowding hypothesis, primarily advanced by Barbara Bergmann (Small 2022; Bergmann 1974; 1971), "predicts that because of discrimination women and men are segregated into different occupations and that those doing 'women's work' earn less than those doing 'men's work' even though all workers are equally well qualified for both jobs" (Sorensen 1990, 56). As 'women's work' tends to be devalued, the jobs they are employed in pay less (Tomaskovic-

Devey and Skaggs 2002), as would those employed *alongside* women. The sex-typing of jobs (i.e., labelling jobs as male-typed or female-typed) is thus a key element for reinforcing inequalities between groups, and the phenomenon of segregation between and within occupations is thus also a measure of discrimination (Zellner 1972). The literature on discrimination highlights two layers of discrimination: the first being discrimination based on individual attributes and the second, discrimination based on group attributes.

Birkelund (1992), with the aid of an example, argued that teaching and engineering professionals largely require the same level of education, although a woman in an engineering occupation is likely to earn better wages compared to a woman working as a teacher, as the former is likely to be more male-dominated compared to the latter. In many ways, women are more likely to end up as teaching professionals due to structural factors, they are less likely than men to take up studies to obtain an engineering degree, and also less likely to be employed as such, even if they are qualified. A variety of social, economic, and cultural factors would converge to create differences in the likelihood of becoming an engineering professional between men and women. In such instances, controlling for similar levels of education would unlikely account for social stratification in the types of education that people pursue, even if the outcome levels of the education remain the same (Gibson et al. 1998; Darity et al. 2015; Darity 2005).

Debates about the occupational crowding hypothesis have resurfaced in recent years; particularly studying how the crowding effect interacts with stratification in the labour market and how it can incorporate intersectional approaches (Holder 2018; Wilson 2021; Small 2022; Small et al. 2023). Many elements in the occupational crowding hypothesis are relevant to the theorisation of stratification economists, as it relates to inequalities in the labour market. Stratification economics "examines intentional and structural processes that divide" groups, whether by gender, race, or other identity markers (Jennings et al. 2022, 579). The main argument is that individuals belonging to privileged groups will exploit their advantage to protect their privilege. Stratification economists have also challenged the postulates of mainstream economic thought which emphasises methodological individualism, as it requires sorting individuals into groups. For instance, the irrationality of discrimination is explicitly challenged as "discrimination is functional in promoting the privileged group's relative status" (Darity et al. 2015, 3). They further reject the notion that individual attributes are the only characteristics relevant to explaining positioning within society and the market.

Based on the behaviour of people within their various groupings, stratification economists reject the notion that accumulation of human capital will insulate individuals who belong to subordinate groups from discrimination (Darity 2005). However, authors such as Bradshaw (2021) and Davis (2015), have highlighted the neglect of intersectional analyses in the theorisations of stratification economics. Drawing out the main arguments of stratification economics, as they relate to group membership, Bradshaw argues that this theory is compelling only "when individuals identify with a singular homogenous group and where polarisation is high among social groups [but], it does not acknowledge that individuals often identify with multiple social groups and that this identification is not fixed" (Bradshaw 2021, 1). Davis (2015, 1217), on the other hand, argues that "social stratification and group-based inequality are offset or moderated by individuals' cross-cutting social group identities, which might imply that social conflict decreases in a world made up of increasingly heterogeneous

social groups." This creates a tension for individuals who may want to act in the interest of the various groups they form a part of to varying extents when social conflict arises. Within the constraints introduced by group membership, individuals may then choose to embrace their subordinate status or alternatively devalue their group membership in order to achieve individual economic and social mobility (Davis 2015).

The ability of individuals to transcend their group identity through social mobility illuminates the layers of discrimination in the labour market: at the individual level and the occupational level. For the purposes of the discussion, it is worth noting the definition of social identity, as discussed by Davis (2015). They define social identity as "the type of identity people have when they identify with others, where this can be either an identification with particular people with whom one interacts typically directly in certain social role settings…or an identification with people as members of social groups within which one identifies, commonly without knowing most group members" (Davis 2015, 1219). The relational identity is typically associated within a 'relational web' whether through kinship ties or employment status, while categorical identities are typically assigned based on characteristics, such as race or class. One can thus have an interest in advancing the plight of either your relational groups or categorical groups, depending on the issue at hand.

To the extent that an individual from a privileged group is employed in an occupation group where members from a subordinate group are crowded together or a member of a subordinate group finds themselves employed in an occupation group primarily consisting of privileged group members, these individuals may have varying motivations to pursue pro-own-group and/or anti-own-group agendas. This is certainly the case in the South African context where affirmative action policies have helped the plight of members who form part of subordinate groups, while simultaneously introducing a set of complexities regarding group membership for those who have managed to transcend (for instance, through class categorisation) the fate of their own group (like race categorisation) within the labour market.

3 An overview of the South African labour market

South Africa has a long and complex history of institutionalised racism and segregation in all facets of society, which the post-apartheid government has sought to redress with the introduction of a variety of polices; specifically labour market policies (Employment Equity Act 19370 of 1998 1998; Republic of South Africa 2002; Broad-Based Black Economic Empowerment Act 2003; National Minimum Wage Act No. 9 of 2018 2018). Prior to the abolishment of state-sponsored structural discrimination, job reservation policies provided white workers (primarily men) the privilege of being protected in jobs from which the Black majority of workers were barred from entering. This resulted in an abundance of labour supply of Black workers in certain occupations and reduced competition and increased wages for white workers in a different set of occupations; consistent with the theorisation of Bergmann's occupational crowding hypothesis (Bergmann 1971; Wolpe 1972). These structural inequalities which advanced racialised and patriarchal capitalism in southern Africa persist in large part in the contemporary South African labour market (Pons-Vignon and Di Paola 2014; Mosomi and Wittenberg 2020; Bhorat and Oosthuizen 2005).

Consequently, many occupation groups are not only over-represented by Black workers, but also women, with African women at the absolute bottom of the occupational hierarchy (Mosomi 2019; Ntuli and Wittenberg 2013). In response to this, the government has introduced policies aimed at both structural occupational interventions in the labour market and change at the individual level. At the occupational level, sectoral determinations, and economy-wide policies, such as the national minimum wage, have been most notable (Finn 2015; Castel-Branco 2016). These interventions are largely aimed at ensuring there is a floor below which workers at the bottom of the occupational hierarchy would not fall in terms of wages and related benefits. At the individual level, intentional advancement of Black people and other marginalised groups in the form of, for instance, increased levels of education, has allowed such groups to benefit from policies such as the Employment Equity Act, where equally qualified individuals from marginalised groups can receive preference in employment decisions (Thomas 2002).

However, those benefiting from economy or sector-wide policies would consequently not necessarily achieve social mobility through government interventions, as these interventions are aimed at elevating the status of *all* the occupational group members, without necessarily changing their positioning within the occupational hierarchy. For instance, an increase in the minimum wage of cleaners will not change the fact that cleaners will still be ranked lower than engineers in the occupational hierarchy. In other words, they are aimed at lifting floors rather than breaking ceilings. Those who benefit from individual interventions, on the other hand, can achieve social mobility, as they are provided preference in competition with more privileged members of society – allowing them to break free from their relational group within the labour market. Out of this, a new form of stratification is created within groups of similar people. For instance, class stratification amongst African women might become intensified, while white men employed in occupation groups where African women are over-represented may be disadvantaged as a result of the structurally disadvantaged positioning within the labour market.

4 Materials & methods

To demonstrate the association between quality of work and individual characteristics combined with being employed in an occupation group highly staffed with women, the study uses secondary labour force survey data. Quality of work was the main outcome variable, although a crowding index is also used to determine the extent to which women, and African women in particular, are over, under or evenly represented in occupation groups in the South African labour market.

