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The Social Unemployment Gap in South Africa: Limits of Enabling Socio-Economic Redress Through Expanding Access to Higher Education

Tafadzwa Tivaringe

University of Colorado - Boulder
United States

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Abstract: The South African government recently adopted an education policy that attempts to achieve socio-economic redress through expanding free university education to first-year students from low-income backgrounds. However, in a country in which structural factors such as race, gender, and age continue to shape labor market outcomes, to what extent can attainment of university education significantly improve the labor market outcomes of historically marginalized groups? To evaluate the limits and possible unintended consequences of this policy intervention, I use nationally representative data from 1994 through 2017 to explore the correlation between a bachelor's degree and the likelihood of unemployment. Using a logistic regression and predicted probabilities, I show that, despite the existence of a race-based affirmative action policy designed to alleviate structural barriers in South Africa's labor market, structural factors still significantly attenuate the role of university education in enabling labor force participation among historically marginalized groups. I term the effect of these multi-dimensional structural barriers: the social unemployment gap. These findings suggest that the use of university education as a strategy for socio-economic redress in labor markets

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characterized by structural asymmetries extending beyond race necessitates the existence of intersectional labor market affirmative action policies.

Keywords: South Africa; free higher education; unemployment; socio-economic redress; predicted probabilities

La brecha del desempleo social en Sudáfrica: Límites de la reparación socioeconómica a través de la expansión del acceso a la educación superior

Resumen: El gobierno sudafricano adoptó recientemente una política educativa que intenta lograr una reparación socioeconómica mediante la expansión de la educación universitaria gratuita a estudiantes de primer año de bajos ingresos. Sin embargo, en un país en el que factores estructurales como la raza, el género y la edad continúan dando forma a los resultados del mercado laboral, ¿en qué medida el logro de la educación universitaria puede mejorar significativamente los resultados del mercado laboral de los grupos históricamente marginados? Para evaluar los límites y las posibles consecuencias no deseadas de esta intervención política, utilizo datos representativos a nivel nacional desde 1994 hasta 2017 para explorar la correlación entre un título de licenciatura y la probabilidad de desempleo. Utilizando una regresión logística y probabilidades predichas, demuestro que, a pesar de la existencia de una política de acción afirmativa basada en la raza diseñada para aliviar las barreras estructurales en el mercado laboral de Sudáfrica, los factores estructurales aún atenúan significativamente el papel de la educación universitaria para permitir la participación de la fuerza laboral entre grupos históricamente marginados. Califico el efecto de estas barreras estructurales multidimensionales: la brecha social de desempleo. Estos hallazgos sugieren que el uso de la educación universitaria como una estrategia para la reparación socioeconómica en los mercados laborales caracterizados por asimetrías estructurales que se extienden más allá de la raza requiere la existencia de políticas de acción afirmativa del mercado laboral interseccional.

Palabras-clave: Sudáfrica; educación superior gratuita; desempleo; reparación socioeconómica; probabilidades pronosticadas

O déficit social do desemprego na África do Sul: Limites da reparaco socioeconmica atravs da expanso do acesso ao ensino superior

Resumo: O governo sul-africano adotou recentemente uma poltica educacional que busca obter reparaco socioeconmica, expandindo a educao universitria gratuita para calouros de baixa renda. Contudo, em um pas onde fatores estruturais como raa, gnero e idade continuam a moldar os resultados do mercado de trabalho, em que medida a obteno do ensino universitrio pode melhorar significativamente os resultados do mercado de trabalho de grupos historicamente marginalizados? Para avaliar os limites e as possveis conseqncias indesejadas dessa interveno poltica, uso dados representativos nacionalmente de 1994 a 2017 para explorar a correlao entre um diploma de bacharel e a probabilidade de desemprego. Usando uma regresso lgica e probabilidades previstas, demonstro que, apesar da existncia de uma poltica de ao afirmativa baseada na raa projetada para aliviar barreiras estruturais no mercado de trabalho sul-africano, fatores estruturais ainda atenuam significativamente o papel da educao universidade para permitir a participao da fora de trabalho entre grupos historicamente marginalizados. Eu avalio o efeito dessas barreiras estruturais multidimensionais: a diferena social do desemprego. Esses achados sugerem que o uso da educao universitria como estratgia de reparaco socioeconmica nos mercados de trabalho caracterizados por assimetrias

estruturais que se estendem além da raça requer a existência de políticas de ação afirmativa no mercado de trabalho intersetorial.