4.1 Description of the data

The data used in this analysis come from the Labour Market Dynamics (LMD) Survey of 2019. The LMD survey is an amalgamation of the four Quarterly Labour Force Surveys (QLFS) conducted in the same year, including wage data, which are not released with the QLFS (Stats SA 2019).[2] The sample is nationally representative and includes roughly 30 000 households

[2] The raw dataset used in the paper are freely available for download from the DataFirst website (https://www.datafirst.uct.ac.za).

for each quarter. The data include a variety of variables related to the labour market, as well as demographic and household characteristics. A key variable used in the analysis was the occupation variable. The occupation variable was coded using sub-major (or 2-digit) level occupation groups as outlined in the South African Standard Classification of Occupations (SASCO) manual (Stats SA 2012). This SASCO is based on the International Labour Organization's (ILO) International Standard Classification of Occupations (ISCO-08). The codes used to create the occupation variable are reflected in Table 3.

Of particular interest here is the race variable. In South Africa, population groups are split into four, based on apartheid-era classification. These include African, Indian, white, and Coloured. Although in contemporary South African policy, Indian, Coloured, and African individuals are collectively referred to as 'Black', these groups were granted differing degrees of privilege and disadvantage during the Apartheid-era. In many ways this hierarchy is still reflected in the labour market. A consistent feature of racialisation in South Africa, however, is that African individuals were at the bottom of the hierarchy. Thus, all the analyses include the results disaggregated for African women only. Lastly, the analyses only included those between the ages of 25 and 64 (inclusive) to avoid conflation of the schooling sample amongst the youth cohort of the population.

4.2 The employment quality index (EQI)

The employment quality index (EQI) is the main variable of interest. Using a quality of work measure provides an opportunity to contribute to a literature which considers facets of inequality in the labour market beyond wages, which is a measure used in traditional labour market studies. This study used an index developed by Yu (2020), which also uses South African QLFS data. The index is developed using measures and recommendations from previous literature (see Yu (2020) for a comprehensive discussion) and specifically measures employment quality (aspects related to the job which could impact the worker's wellbeing, such as work hours and social protection) as opposed to work quality (aspects related to the quality of the work being performed, such as work intensity and work autonomy) (Yu 2020).

The EQI only includes objective measures of work and only includes binary measures, which are described in Table 1.[3] In their analysis, Yu (2020) included 18 indicators. These indicators included the 17 described in Table 1 as well as a variable which measured whether a worker was underemployed based on their education level. This variable was coded based on the years of educational attainment which a worker has. In their description, they state that "if the years of educational attainment of the worker is more than one standard deviation above the average education years in his/her broad occupation category, the worker is identified as over-educated because his/her skills are under-utilised" (Yu 2020, 282). In the analysis for this paper, this variable was excluded, as the educational attainment of a worker was used on the construction of the crowding index.

[3] Yu (2020) uses an index which includes only binary measures as well as an index which includes variables with more categories. For instance, in their analysis for the binary index working on weekends (Saturday/Sunday) is coded 0 if the worker said they work on weekends and 1 if they said that they did not. While in the latter index, this variable is coded 0 if the worker indicated they worked on both days, 0.5 if the worker indicated that they worked on either Saturday or Sunday or 1 if the worker indicated that they did not work on either of those days. In their analysis, there are no notable differences in the results which stem from the different methods. Thus, this study used the binary method.

Table 1: Employment Quality Index (EQI) indicator codes and descriptions

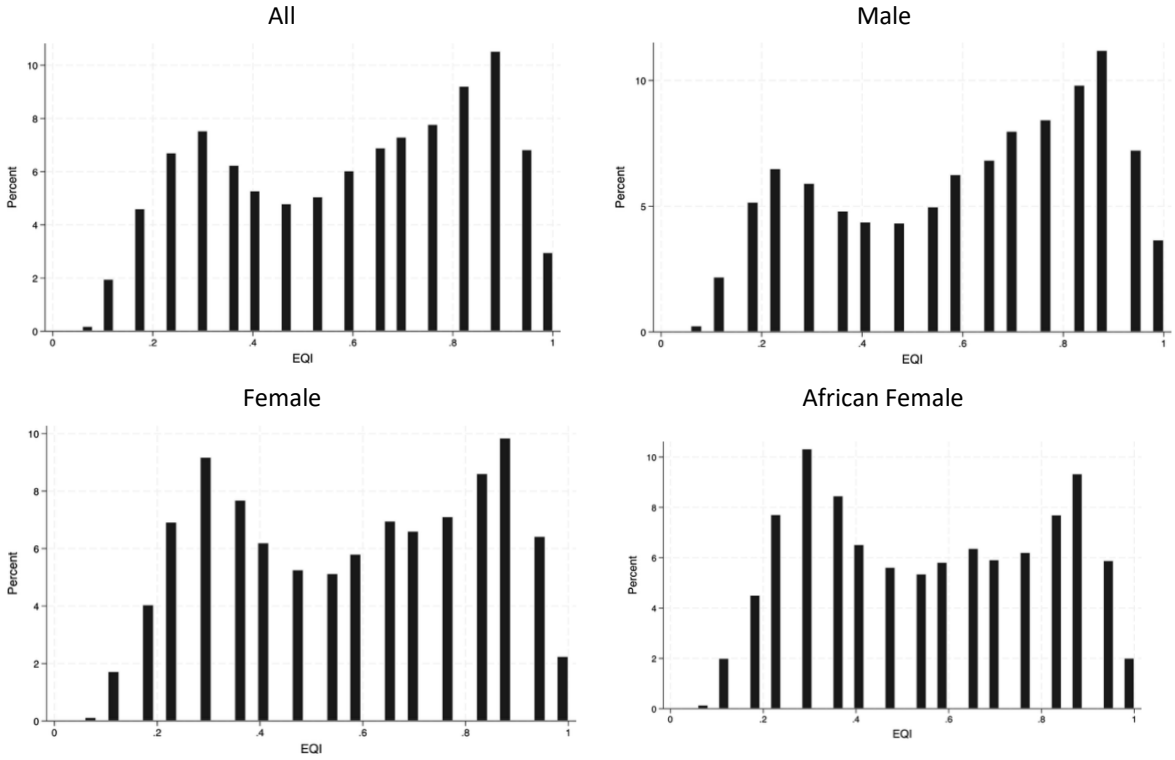
Indicator	Component	Code
Earnings	Based on the monthly wage, this variable indicated whether the worker earned above the national minimum wage (ZAR20 per hour). This was set at ZAR3,900 based on a 45-hour week.	1 = Above min wage 0 = Below min wage
Tenure	Indicator of whether respondent has been in their current job for at least a year.	1 = At least one year 0 = Less than a year
Contract type	The variable captured whether respondents had a written or a verbal contract.	1 = Written 0 = Verbal
Contract duration	Indicator of the nature of the contract under which a respondent is employed, where a 'permanent' contract provides for the most continuity amongst the three options available (permanent, temporary, casual).	1 = Permanent 0 = Casual or temporary
Firm size	The South African Employment Equity Act applies to countries employing 50 or more employees. Respondents who reported having more than 50 employees in their workplaces were coded as 1.	1 = Company has more than 50 employees 0 = Company has less than 50 employees
Paid leave	Indicator of whether the respondent is entitled to paid vacation leave or not.	1 = Yes 0 = No
Paid parental leave	Indicator of whether the respondent is entitled to paid maternity or paternity leave.	1 = Yes 0 = No
Pension contribution	This measure captured whether the respondent received a pension fund contribution as part of their work benefits.	1 = Yes 0 = No
Paid sick leave	Indicator of whether the respondent is entitled to paid sick leave or not.	1 = Yes 0 = No
UIF contribution	This measured captured whether respondents' employers contribute towards the Unemployment Insurance Fund (UIF) on their behalf.	1 = Yes 0 = No
Medical aid	This measure captured whether a respondent received a medical aid benefit at work.	1 = Yes 0 = No
Usual weekly hours	Indicator of whether respondent worked more than the 45 hours legislated in the Basic Conditions of Employment Act (BCEA)	1 = 45 hours or fewer 0 = more than 45 hours
Weekend work	This variable captured whether respondents reported working on a Saturday/Sunday.	1 = No 0 = Yes
Past week's hours equal usual weekly hours	This indicator forms part of the group of indicators in Yu's study which measures work-life balance and reflects employment security. Respondents who indicated that the past week's hours did not match the current week's hours were coded as 0.	1 = Yes 0 = No
Time-based underemployment	Time-based underemployment is based on a combination of questions which are asked of respondents. Thos who are coded as underemployed are those who reported working fewer than 35 hours a week,	1 = No 0 = Yes

	indicated that they wanted to work more hours, and are available to start this additional working within the next 4 weeks (Yu 2009).	
Trade union membership	This variable captured whether a respondent belonged to a union.	1 = Yes 0 = No
Salary increase determination	This indicator was constructed based on how the respondent indicated their salary increases are determined each year. According to Yu (2020, 282), "if the survey participant declared that salary increase is determined by negotiation between the employee and his/her employer, negotiation between the union and his/her employer, or bargaining council…this suggests the presence of some form of social dialogue." Those who indicated that they receive no regular salary increase or that this increase is determined by the employer only were coded as 0.	1 = Some dialogue 0 = No dialogue/no increase