Palavras-chave: África do Sul; ensino superior gratuito; desemprego; reparação socioeconômica; probabilidades previstas

Introduction

After multiple university closures due to student-led protests (locally known as #FeesMustFall) between 2015 and 2016, South Africa's President, Jacob Zuma, stipulated that, "in 2018, free higher education would be provided to all new first-year students from families that earn less than R350,000 per year" (Muller, 2018, p. 1). The government's response was aimed at addressing a set of demands by historically marginalized groups that, in sum, indicted the post-apartheid dispensation for failing to usher meaningful socio-economic redress to the majority non-White population. The government's intervention is, from a global view, consistent with how developed and liberal economies, such as the U.S., attempt to achieve redress for historically marginalized groups in an age in which policies that appeal to meritocratic values would elicit relatively more political traction (Klees, 2017).

To be sure, government policies that expand access to education are an important lever to achieve social redress. Yet, to be truly effective mechanisms of redress, policies that expand access to higher education necessarily require a socio-economic system in which educational attainment can easily translate to material shifts in one's socio-economic conditions. This assumption appears to hold, at least in relative terms, in advanced economies where socio-economic mobility has a higher correlation with one's educational attainment. For instance, in the U.S. and Europe, earning a bachelor's degree is typically correlated with increased labor force participation rates as well as higher incomes (Bailey & Dynarski, 2011; Belley & Lochner, 2007; Kahn, 2009; Mincer, 1974, 1991; Piketty, 2014; Reimer, Noelke, & Kucel, 2008). In South Africa, however, the translation of educational gains to real socio-economic gains is, at least for some populations, increasingly becoming contested or even outright tenuous (Bhorat et al., 2012; Kraak, 2010; Mlatsheni & Rospabé, 2002). The opaqueness of the relationship between university qualifications and labor market outcomes is particularly problematic in these politically charged times given that issues of socio-economic redress are already adversely affecting the emerging democracy's socio-political equilibrium.

To address the opaqueness of the relationship between university qualifications and labor market outcomes, I explore the link between higher education and labor force participation to show that labor force participation is still overwhelmingly shaped by structural social factors – what I term the social unemployment gap – that constrain the ability to turn college degrees into meaningful employment. As such, I argue that a policy intervention that attempts to achieve socio-economic redress by expanding access to higher education for historically marginalized groups will unlikely achieve real socio-economic redress without adequately addressing social impediments in the labor market. In fact, given the instrumental and transformative view of education that dominates the South African public sphere (Kraak, 1999; Kruss, 2004), such a policy intervention may present false hope and consequently compound the country's ongoing political challenges (Bauman, 2009; Cainarca & Sgobbi, 2012). To advance this argument, I begin by discussing how discourse on higher education and redress has largely prioritized issues of access without paying adequate attention to the implications of attaining higher education. Subsequently, I use the case of the #FeesMustFall movement in South Africa to motivate a discursive shift toward implications of attaining higher education as well as illustrate the urgency for linking higher education policy to labor market policy.

I then draw on the country's 1993-2017 household survey data to map the relationship between education and labor market participation. Here, I use an array of descriptive statistics and a logistic regression model to estimate the degree to which one's likelihood of being unemployed is associated with the possession of a bachelor's degree. Finally, I decompose the differential marginal effects of a bachelor's degree by estimating probabilities for specific population groups using a three-dimensional identity strategy that accounts for a person's race, gender, and age to evaluate the extent to which a bachelor's degree can offset already existing social hierarchies of unemployment.

Higher Education Access Expansion and the Imperative of Social Redress

Although labor market economists (e.g., Autor et al., 2007; Bailey & Dynarski, 2011; Light & Strayer, 2004) and sociologists (e.g., Esping-Andersen, 2007; Hout, 2012; Reardon & Bischoff, 2011; Wright, 1978) have conducted substantial research on the implications of attaining higher education qualifications, mainstream policy discourse and education policies seeking to achieve social redress for historically marginalized groups tend to merely focus on expanding access. In the US, for instance, educationists who advocate for expansion of educational opportunities to marginalized groups typically address a) the ways in which historically marginalized groups can be adequately prepared for college (Kallison & Stader, 2012; Strayhorn, 2011), b) devising funding models that can enable such students to afford college (Cellini, 2010; Deming et al., 2013), and c) creating college-support structures that facilitate college completion among this population group (Hurtado et al., 2011; Noguera, 2003; Strayhorn, 2008). As the form of these foci show, educationists assume that the link between education and social mobility is empirically valid.

This expectation is not without credible evidence. In a recent study, Hout (2012) finds that college graduates find better jobs, earn more money, and suffer less unemployment than high school graduates. Indeed, other scholars have also reported that college graduates live more stable family lives, enjoy better health, live longer (Kingston et al., 2003; Lange & Topel, 2006), commit fewer crimes (Moretti, 2004), and report relatively high levels of happiness (Fischer & Torgler, 2006). To be clear, scholars in the U.S. do acknowledge that the extent to which college qualifications are associated with positive labor market outcomes varies according to the type of qualification (Carnevale et al., 2013; Harmon et al., 2003). Nonetheless, even for the scholars who argue that the returns on college degrees vary according to the type of qualifications, the overall trend is that favorable economic returns typically accrue to college graduates (Carnevale & Rose, 2015). Thus, *prima facie* evidence suggests that pursuing socio-economic mobility through expanding access to higher education within the U.S. economy is plausible.

Much like the US, policy debates in South Africa also tend to treat the link between tertiary education and better socio-economic outcomes as an established fact. Since the dawn of democracy in 1994, successive administrations have sought to use education as a lever to address injustices done to the Black majority under apartheid (Bawa & Mouton, 2006; Kraak, 1999). Consider, for instance, the policy record of Nelson Mandela's administration which, by establishing key higher education institutions, such as the National Research Foundation [NRF], the National Advisory Council on Innovation (NACI), and the National Commission on Higher Education (NCHE), sought to empower historically marginalized groups by redirecting funding to historically Black institutions (Bunting, 2006; Cloete, 2006). Carried on by successive administrations after Mandela, the idea is that expanding educational opportunities to previously marginalized groups will offset the disparity in structural opportunities and advance the country's development through producing globally competitive, highly skilled human capital (Naidoo & Ranchod, 2018; Wangenge-Ouma & Carpentier, 2018). As Mandela himself put it, "the social and economic emancipation of people from poverty and deprivation is most centrally linked to the provision of education of quality" (Mandela

& Langa, 2017, p. 247). Thus, reform in education policies in post-apartheid South Africa hypothesize that higher education will, as in the developed economies, lead to meaningful socio-economic mobility for the historically marginalized non-White populations. Conspicuously, unlike in developed economies like the US, South Africa lacks credible empirical evidence to support the conviction undergirding these reforms.

The Need for Credible Discourse on What Happens After Attaining Higher Education Qualifications in South Africa

Despite similarities in policy perspectives that view expanding access to higher education opportunities as effective mechanisms of socio-economic redress in both the US and South Africa, South Africa's policy debates have been characterized by highly contested evidence regarding the link between attaining higher education and labor force participation – a key lever for upward socio-economic mobility. In a recent study, Baldry (2016) uses a data from a market research company between 2006 and 2012 to examine the relationship between earning a tertiary qualification and unemployment. Baldry (2016) finds high levels of unemployment among graduates and evidence that the strongest determinants of unemployment were the graduates' race, their socio-economic status, and the year of graduation. In an earlier study, Mlatsheni & Rospabé (2002) also find “that having [higher] qualifications in the fields that are often considered to be in high demand, does not necessarily guarantee one a job, more especially if one is African”¹ (p. 20). Elsewhere, Kraak (2010) observes that “the rate of growth of unemployed graduates is escalating at a rapid pace in South Africa” (p. 81). In sum, these studies contradict claims that one's education level is correlated with the likelihood of finding employment.

Some scholars, however, disagree that structural factors negatively impact the labor market experiences of non-Whites (e.g. Crankshaw, 1997; Moll, 2000; Seekings, 2008). For instance, Seekings (2008) argues that race no longer structures economic opportunities. Seekings contends that the adoption of the 1994 Employment Equity Act and the 1998 Black Economic Empowerment Act (now the Broad Based Black Economic Empowerment Act) have led to the creation of a Black middle class by deracializing education and the labor market. If anything, Seekings hypothesizes that recent White graduates are emigrating from South Africa due to diminishing employment opportunities that have been caused by a labor market that is now favors non-Whites.