The scores were combined to give each respondents in the sample a unique EQI score: $\sum_{i=1}^{m} w_i I_i$, where w_i provides each indicator with an equal weight ($w_i = 1/17$) and I_i is the individual indicator for each worker, between the values of 0 and 1 (Yu 2020). this provided a score between 0 and 1 where individuals with scores closer to 0 had poorer work quality (based on the measured components) and individuals closer to 1 had better quality jobs.

The frequency distributions of the EQIs for each group studied in this paper are presented in Figure 1.

Figure 1: Frequency distributions for EQI scores (percentages)



4.3 The crowding index

The crowding index was developed by Barbara Bergmann (1971). Given that men and women are likely to systematically differ in the types of skills (or human capital) they possess, this index explicitly includes only those individuals who are 'qualified' to be in a particular position. To do so, the number of working-age individuals who are qualified to take up a position is weighed up against the number of individuals who are employed within the position. The proportions for not economically active, employed, and unemployed individuals within each group under study in this paper are reflected in Table 2.

Table 2: Employment status by group (proportions)

	All	Male	Female	African Female
Not economically active	0.281	0.202	0.357	0.353
Employed	0.539	0.609	0.471	0.453
Unemployed	0.180	0.188	0.172	0.194
N	124850	57589	67261	54805

Source: LMD 2019. Note: Data are weighted. Standard errors in parentheses. All proportions are significantly different from 0 at p<0.001.

To determine qualification, all working-age individuals who had between the 25th and 90th percentile of educational attainment for a particular occupation group were considered qualified (Gibson et al. 1998; Small et al. 2023). By doing so, it undermines the assumption made by human capital theorists about the lack of supply amongst certain groups for occupations in the labour market. The mean, 25th and 90th percentile levels of education for the various occupation groups are displayed in Table 3.

Table 3: Occupation group codes, education levels for 25th percentile, 90th percentile, and mean level of education for occupation groups

Code	Occupation Group	25th Percentile	90th Percentile	Mean
11	Chief executives, senior officials & legislators	Complete Secondary	Tertiary	Complete Secondary
12	Administrative & commercial managers	Complete Secondary	Tertiary	Complete Secondary
13	Production & specialised services managers	Incomplete Secondary	Tertiary	Complete Secondary
21	Science & engineering professionals	Tertiary	Tertiary	Tertiary
22	Health professionals	Tertiary	Tertiary	Tertiary
23	Teaching professionals	Tertiary	Tertiary	Tertiary
24	Business & administration professionals	Tertiary	Tertiary	Tertiary
31	Science & engineering associate professionals	Complete Secondary	Tertiary	Complete Secondary
32	Health associate professionals	Complete Secondary	Tertiary	Complete Secondary
33	Business & administration associate professionals	Tertiary	Tertiary	Tertiary
34	Legal, social & cultural associate professionals	Complete Secondary	Tertiary	Complete Secondary
41	General & keyboard clerks	Complete Secondary	Tertiary	Complete Secondary
42	Customer services clerks	Complete Secondary	Tertiary	Complete Secondary
51	Personal service workers	Incomplete Secondary	Tertiary	Complete Secondary
52	Sales workers	Incomplete Secondary	Complete Secondary	Complete Secondary
61	Skilled agricultural workers	Incomplete Secondary	Tertiary	Incomplete Secondary
62	Skilled forestry, fishery & hunting workers	Incomplete Primary	Complete Secondary	Incomplete Secondary
71	Building & related trades workers	Incomplete Secondary	Complete Secondary	Incomplete Secondary
72	Metal, machinery & related trades workers	Incomplete Secondary	Tertiary	Complete Secondary
73	Handicraft & printing workers	Incomplete Secondary	Complete Secondary	Incomplete Secondary

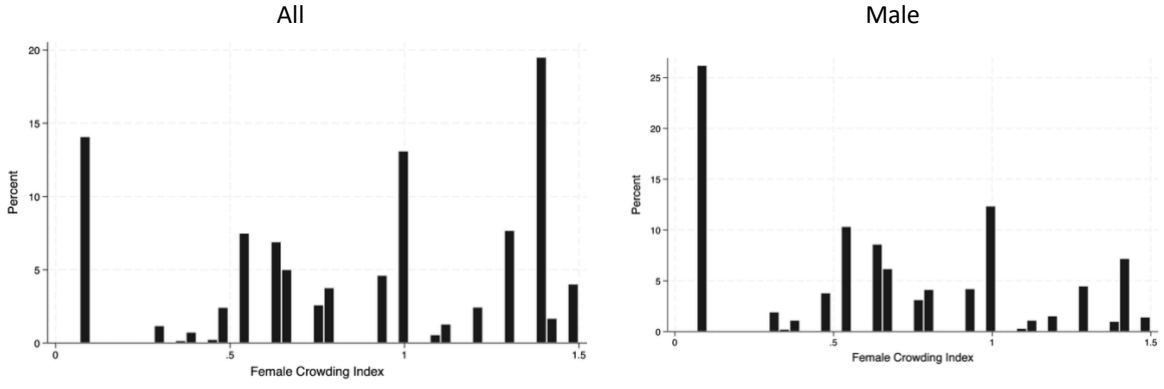
75	Food processing, woodworking, garment and related trades workers	Incomplete Secondary	Complete Secondary	Incomplete Secondary
81	Stationary plant & machine operators	Incomplete Secondary	Complete Secondary	Complete Secondary
82	Assemblers	Incomplete Secondary	Complete Secondary	Complete Secondary
83	Drivers & mobile plant operators	Incomplete Secondary	Complete Secondary	Incomplete Secondary
91	Cleaners	Incomplete Secondary	Complete Secondary	Incomplete Secondary
92	Agriculture, forestry & fishery workers	Incomplete Primary	Complete Secondary	Incomplete Secondary
93	Mining, construction, manufacturing & transport workers	Incomplete Secondary	Complete Secondary	Incomplete Secondary

The crowding index was calculated using formula (1):

$$Crowding_i = \frac{F_i/W_i}{F_i^{edu}/WP_i^{edu}} \quad (1)$$

Where F_i represents the females employed in occupation i and W_i, all workers employed in occupation i. While F_i^{edu} represents the females in the working population with the necessary education levels to be employed in occupation i and WP_i^{edu} the number of people in the working-age population with the relevant education level for occupation i. The same formula was used to calculate the crowding index for African females. The strength of using the crowding score is that it reflects an element of discrimination in the labour market, given that it weighs up the share of suitably qualified workers in the population against the actual number of workers in the occupation group. Lastly, occupation groups with an index below 0.9 were considered under-represented, values greater than 1.1 over-represented, and those with values in between, evenly-represented (Gibson et al. 1998). The frequency distributions for the crowding indices for each group studied in this paper are presented in Figure 2 and Figure 3.