The rise of unemployment among graduates from marginalized groups has also been refuted by Van der berg & Van Broekhuizen (2012) who contend that studies that find high unemployment rates among graduates are not credible. For Van der berg & Van Broekhuizen, references to graduate unemployment “are generally premised on the findings of a handful of published research studies that have made reference to rising graduate unemployment, the results of those studies are subject to a number of criticisms, ranging from inadequate definitions of ‘graduates’ to the use of incomplete, dated, or unrepresentative data” (p. 1). Using data from labor force surveys between 1995 and 2011, Van der berg & Van Broekhuizen argue that there is no evidence of a high level or a markedly upward trend in graduate (i.e. degree) unemployment.

These conflicting claims and findings point to the need for stronger empirical research to guide policy and advance literature on the transformational potential of higher education. Crucially, the urgency of such research is clear in the South African context where student-led movements were appeased by declaration of free tertiary education. Indeed, if the presidential declaration was a governmental response aimed at addressing the charge that post-apartheid South Africa has failed to

¹ Mlatsheni & Rospabé (2002) use “African” as reference to Black people consistent with Statistics South Africa's definition of racial categories.

deliver socio-economic redress for historically marginalized groups during the #FeesMustFall protests, then it is now urgent to credibly assess the association between attaining higher education and the likelihood of better labor market outcomes.

#FeesMustFall and the Urgency of Social Redress

At the height of the student-led #FeesMustFall movement in 2016, protestors comprising of students, university staff (including faculty), members of various labor unions, and community representatives shut down universities across the country and marched to key government institutions, such as the parliament in Cape Town and the presidential offices at the Union Building in Pretoria (Heffernan et al., 2016; Jansen, 2017; Naidoo, 2018). Their central grievances were: a) university tuition was prohibitive for the majority of Black students, b) the majority Black workers who were working at universities as non-academic staff in roles such as security and cleaning services were working under conditions that were both insecure, as well as exploitative, due to the privatization of most non-academic campus jobs, and c) that, overall, the post-apartheid dispensation had failed to offer meaningful socio-economic redress to Black people (Butler-Adam, 2016; Naidoo, 2018). To be clear, while all these challenges have local causes, a significant number of researchers have attributed the growing precariousness of life outcomes for most low-income Black people in post-apartheid South Africa to the effects of adopting global neoliberal policies (Seekings & Nattrass, 2016). The adoption of neoliberal policies at the dawn of South Africa's democracy, researchers argue, has led to the gradual erosion of social security among low-income Black people because of the massive job losses that accompany privatization of key industries (Beall, 2002; Bezuidenhout et al., 2007; Roberts & Thoburn, 2004) as well as the precarious character of working conditions that emanates from the informalization of work contracts within this laissez-faire policy environment (Barrientos & Kritzinger, 2004; Kenny, 1999; Standing, 2011). Thus, despite protestors framing their grievances in a way that attributed blame to the government, it is important to note that their grievances are tied to broader global dynamics.

At the core of the grievances expressed during these protests was an indictment of the labor market as a key impediment to the socio-economic transformation of many non-White people in post-apartheid South Africa (Naidoo, 2018). For many protestors, the promises of the democratic dispensation had remained "unfulfilled for the Blacks" (Ramaru, 2017, p. 89). This is because, as protestors argued, unemployment and poverty were still high among Blacks and that the hopes of upward social mobility had largely remained elusive for this group (Gibson, 2017; Naidoo, 2018). Indeed, the persistence of poverty and unemployment, especially among non-Whites, has led many observers to conclude that the policy tasked with remedying the socio-economic imbalances perpetuated during apartheid, the Broad-Based Black Economic Empowerment (BBBEE), has either not been truly broad in implementation (Freund, 2007; Southall, 2010; Tangri & Southall, 2008) and or it has become a mere patronage medium designed to deepen clientelist networks by enriching a minority group that is connected to political elites (Seekings & Nattrass, 2015; Tangri & Southall, 2008).

Yet, these structural challenges did not deter many protestors from upholding the belief in the transformational capacity of university qualifications. To the protestors, attaining such qualifications translates to possessing the means for socio-economic mobility necessary to altering one's circumstances (Mandela & Langa, 2017). As activist Julia Nxadi articulates in the #FeesMustFall documentary, education is the key to "breaking the cycle of poverty and some sort of dignity" (Dougan, 2015, 4:04). However, as the conflicting claims and arguments on graduate unemployment show, the view that there is a positive correlation between attaining a bachelor's

degree and favorable labor market outcomes is, at best unclear, and at worst tenuous. Consequently, South Africa is confronted by an urgent need to credibly assess the correlation between bachelor's degrees and labor force participation.

Addressing Fragile Evidence: Empirical Strategy

Against this background, I estimate the correlation between attaining a bachelor's degree and the odds associated with being unemployed. In other words, I test the hypothesis that having a bachelor's degree is significantly associated with a lesser likelihood of unemployment. Given that Baldry (2016) has already shown that the relationship between holding a bachelor's and the likelihood of employment is affected by time-varying parameters, my estimation strategy makes use of a cross-sectional dataset that spans from 1993 to 2017, the Post-Apartheid Labor Market Series (PALMS) data. I estimate the following regression model² for the odds of unemployment associated with a bachelor's degree:

$$\Pr(Y_{ijst}) = \beta_0 + \beta_1 \text{Bachelors}_i + \beta_2 \text{Under26}_i + \beta_3 \text{Bachelors} * \text{Under26}_i + \beta_4 \text{Year}_t + \beta_5 \text{Race}_i + \beta_6 \text{Female}_i + \beta_7 \text{Race} * \text{Female} * \text{Under26}_i + \beta_8 \text{Province}_j + \beta_9 \text{Metro}_s \quad (1)$$

Where $\Pr(Y_{ijst})$ is a measure of the probability of person i 's employment status and is coded 1 for unemployed and 0 for employed. Coding the y outcome this way better suits the data generating process and is consistent with the debate on graduate unemployment because it sets unemployment as the primary outcome. Since the dataset does not contain variables that can ascertain when employed people acquired degrees, but has information on whether an unemployed person possesses a bachelor's, we can be more certain of the correlation between gaining employment and attaining a degree by focusing on unemployment as the primary outcome. Bachelors_i is a dummy variable equal to 1 for possession of a bachelor's degree by person i . Coding higher education qualifications this way addresses a concern in the South African labor market debate that graduate unemployment tends to be overstated because researchers erroneously aggregate all higher education qualifications (Van der berg & Van Broekhuizen, 2012). Under26_i is a dummy variable coded 1 for person i who is under 26 and 0 for person i who is 26 years or older. $\text{Bachelors} * \text{Under26}_i$ is an interaction term that captures the unique effects associated with possessing a bachelor's degree if person i is under 26 years. The purpose of this interaction term is to address the lack of data regarding when person i obtained a degree. Thus, by interacting Bachelors_i and Under26_i , I differentiate young graduates from people who obtain degrees while already employed and address the concern that the association between attaining a bachelor's degree and the likelihood of being employed is overestimated for recent graduates (Van der berg & Van Broekhuizen, 2012). Year_t is a set of dummy variables that captures yearly fixed effects. Race_i and Female_i are social categories for person i . $\text{Race} * \text{Female} * \text{Under26}_i$ is an interaction term for the ways in which race, gender, and age intersect for person i . This computed variable allows us to differentiate the combined

² My empirical strategy uses racial and gender categories that are consistent with the way Statistics South Africa codes such identities for the country's enumeration purposes. While this approach is useful in ensuring that findings are consistent with other statistical evaluations that use Statistics South Africa data, I note that race and gender identities have a long history of contestation that is not sufficiently captured when we operationalize such identities in this manner. For this reason, it is useful to note that the categories used here are not exhaustive of the range of race and gender identities.

effects of the social categories from the observed primary categories. *Province_j* is a set of dummy variables that captures provincial fixed effects for each of South Africa's nine provinces and *Metro_s* is an indicator variable that differentiates metropolitan from non-metropolitan areas.

Given that a bachelor's can be utilized for other labor market activities linked to positive socio-economic outcomes, such as reported entrepreneurial activities and self-employment, the model codes such activities as indicators of employment. This ensures that I do not overestimate the extent of unemployment among bachelor's degree holders. Also, I make use of a logistic regression framework that reports odds ratios to tap into two desirable benefits associated with this statistical technique. Firstly, because odds ratios take into account the probability associated with both possible outcomes, they fit the data generating process underlying the binary outcome under investigation (Morgan & Teachman, 1988). Secondly, odds ratios are not sensitive to sample size differences in subpopulations, thereby rendering them a good technique to compare subpopulations with varying sample sizes (Long, 1997; Peng et al., 2002;). Because PALMS is a nationally representative dataset that is derived from Statistics South Africa's nation-wide household survey data composed of unevenly sampled subpopulations, this property ensures that we obtain reliable estimates in spite of different sample sizes.