Figure 2: Frequency distributions for Female Crowding Index (percentages)



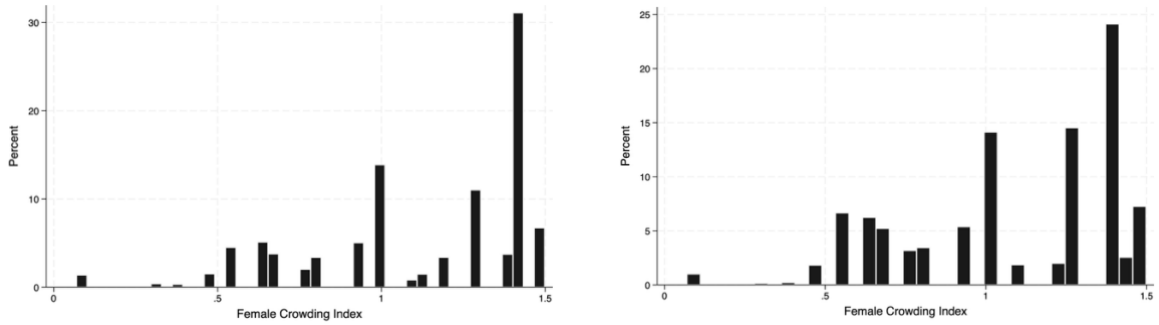
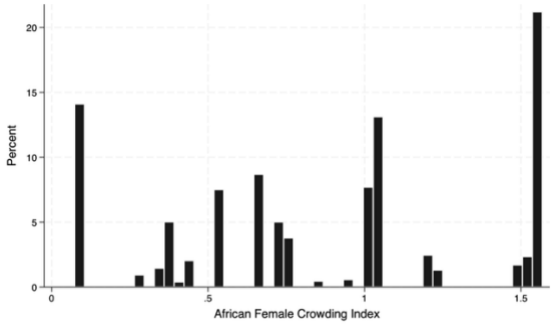
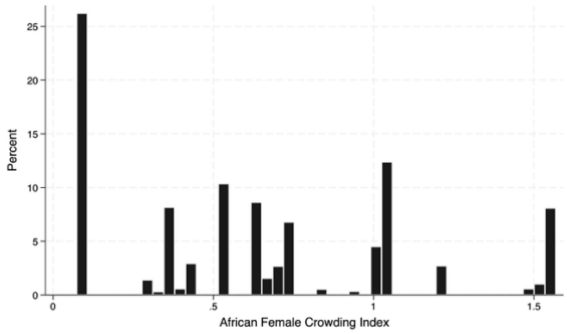


Figure 3: Frequency distributions for African Female Crowding Index (percentages)

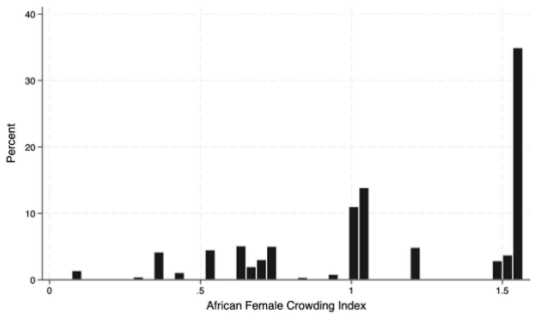
All



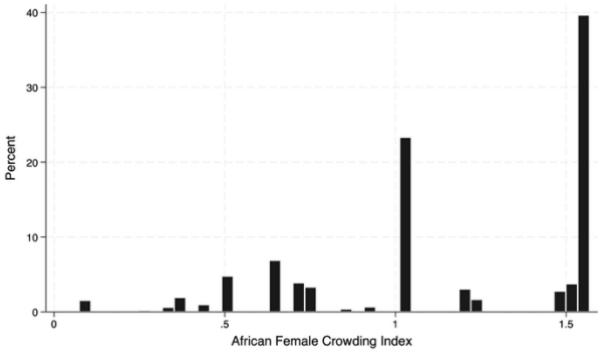
Male



Female



African Female



4.4 Analysis

The crowding index was used descriptively in the paper, while the EQI was analysed using regression analyses. The first set analysed the correlates of the EQI using fractional probit regressions. Fractional probit regressions are suitable for dependent variables limited to values between 0 and 1 (inclusive) (Papke and Wooldridge 1996). The regressions took on the following form:

$$E(y_i|x_i, \varepsilon_i) = \emptyset(x'_i\beta_i + \varepsilon_i) \quad (2)$$

where y_i was the EQI, $0 \leq y \leq 1$, x'_i the vector of observed explanatory variables for individual i with corresponding parameter vectors, β_i, and $\emptyset$ the cumulative distribution function. Lastly, ε_i captured the unobserved variables. The explanatory variables included gender, age, age squared, race, geographical location, marital status, education, sector, industry of employment, as well as a control for province of residence. These were estimated

using pooled regressions (including both male and female respondents) as well as disaggregated by gender and run separately for African females.

The second set of regressions estimated the association between the share of female and African female workers in an occupation on the EQI of the individual. As discussed in the literature review, crowding of groups within occupations may be associated with the structural disadvantage of individuals belonging to subordinate groups and vice versa. Further, literature has shown that the feminisation of occupations is associated with a decrease in the quality of those occupations, whether it be in working conditions or the wages paid in those jobs (Ozler 2000; Seguino 2000; 2007; Standing 1989). The crowding of African females, in particular, may be associated with even worse outcomes. The EQI was again used as a dependent variable in these regressions, and the model took on the following form:

$$E(y_i|z_i, x_i, \varepsilon_i) = \emptyset(z_i\delta_i + x'_i\beta_i + \varepsilon_i) \quad (3)$$

where the variables in equation (3) represent the same variables presented in equation (2), with the addition of z_i and it corresponding parameter, δ_i, representing the female shares and African female shares by occupation group, included separately for each regression.

4.5 Limitations

The analysis presents a number of limitations. The first is that the EQI was created using the available variables in the LMD survey and includes variables which are objectively measurable and observable. There are additional subjective measures which could be included in the design of a EQI. The measure here should thus not be interpreted as an exhaustive list of indicators workers might consider when contemplating the quality of their work (see Mackett (2020) for further discussion). The second limitation related to educational quality. In South Africa, educational quality may differ, even amongst individuals who have the same level of education, and this may overestimate the availability of qualified workers in the crowding index. However, due to the nature of the data, the analysis is unable to control for the quality of education, but rather only the level of educational attainment, as captured by the education variable. A similar undertaking is evident in previous literature which considers the education levels of workers in the labour market (Serumaga-Zake and Kotze 2004; Gradín 2021; Ntuli and Wittenberg 2013).

In addition to these limitations are issues related to endogeneity and sample selection. There is the possibility that differences in gendered occupational outcomes and occupational segregation could be driven by self-selection of females and African females particularly, into certain occupations (Borrowman and Klasen 2020). A variety of similar studies in the South African context have been undertaken on female labour market outcomes and one conducted by Ntuli (2007b), in which they account for selection bias, found that the female selection bias terms were largely insignificant in the analyses undertaken. Additionally, other studies have opted to avoid accounting for selection using the Heckman selection model, while others have highlighted the limitations of accounting for selection, specifically in the South African context, but have produced robust results nonetheless. A summary of these studies and their reasoning are discussed in Bhorat and Goga (2013).

Lastly, given the nature of the variables included in the index, self-employed individuals are excluded from the analyses, as they have a different relationship to the labour market compared to employees in relation to the variables used and thus do not have data for some of the variables included in the analysis (for instance, contract type and union membership). Mackett (2020) again provides useful discussion on this motivation.

5 Results

The analysis starts with an overview of how females are distributed within the labour market by looking at the female share within each occupation and the African female share. This is followed by a discussion of the crowding indices of females and African females, and ends with the results from the regression analysis which looks at the determinants of the decent work score by occupation group. However, before a discussion of the results from the analysis, the following section briefly discusses the mean values of all the variables included in this study.

5.1 Descriptive statistics for the sample

Table 4 displays the mean descriptive statistics for the study sample variables. These statistics include mean values for the pooled sample, males only, females only, and lastly African females. The data show that the mean EQI score for the entire sample was 0.606 (on a scale from 0 to 1), the EQI for males only was 0.620, 0.591 for females only, and 0.566 for African females. The female crowding index, which shows whether women are over, under, or evenly represented in occupation groups are also displayed. Values below 0.9 indicate an under-representation of women, values greater than 1.1 indicate an over-representation, and everything in-between is considered evenly represented. The data show that for the pooled sample, scores generally reflected under-representation in the occupation groups in which the sample worked, with a value of 0.871. The male sample's score showed than on average males worked in occupation groups which suffered from more severe under-representation, with a score of 0.628. The female and African female samples, on the other hand, both reflected work in occupation groups which were over-represented with women. The female sample had a mean score of 1.119, while the African female sample had a score of 1.134. The African female crowding index displayed the same data as the female crowding index, but for the concentration of African females within occupation groups. The pooled sample score was slightly lower than the female crowding index score, with a value of 0.864. This indicates that on average occupation groups in the sample tended to have an under-representation of African female workers. The score for males still reflected an under-representation (0.628), while the scores for the female (1.132) and African female (1.168) samples showed an over-representation.

The table also shows the mean female shares for workers in the sample, or the share within the individual worker's occupation group which is made up of females. These are the values used to estimate equation (3). The data show that the average female share across the sample was 0.468, while the value for males only was much lower, 0.350. For females, the average female share was 0.601 and 0.609 for African females. Similarly, the African female share indicated a lower value for the pooled sample; 0.365. This indicates that for the pooled sample, the proportion of African females represented within each occupation group was less

than 40% of workers. The value for males was 0.266, for females, 0.477, and for African females, 0.495. Thus, for occupation groups where females and African females worked, almost half the occupation group was made up of females and African females.

The table further shows that males made up a larger share of the sample (0.531) than females (0.469). The average age within the sample was 40 years old and most of the sample was made up of Africans (over 80% for pooled, male and female samples). The values for the pooled sample showed that most workers were married (0.511), this was also the case for the male sample (0.559), but not necessarily for the female (0.456) and African female (0.407) samples. As expected, the majority of workers resided in urban areas across the samples, while the largest shares of workers had an incomplete or complete secondary schooling. Most workers worked in the formal sector, although the mean values for workers in the formal sector were higher for the male sample than they were for the female samples. Lastly, for the pooled sample, close to a quarter of workers worked in the Community sector (which encapsulates work in social work, education and healthcare for instance) , while more than a third of females (0.341) and African females (0.341) worked in this sector. Most notable here is that a fifth of African female workers (0.214) worked in Private Households.

Table 4: Mean descriptive statistics for sample

	All		**Male**		**Female**		**African Female**	
	Mean	**SE**	**Mean**	**SE**	**Mean**	**SE**	**Mean**	**SE**
Employment Quality Index (EQI)	0.606	(0.00)	0.620	(0.00)	0.591	(0.00)	0.566	(0.00)
Female crowding index	0.871	(0.00)	0.652	(0.00)	1.119	(0.00)	1.134	(0.00)
African female crowding index	0.864	(0.00)	0.628	(0.00)	1.132	(0.00)	1.168	(0.00)
Female share	0.468	(0.00)	0.350	(0.00)	0.601	(0.00)	0.609	(0.00)
African female share	0.365	(0.00)	0.266	(0.00)	0.477	(0.00)	0.495	(0.00)
Male	0.531	(0.00)						
Female	0.469	(0.00)						
Age	40.159	(0.05)	39.695	(0.07)	40.685	(0.07)	40.427	(0.08)
African	0.813	(0.00)	0.809	(0.00)	0.818	(0.00)		
Coloured	0.077	(0.00)	0.075	(0.00)	0.080	(0.00)		
Indian	0.022	(0.00)	0.028	(0.00)	0.016	(0.00)		
White	0.087	(0.00)	0.088	(0.00)	0.086	(0.00)		
Not married	0.489	(0.00)	0.441	(0.00)	0.544	(0.00)	0.593	(0.00)
Married	0.511	(0.00)	0.559	(0.00)	0.456	(0.00)	0.407	(0.00)
Urban	0.736	(0.00)	0.740	(0.00)	0.731	(0.00)	0.691	(0.00)
Traditional	0.194	(0.00)	0.175	(0.00)	0.216	(0.00)	0.264	(0.00)
Rural	0.070	(0.00)	0.085	(0.00)	0.053	(0.00)	0.045	(0.00)
No schooling	0.021	(0.00)	0.020	(0.00)	0.022	(0.00)	0.026	(0.00)
Incomplete primary	0.065	(0.00)	0.071	(0.00)	0.059	(0.00)	0.063	(0.00)
Incomplete secondary	0.388	(0.00)	0.404	(0.00)	0.371	(0.00)	0.396	(0.00)
Complete secondary	0.312	(0.00)	0.318	(0.00)	0.305	(0.00)	0.294	(0.00)
Tertiary	0.214	(0.00)	0.188	(0.00)	0.243	(0.00)	0.221	(0.00)
Informal	0.188	(0.00)	0.141	(0.00)	0.241	(0.00)	0.271	(0.00)
Formal	0.812	(0.00)	0.859	(0.00)	0.759	(0.00)	0.729	(0.00)
Agriculture	0.069	(0.00)	0.089	(0.00)	0.047	(0.00)	0.044	(0.00)
Mining	0.033	(0.00)	0.051	(0.00)	0.011	(0.00)	0.011	(0.00)
Manufacturing	0.103	(0.00)	0.129	(0.00)	0.075	(0.00)	0.065	(0.00)
Utilities	0.011	(0.00)	0.014	(0.00)	0.007	(0.00)	0.007	(0.00)
Construction	0.069	(0.00)	0.109	(0.00)	0.024	(0.00)	0.025	(0.00)
Trade	0.148	(0.00)	0.145	(0.00)	0.152	(0.00)	0.153	(0.00)
Transport	0.057	(0.00)	0.087	(0.00)	0.023	(0.00)	0.021	(0.00)
Financial	0.150	(0.00)	0.164	(0.00)	0.133	(0.00)	0.118	(0.00)

Community	0.248	(0.00)	0.166	(0.00)	0.341	(0.00)	0.341	(0.00)
Private Households	0.112	(0.00)	0.046	(0.00)	0.187	(0.00)	0.214	(0.00)
N	39186		19686		19500		16250	

Source: LMD 2019. Note: Data are weighted. Standard errors in parentheses. All means are statistically different from 0 at p<0.001.

5.2 Female share by occupation group

Table 5 shows the share of each occupation group within the occupational distribution and the female and African females employed in each occupation group. The data show that the two largest occupation groups were personal service workers and cleaners. They respectively made up 13% and 17% of all the workers in the sample. Both of these occupation groups had high female shares as well: 53.7% and 74.9%, respectively. Out of the 27 occupation groups included in the sample, women dominated 10 occupation groups, with the highest shares in health associate professionals (76.3%), cleaners (74.9%), and customer service clerks (79.9%). For many of the occupation groups where females dominated, African females were also dominant. The highest African female shares were evident amongst cleaners (68.9%), customer service clerks (61.5%), business and administration associate professionals (59.5%), health associate professionals (58.8%), and workers in food processing, woodworking, garment and related trades (53.8%).