Additionally, because policies that seek to engender socio-economic redress in South Africa target historically marginalized groups, I decompose the differential marginal effect of a bachelor's degree by estimating probabilities for a range of populations using a three-dimensional identity strategy that accounts for a person's race, gender, and age. The goal here is to evaluate whether the marginal effect of a bachelor's have the capacity to change the hierarchy of probability of unemployment that is observed in the absence of a bachelor's degree (Bhorat & Hodge, 1999; Burger & Jafta, 2006).

Data

PALMS version 3.2 is a stacked cross-sectional dataset that consists of data from 61 household surveys conducted by Statistics South Africa between 1994 and 2017, as well as the 1993 Project for Statistics on Living Standards and Development, conducted by the Southern Africa Labor and Development Research Unit (SALDRU) at the University of Cape Town (Kerr & Wittenberg, 2017). The data are nationally representative with over five million observations. For studies on South Africa, these "surveys are regarded as one of the more reliable sources of labor market data, including labor market income" (Kerr & Wittenberg, 2017, p. 1). Given the breath of the dataset and its reliability in capturing labor market dynamics in South Africa, PALMS is widely used, especially in economics literature, on earnings and inequality (e.g., Burger & Yu, 2006; Wittenberg, 2017). By using a national dataset that spans from the eve of the post-apartheid dispensation to the latest nationwide data available, I address Van der berg & Van Broekhuizen's (2012) concern that claims about high levels of unemployment are based on the "use of incomplete, dated, or unrepresentative data" (p. 1).

Validity and Alternative Model Specifications

There are a few concerns regarding the data and associated model that I wish to acknowledge and address in this section. The first issue is that "no attempt [was] made to link individuals or households across waves" (Kerr & Wittenberg, 2017, p. 1). As a result, despite having cross-sectional data that is time-varying, the data are not repeated measures of similar persons across multiple points in time. This presents a challenge that is evident in model (1): the inability to account for the exact time at which person i attained a bachelor's degree. As I discussed in specifying model (1), I addressed this issue by creating an interaction term, *Bachelors * Under26_i*, that

distinguishes between recent graduates and graduates who earned degrees after the age of 26. Given that some literature shows diminishing unemployment is disproportionately distributed among various social groups, this strategy mitigates against the likelihood of bias that can emerge from aggregating all holders of a bachelor's degree (Mlatsheni & Rospabé, 2002; Moleke, 2005; Pauw et al., 2008).

Another issue with my estimation strategy is that I model unemployment as a function of mostly social factors instead of pure market elements. Thus, whereas a market theory of labor market dynamics would suggest that the odds of employment are significantly affected by academic qualifications, as well as work experience (Mincer, 1974), I have specified a model in which the observed determinant parameters are mostly social. In other words, I have specified a restricted model of the determinants of employment in spite of the knowledge that ideally a market-based theory of the determinants of employment (the unrestricted version) would include more merit-based factors, such as person *i*'s work experience (Ehrenberg & Smith, 2012; Mincer, 1974, 1991). While I acknowledge that model (1) is restricted in terms of specification, below I discuss why such a restriction will unlikely affect the reliability of the estimates.

Current literature on the South African labor market shows that, theoretically, the restricted model (1) that I have provided – one that predominantly features social parameters – is perhaps, on average, indistinguishable from the unrestricted model that features more merit-based labor market parameters, such as work experience. This is because, while there is some disagreement, an overwhelming proportion of labor market research in South Africa shows that social indicators such as race, gender, and age, significantly shape labor market dynamics. For instance, in his assessment of the typical trajectory of Black children in South Africa (the largest constituency in the #FeesMustFall protests), Seekings (2008) observes that:

most children from poor neighborhoods – almost all of whom are African [Black] – grow up in home environments that are uncondusive to educational success, and attend schools where the quality of education is very poor. Many remain in school until their late teens, but are unable to acquire many skills. Their ability to find employment is constrained by their lack of skills and experience, their location far from most job opportunities, and their lack of the right contacts, i.e. people who have jobs and can therefore help them to find employment. Many move into the underclass of chronically unemployed, with intermittent short spells of unskilled work. (p. 21)

While Seekings (2008) is reluctant to directly acknowledge the continued salience of race in the country's labor market, his own narration of the structure of systemic marginalization that is particular to Blacks is deeply revealing. By demonstrating how a life that begins in the Black neighborhoods is essentially condemned to chronic unemployment via poor education and systemically fewer opportunities to gain work experience, it is hard to make sense of his conclusion that race is no longer salient in shaping labor market outcomes. For Seekings, what seems to matter most is that the affirmative action policies adopted by the post-apartheid government are “a disadvantage of being White” and the fact that “earnings and incomes reflect race far less than class” (p. 22). Yet, as Tangri & Southall (2008) show, affirmative action policies have “benefited mainly politically-connected individuals rather than the mass of the previously disadvantaged, and partly because South Africa's corporate sector continues to be dominated – managed and owned – by the minority Whites” (p. 699). Thus, while it may be the case that some occupations may be deracialized, as Seekings observes, Tangri and Southall's view that affirmative action has not improved the life

opportunities of the average Black South African suggests that race still plays a significant role in shaping labor market dynamics.