The types of jobs included in these occupation groups included nursing and midwifery associate professionals, veterinary technicians and assistants, traditional and complementary medicine associate professionals, and medical and pharmaceutical technicians for health associate professionals. Customer service clerks included bank tellers, pawn brokers, receptionists, and travel operators. Cleaners included those who generally perform cleaning tasks, such as domestic cleaners, street sweepers, office and hotel cleaners, as well as building care takers. While food processing, woodworking, garment and related trades workers included those who treat and process food stuff such as meat, fish and vegetables, workers who treated fibres, skins and hides, and made or repaired furniture or garments, hats and shoes. A large body of work has highlighted how work predominantly performed by women in the labour market is closely linked to the division of labour within the household, but also how apartheid-era segregation of work continues in the contemporary South African labour market, with women restricted in the labour market through a variety of mechanisms on both the demand and supply side (Serumaga-Zake and Kotze 2004; Mosoeta 2001; Ntuli and Wittenberg 2013). Furthermore, the continued over-representation of African women in domestic work, highlights the intersectional nature of African women's oppression, as they experience exploitation and oppression, even at the hands of middle-class African employers (Bosch and McLeod 2015; Maqubela 2016; Dawood and Seedat-Khan 2023).

Table 5: Occupational share, female share and African female share by occupation group

	Occupation Share	**Female Share**	**African female Share**
Chief executives, senior officials & legislators	0.476	0.404	0.333
Administrative & commercial managers	5.091	0.354	0.149
Production & specialised services managers	0.241	0.249	0.141
Science & engineering professionals	0.852	0.217	0.109*
Health professionals	0.538	0.615	0.365
Teaching professionals	2.358	0.672	0.468*

Business & administration professionals	1.751	0.519	0.256
Science & engineering associate professionals	1.963	0.260	0.169
Health associate professionals	1.606	0.763	0.585
Business & administration associate professionals	2.233	0.769	0.595
Legal, social & cultural associate professionals	2.660	0.496	0.280*
General & keyboard clerks	7.284	0.686	0.400
Customer services clerks	3.684	0.799	0.615
Personal service workers	13.143	0.537	0.449
Sales workers	3.525	0.426	0.328
Skilled agricultural workers	0.234	0.191	0.126*
Skilled forestry, fishery & hunting workers	0.072	0.270	0.270
Building & related trades workers	4.822	0.047	0.042
Metal, machinery & related trades workers	3.275	0.046	0.038
Handicraft & printing workers	0.396	0.252	0.177
Food processing, woodworking, garment and related trades workers	1.303	0.596	0.538
Stationary plant & machine operators	1.287	0.164	0.150
Assemblers	2.055	0.404*	0.316
Drivers & mobile plant operators	5.958	0.037	0.032
Cleaners	17.239	0.749	0.689
Agriculture, forestry & fishery workers	8.711	0.284	0.230
Mining, construction, manufacturing & transport workers	7.240	0.339	0.284
N	39483	39483	39483

Source: LMD 2019. Note: Data are weighted. *Mean not statistically significant. All other differences are statistically different from 0 at p<0.001.

5.3 Crowing and decent work index

Table 6 is split into two parts. The first part of the table reflects the crowding index by occupation group. As noted, a score greater than 1.1 reflects an occupation group in which females or African females are over-represented. A score between 1.1 and 0.9 reflects an occupation group in which they are evenly represented, while scores smaller than 0.9 are occupation groups in which they are under-represented. The scores for females and African females are reported separately in the second and third columns of the table.

As is evident from Table 5, the occupation groups in which women had greater than 50% shares are also the ones in which they were over-represented (health associate professionals, customer service clerks, and cleaners). Although, there were also occupation groups where they may have been dominant but in which they were evenly represented. Some of these, for the overall female shares, included business and administrative professionals, legal, social and cultural associate professionals, and customer service clerks. The former was female-dominated

Similarly, for the African female shares, African women were over-represented as personal service workers, although were not dominant in this occupation group. Additionally, they made up 40% of general and keyboard clerks, but were over-represented according to the crowding index. This shows the importance of taking additional factors into account when studying equity across the labour market, such as the share of the workforce which would be qualified to work in a particular job.

The second part of Table 6 shows the average EQI by occupation group. The averages are also disaggregated for males, females, and African females. The data show that the best performing occupation groups in terms of EQI scores were science and engineering professionals and associate professionals, health professionals, and teaching professionals. African female science and engineering and health professionals interestingly scored higher than both females and males in the same occupation groups, while the score for females in general was highest amongst teaching professionals.

The opposite was true for the lowest scoring occupation groups (excluding agricultural work), which included personal service workers, sales workers, and cleaners for females and African females. Across these three groups, females overall had higher scores than the disaggregated scores of African females. The scores for males were also consistently the highest, compared to females and African females, for these three groups. These data show that although females in general and African females, in particular, perform well and poorly in the same areas, African females seem to have higher gains at the top of the occupational distribution compared to at the bottom. This highlights the growing centrality of class inequality within the South African labour market and, by extension, society.

Table 6: Crowding Index and Employment Quality Index by occupation group

	Crowding index		Employment Quality Index				Diff	
	Female	African female	All	Male (1)	Female (2)	African female (3)	(1)-(2)	(1)-(3)
Chief executives, senior officials & legislators	0.757	0.847	0.744	0.743	0.746	0.732	-0.003	0.011
Administrative & commercial managers	0.664	0.378	0.789	0.782	0.803	0.816	-0.021	-0.034
Production & specialised services managers	0.463	0.328	0.627	0.627	0.627	0.619	0	0.008
Science & engineering professionals	0.389	0.280	0.826	0.819	0.851	0.860	-0.032	-0.041
Health professionals	1.102	0.941	0.836	0.852	0.829	0.865	0.023	-0.013
Teaching professionals	1.204	1.206	0.832	0.820	0.838	0.837	-0.018	-0.017
Business & administration professionals	0.929	0.660	0.799	0.781	0.816	0.836	-0.035	-0.055
Science & engineering associate professionals	0.488	0.429	0.814	0.823	0.789	0.785	0.034	0.038
Health associate professionals	1.431	1.487	0.793	0.787	0.795	0.793	-0.008	-0.006
Business & administration associate professionals	1.378	1.533	0.755	0.770	0.752	0.743	0.018	0.027
Legal, social & cultural associate professionals	0.930	0.712	0.718	0.710	0.725	0.720	-0.015	-0.01
General & keyboard clerks	1.288	1.017	0.778	0.788	0.773	0.772	0.015	0.016
Customer services clerks	1.498	1.563	0.641	0.643	0.641	0.629	0.002	0.014
Personal service workers	0.997	1.044	0.580	0.622	0.537	0.523	0.085	0.099
Sales workers	0.796	0.748	0.548	0.566	0.521	0.504	0.045	0.062
Skilled agricultural workers	0.355	0.293	0.532	0.555	0.454	0.394	0.101	0.161
Skilled forestry, fishery & hunting workers	0.506	0.609	0.235	0.235	0.235*	0.235*	0	0
Building & related trades workers	0.087	0.095	0.545	0.540	0.624	0.615	-0.084	-0.075
Metal, machinery & related trades workers	0.086	0.088	0.678	0.674	0.736	0.732	-0.062	-0.058
Handicraft & printing workers	0.472	0.403	0.499	0.476	0.585	0.590	-0.109	-0.114
Food processing, woodworking, garment and related trades workers	1.116	1.225	0.604	0.570	0.630	0.620	-0.06	-0.05
Stationary plant & machine operators	0.305	0.349	0.773	0.777	0.748	0.736	0.029	0.041
Assemblers	0.755	0.720	0.728	0.746	0.697	0.680	0.049	0.066
Drivers & mobile plant operators	0.069	0.073	0.562	0.557	0.706	0.722	-0.149	-0.165
Cleaners	1.402	1.568	0.432	0.508	0.414	0.412	0.094	0.096
Agriculture, forestry & fishery workers	0.532	0.520	0.445	0.438	0.464	0.433	-0.026	0.005
Mining, construction, manufacturing & transport workers	0.635	0.647	0.595	0.600	0.586	0.573	0.014	0.027
N			39483	19844	19639	16374		

Source: LMD 2019. Note: Data are weighted. *Mean not statistically significant, all other differences are statistically different from 0 at p<0.001.