Further, labor market dynamics are not reducible to merely examining income distributions for specific occupational classes. Therefore, Seekings (2008) may very well be correct that race is no longer significant given the shrinking of the racial wage gap in certain occupations. Yet, it is erroneous to interpret such evidence of deracialization as a complete falsification of the significance of race in shaping the labor market. For, if we consider other elements of the labor market, such as unemployment or the skills distribution, race is still salient (Mlatsheni & Rospabé, 2002). As Burger & Woolard (2005) observe, “Africans and Coloreds are over-represented in the unskilled labor category, whereas very small proportions of these race groups are employed as skilled laborers” (p. 468). In fact, as Mlatsheni & Rospabé’s (2002) evaluation of the October Household Survey data shows, “racial differences in employment are likely to reflect some hiring discrimination from the employers” (p. 24). In addition to race, Mlatsheni & Rospabé also observe that “the gender analysis revealed strong evidence of discrimination against women in both wage employment and self-employment” (p. 24). Importantly, like Seekings (2008), Mlatsheni & Rospabé also acknowledge the role that systemic deprivation of opportunities at earlier stages in life plays in creating a labor market in which merit-based parameters are insignificant: “one should note that in both the race and gender cases pre-labor market discrimination is likely to have played a part in the outcomes” (Mlatsheni & Rospabé, 2002, p. 24). Thus, if findings of the dynamics of labor markets in South Africa constantly show that race, gender, and age are key determinants of opportunity to gain employment, then it is defensible to use such social categories to reliably predict one’s odds of employment. Moreover, the finding that structural marginalization prior to entering the labor market is correlated to particular social categories allows us to omit work experience as a variable and still produce reliable estimates of unemployment.

Findings that show the salience of social factors in shaping labor market dynamics, especially unemployment, render it defensible to use model (1) as reflective of the unrestricted model of unemployment. Since the unrestricted model accounting for more merit-based is the following:

$$\Pr(Y_{ijst}) = \beta_0 + \beta_1 Bachelors_i + \beta_2 Under26_i + \beta_3 Bachelors * Under26_i + \beta_4 Year + \beta_5 Race_i + \beta_6 Female_i + \beta_7 Race * Female * Under26_i + \beta_8 Province_j + \beta_9 Metro_s + \beta_{10} WorkExp_i \quad (2)$$

where the additional variable, $WorkExp_i$, is the work experience of person i , then the literature is suggesting that the model (2) is as good as model (1), albeit acknowledging that the coefficient on $WorkExp_i$ is indistinguishable from zero, ceteris paribus. To explicitly acknowledge $WorkExp_i$ on model (1), I specify the following model:

$$\Pr(Y_{ijst}) = \beta_0 + \beta_1 Bachelors_i + \beta_2 Under26_i + \beta_3 Bachelors * Under26_i + \beta_4 Year + \beta_5 Race_i + \beta_6 Female_i + \beta_7 Race * Female * Under26_i + \beta_8 Province_j + \beta_9 Metro_s + \beta_{10} 0 * WorkExp_i \quad (3)$$

The final concern is that the dataset contains many missing observations. For instance, the original PALMS dependent variable, “empstat2” contains 1,746,298 missing cases out of a total 5,474,450 cases. That is, nearly 32% of the predicated variable is missing. To address missingness, I restrict the number of cases considered in the logistic model to an age range from 15 to 65 years, as per the lower and upper limits provided by the Basic Conditions of Employment Act of 1997 (DoL, 2002).

By doing this, missing observations are drastically reduced to merely 134. Importantly, this strategy constrains the model to fit within the legal working age range, thereby addressing the artificial bias that will emerge from age populations that are legally not permitted to work. At this point, missingness in the dependent variable is no longer a concern.