Table 7 shows the combined average EQIs of occupation groups which are evenly, over, and under-represented by females in general and African females. The table shows the scores for the pooled sample and is disaggregated for males only, females only and African females only. The data show that when considering the female crowding index, that the pooled sample produced the highest EQI scores for evenly represented occupation groups. For males, the highest EQI scores were in occupation groups which were over-represented with females, while both the female and African female samples had the highest EQI scores in occupation groups which were under-represented with females. The lowest average EQI scores, on the other hand, were in occupation groups which were over-represented with females for the pooled sample, under-represented for the male sample and over-represented for the female and African female samples. These data show that for the sample, occupation groups which were over-represented with females were the worst performing in terms of quality. This is expected from theory which suggests that subordinate groups tend to be pushed into lower quality jobs, where they then tend to be over-represented. However, the data for the male sample show that men generally gained from this over-representation. Even if these occupation groups were systematically lower in quality, this is not reflected in their EQI scores. This could likely be a reflection of the "glass escalator effect", where men face structured advantages within occupations characterised as 'women's work', which also typically tends to be poorly performing jobs in terms of quality (Williams 1992).

For the African female crowding index, across all the samples, the data show that the highest EQI scores were amongst occupation groups in which African females were evenly represented, while the lowest were in occupation groups where they were over-represented. Again, these data suggest that occupations groups characterised by an over-representation of African females performed most poorly, likely a reflection of the types of occupation groups in which African females are crowded into, but that the even-representation of African females is beneficial to everyone, likely also a reflection of the characteristics (potentially more inclusive) of those types of occupation groups.

Lastly, the table shows that on average men tended to have higher EQI scores than women in evenly and over-represented occupation groups, while females tended to have higher average scores in under-represented occupation groups. The largest difference was also evident in over-represented occupation groups. Furthermore, the female sample scored higher in all types of occupations compared to African females, highlighting the importance of not treating women as a homogenous group. These differences again suggest that evenly represented occupation groups are characterised by the least gender differences not only in terms of representation but also quality. This highlights the importance of policies aimed at increasing the representation of subordinate groups in occupation groups in which they are under-represented.

Table 7: Decent work scores by crowding categories

	Female Crowding				**African female Crowding**			
	All	**Male**	**Female**	**African Female**	**All**	**Male**	**Female**	**African Female**
Evenly represented	0.623	0.651	0.594	0.570	0.655	0.667	0.646	0.621
Under-represented	0.605	0.602	0.619	0.591	0.618	0.609	0.643	0.616
Over-represented	0.597	0.656	0.578	0.554	0.546	0.604	0.53	0.514

N	39483	19844	19639	16374	19483	19844	19639	16374

Source: LMD 2019. Note: Data are weighted. The differences between representation scores in each column were significant at p<0.001. T-test differences calculated between male and female scores. All means are significantly different from 0 at p<0.001.

5.4 Regression results

Using the EQI as an outcome variable, Table 8 shows the determinants of the EQI, disaggregated for males, females overall, and African females. The discussion here will focus on those variables which are historically significant in determining labour market differences between males and females. The table shows firstly in the pooled regression that being a woman meant that the EQI was likely to be 0.5% lower than those of males. For marital status, the regressions show that being married for males meant that their EQI scores were on average 3.6% higher than males who were not married. This coefficient is also positive for the female sample who score on average 1.1% higher on the EQIs compared to females who are not married. It is possible that married females would have higher reservation wages, as they often tend to be secondary earners, and would be in a position to accept jobs of a higher quality (Ntuli 2007a; Walker 2003; Bbaale 2014). For African females, on the other hand, this coefficient was significant, but lower at 0.7%, likely owing to their historically greater labour force attachment as co-earners (Mackett 2023).

The education variables also support the findings of previous studies (Bbaale 2014; Ntuli and Wittenberg 2013; Dinkelman and Pirouz 2011) which have shown that education is a more important indicator of success for women, compared to men, particularly at higher levels of education. The results in Table 8 support this as the coefficients for females with complete secondary and tertiary education are both higher than the coefficients for males. The data show that compared to males and females, respectively, with no schooling, complete secondary education results in a 14% higher average EQI score for males, 14.3% higher average EQI score for females, and 14.4% for African females. While those with a tertiary education score were on average 22.3% (male), 25.4% (female), and 27.7% (African female) higher.

The results also show that formal sector employment is more important for males, than the other groups, who have 28.7% higher average EQI scores compared to males employed in the informal sector. Lastly, workers in the agriculture sector were significantly more likely to have lower EQI scores than workers in any other sector, with the exception of workers in the construction sector who did not have significantly different scores for the pooled, male, and African female regressions.

Table 8: Determinants of EQI, marginal effects

		All		**Male**		**Female**		**African female**	
		Coef	SE	Coef	SE	Coef	SE	Coef	SE
Gender									
	Female	-0.005**	(0.00)						
Age		0.010***	(0.00)	0.010***	(0.00)	0.010***	(0.00)	0.010***	(0.00)
Age Squared		-0.000***	(0.00)	-0.000***	(0.00)	-0.000***	(0.00)	-0.000***	(0.00)
Race									
	Coloured	0.032***	(0.00)	0.027***	(0.01)	0.039***	(0.01)		
	Indian	0.022**	(0.01)	0.021*	(0.01)	0.030*	(0.01)		
	White	0.024***	(0.00)	0.040***	(0.01)	0.010	(0.01)		

Marital Status								
Married	0.025***	(0.00)	0.036***	(0.00)	0.011***	(0.00)	0.007*	(0.00)
Area								
Traditional	-0.051***	(0.00)	-0.044***	(0.00)	-0.053***	(0.00)	-0.047***	(0.00)
Rural	0.046***	(0.00)	0.043***	(0.01)	0.045***	(0.01)	0.054***	(0.01)
Education								
Incomplete Primary	0.021**	(0.01)	0.032**	(0.01)	0.005	(0.01)	0.010	(0.01)
Incomplete Secondary	0.059***	(0.01)	0.062***	(0.01)	0.050***	(0.01)	0.054***	(0.01)
Complete Secondary	0.145***	(0.01)	0.140***	(0.01)	0.143***	(0.01)	0.144***	(0.01)
Tertiary	0.243***	(0.01)	0.223***	(0.01)	0.254***	(0.01)	0.277***	(0.01)
Sector								
Formal	0.273***	(0.00)	0.287***	(0.00)	0.234***	(0.01)	0.228***	(0.01)
Industry								
Mining	0.290***	(0.01)	0.281***	(0.01)	0.291***	(0.01)	0.303***	(0.01)
Manufacturing	0.133***	(0.01)	0.128***	(0.01)	0.144***	(0.01)	0.149***	(0.01)
Utilities	0.248***	(0.01)	0.239***	(0.01)	0.267***	(0.02)	0.258***	(0.02)
Construction	0.011	(0.01)	0.004	(0.01)	0.029**	(0.01)	0.014	(0.01)
Trade	0.036***	(0.01)	0.028***	(0.01)	0.050***	(0.01)	0.054***	(0.01)
Transport	0.079***	(0.01)	0.059***	(0.01)	0.170***	(0.01)	0.180***	(0.01)
Financial	0.084***	(0.01)	0.069***	(0.01)	0.112***	(0.01)	0.122***	(0.01)
Community	0.100***	(0.01)	0.124***	(0.01)	0.096***	(0.01)	0.094***	(0.01)
Private Households	0.082***	(0.01)	0.059***	(0.01)	0.073***	(0.01)	0.072***	(0.01)
N	39191		19688		19503		16253	

Source: LMD 2019. Note: Data are weighted. Includes controls for province of residence. Reference categories: Gender (Male); Race (African); Area (Urban); Education (No schooling); Sector (Informal); Industry (Agriculture). *** p<0.01 ** p<0.05 * p<0.10.

The last set of results, presented in Table 9, shows the variables associated with the EQIs controlling for the female share and African female share of the occupation an individual works in. These regressions, as per the last set, include pooled results, results disaggregated for males, females, and African females. The most notable results here, relate to the controlling of the shares; specifically, the pooled results which also controls for gender. When controlling for the female share in an occupation group, the results show that the average increase in the EQI score is 1.6%, the higher the female share in the occupation group. Further interesting here, is that when controlling for the female share, the coefficient for the gender variable is larger. In contrast to the results in Table 8 where females scored on average 0.8% lower on a EQI compared to males, when controlling for the female share of an occupation group. This is also consistent with the results seen in Table 5, where a high share of women was good for men's quality of work, but not so for women's. This result shows that gender differences in EQI scores may, in part, be explained by the gender composition of the occupation group and that the relationship between EQI scores and gender is complex and potentially mediated by other factors, such as the gender occupational distribution. Disaggregated, however, the results showed that the female share made no significant difference for the male EQI scores, while it was positively associated with female and African female EQI scores.

Further interesting in Table 9 are the pooled results when controlling for the African female share of an occupation group. The data show that a higher African female share is associated with an 3.8% decline in the average EQI score for workers in the labour market. This is a more than two-fold increase from the female share coefficient and highlights the importance of not treating women as a homogenous group when studying inequalities and discrimination, as

African women are often more severely impacted by these social ills compared to other women in society. Within the same regression, the gender variable interestingly produced an insignificant result. This highlights the importance of addressing structural occupation factors in addition to individual supply-side intervention to combat gender inequalities in the labour market.

Table 9: Determinants of EQI controlling for female share and African female share, marginal effects

	All	Male	Female	African female	All	Male	Female	African female
Female Share	0.016**	-0.009	0.030**	0.027*				
	(0.01)	(0.01)	(0.01)	(0.01)				
African female Share					-0.038***	-0.049***	-0.065***	-0.069***
					(0.01)	(0.01)	(0.01)	(0.01)
Gender								
Female	-0.008***				-0.000			
	(0.00)				(0.00)			
Age	0.010***	0.010***	0.010***	0.010***	0.010***	0.010***	0.010***	0.010***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Age Squared	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Race								
Coloured	0.032***	0.027***	0.040***		0.031***	0.027***	0.037***	
	(0.00)	(0.01)	(0.01)		(0.00)	(0.01)	(0.01)	
Indian	0.023**	0.023*	0.031**		0.021**	0.022*	0.024*	
	(0.01)	(0.01)	(0.01)		(0.01)	(0.01)	(0.01)	
White	0.024***	0.039***	0.010		0.022***	0.037***	0.005	
	(0.00)	(0.01)	(0.01)		(0.00)	(0.01)	(0.01)	
Marital Status								
Married	0.025***	0.036***	0.011***	0.007*	0.024***	0.035***	0.011***	0.007*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Area								
Traditional	-0.051***	-0.044***	-0.053***	-0.047***	-0.050***	-0.043***	-0.053***	-0.046***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Rural	0.046***	0.043***	0.046***	0.054***	0.046***	0.043***	0.045***	0.053***
	(0.00)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)
Education								
Incomplete Primary	0.021**	0.032**	0.004	0.009	0.021**	0.032**	0.005	0.010
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Incomplete Secondary	0.059***	0.063***	0.050***	0.054***	0.060***	0.063***	0.051***	0.054***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Complete Secondary	0.144***	0.140***	0.142***	0.144***	0.145***	0.140***	0.141***	0.142***

		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
	Tertiary	0.243***	0.223***	0.255***	0.278***	0.241***	0.221***	0.249***	0.271***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Sector									
	Formal	0.272***	0.288***	0.234***	0.227***	0.273***	0.288***	0.235***	0.229***
		(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)
Industry									
	Mining	0.290***	0.280***	0.288***	0.301***	0.291***	0.281***	0.295***	0.306***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
	Manufacturing	0.132***	0.128***	0.139***	0.145***	0.135***	0.129***	0.152***	0.157***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
	Utilities	0.250***	0.239***	0.272***	0.266***	0.251***	0.239***	0.280***	0.272***
		(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)
	Construction	0.012*	0.003	0.028**	0.013	0.009	-0.000	0.032**	0.016
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
	Trade	0.033***	0.029***	0.041***	0.046***	0.042***	0.033***	0.065***	0.071***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
	Transport	0.079***	0.058***	0.162***	0.173***	0.080***	0.056***	0.181***	0.193***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
	Financial	0.081***	0.071***	0.104***	0.113***	0.092***	0.077***	0.129***	0.141***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
	Community	0.096***	0.126***	0.086***	0.085***	0.109***	0.135***	0.115***	0.114***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
	Private Households	0.077***	0.060***	0.059***	0.059***	0.095***	0.065***	0.103***	0.105***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N		39186	19686	19500	16250	39186	19686	19500	16250

Source: LMD 2019. Note: Data are weighted. Includes controls for province of residence. Reference categories: Gender (male); Race (African); Area (Urban); Education (No schooling); Sector (Informal); Industry (Agriculture). *** p<0.01 ** p<0.05 * p<0.10

6 Discussion & Conclusions

The paper set out to illuminate the association between an individual's employment quality, based on their individual characteristics and their employment quality when employed with individuals from subordinate social groups in society. The analysis was limited to men, women, and further broken down for African women. Although, this type of analysis can be performed using a variety of characteristics which define and categorise people into groups, the focus in this paper was on the intersection of gender and race. The main outcome variable of the study was a EQI which was used as a proxy for employment quality.

The results of this study are significant firstly as the interplay between individual and group identities has become a budding topic within the social sciences literature, moving outside the domain of psychology and sociology to be included in the debates of economists who highlight the economic implications of group identity. Intersectional theorists have similarly added their voices to the chorus, particularly as policies which are aimed at redressing historical institutional discrimination against members of subordinate groups have been readily implemented over the last few decades and their impact can now be observed (Crenshaw 2006). This is a highly relevant concern in the South African labour market in which discrimination was institutionalised, and in which efforts to undo this systemic discrimination are prevalent over the post-apartheid period.

The main findings of the study were that African women tended to have higher quality of work scores when employed in occupation groups higher up the occupational hierarchy (according to the standard occupational classification). The second main finding was that overall, higher quality of work scores were associated with less stratified or evenly represented occupation groups. Men were particularly fortunate when employed in occupation groups in which African females were evenly represented, as they derived their highest quality of work scores from those occupation groups. When considering the pooled sample of females, they tended to gain from over-representation. However, overall workers still experienced the worst quality of work in occupation groups where African women were over-represented.

These results highlight the importance of distinguishing between individual interventions and structural interventions, both of which have been included in the South African landscape of labour market interventions. The results also highlight the importance of acknowledging the multiple layers of people's identities and the importance of untangling these intersecting layers. The distinction between women overall and African women in particular, also shows the shortcomings of treating women as a homogenous group. Apartheid and colonial systems have created a complex racial hierarchy not only amongst men but also amongst women. This complexity is further intensified by post-apartheid policies which have stimulated further stratification by class. Furthermore, based on the results of this study, for instance, one can distinguish between two groups of African women who have different experiences in the labour market: those who are employed in occupation groups over-represented with African women and those employed in occupation groups under-represented with African women. These groups have vastly different outcomes, according to the results obtained here, yet tend to be treated homogenously in labour market policies.

The findings of the study show that, when using the employment quality measure, that over-representation of subordinate groups (specifically African women) within an occupation group is to the detriment of all groups in the labour market, raising important questions about the motivation for privileged groups to protect their advantage. An investigation into how people navigate their multiple intersecting group identities and exercise their interests in the labour market would require qualitative enquiry and make for vital further research. Lastly, it must be noted that the analysis did not test for the underlying reasons women and men may be sorted across the labour market the way they are. The results in this study could also be driven by a variety of factors, such as self-selection bias and unobserved heterogeneity amongst the individuals in the sample. Furthermore, the analysis did not correct for possible endogeneity, nor does it investigate causality, which are additional shortcomings to the study. These factors limit policy suggestion and recommendations which can be drawn from the analysis.

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