Findings

The Challenge of Unemployment

This section maps key post-apartheid employment trends and considers how insights drawn from PALMS data may augment what is currently known about South Africa's labor market and the (in)ability of the economy to provide employment opportunities. Specifically, I begin by characterizing the country's labor force absorption trends and subsequently discuss implications that such characteristics may have on the aspirations of bachelor's degree holders seeking to utilize the degree to gain employment in pursuit of better life outcomes.

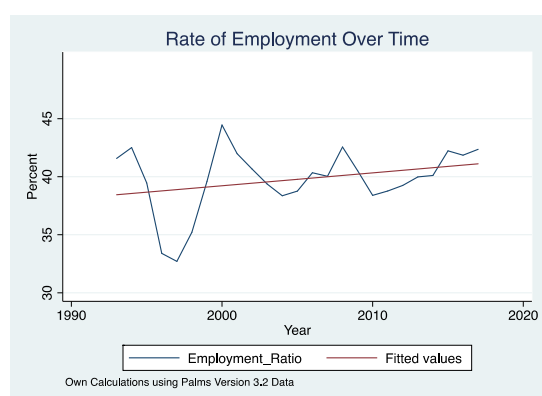


Figure 1. Rate of Employment Over Time

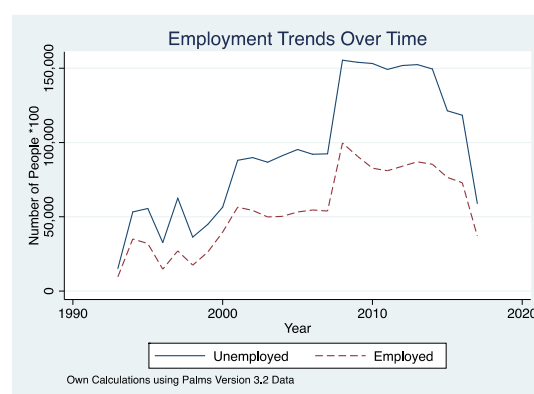


Figure 2. Employment Trends over Time in Actual

According to Statistics South Africa [StatsSA] (2018), unemployment has been rising since the inception of South Africa's democratic dispensation in 1994. In Figure 1, I present the country's rate of employment, expressed as here as a ratio of employed people relative to the total number of people in the labor market. The overall trend of the unemployment rate is that, since dropping acutely in the late 1990s, and subsequently rising from the early 2000s, the absorption of people in the labor market has roughly continued to fluctuate around in 40%³. This means that, for the entire duration of the country's post-apartheid dispensation, the proportion of unemployed people has consistently been more than the number of employed people. This is not to say that the number of people employed has, in actual values, been consistently declining. Rather, as Figure 2 shows, the South African economy has, in actual values, been characterized by an increase in both the number of employed and unemployed people. Consequently, the net effect of these circumstances is that

³ The official StatsSA estimate for unemployment rate is 29%. Importantly, official StatsSA estimates for the unemployment rate for young job seekers (15-24 years) – a big demographic group in the household surveys and the country in general – is 55,2%. Thus, the 10 percentage point difference between the aggregate StatsSA estimate and my estimate is likely explained, at least partially, by sampling differences since StatsSA also uses other data instruments for measuring unemployment. That said, the overall trend is clear: the country is experiencing high levels of unemployment.

South Africa is experiencing sustained higher levels of unemployment (Banerjee et al., 2008; Kingdon & Knight, 2003; Southall, 2004).

The Implications of Diminishing Employment on Holders of Bachelor's Degrees

For researchers of the South African labor market, the reality of consistently high levels of unemployment elicits little contestation, if any at all. Many scholars (Bhorat et al., 2012; Kraak, 2010; Mlatsheni & Rospabé, 2002) as well as the government (GCIS, 2018; NPC, 2010) have already expressed concern at the continued rise of unemployment. The substantial difference among both scholars and policy makers, however, is whether the rise in unemployment has direct implications on graduates seeking to capitalize on the exchange value of their degrees for employment purposes. For scholars such as Kraak (2010), “the rate of growth of unemployed graduates is escalating at a rapid pace in South Africa” (p. 81). For these scholars, “against expectations, unemployment has been increasing among young people with tertiary qualifications” (Oosthuizen & Van Der Westhuizen, 2008, p. 45). Yet others find “no evidence of high level or a markedly upward trend in graduate (i.e. degreed) unemployment” (Van der berg & van Broekhuizen, 2012, p. 4). For this group of scholars, references to high and rising levels of graduate unemployment are generally premised on less credible studies (Van der berg & Van Broekhuizen, 2012, p. 4).

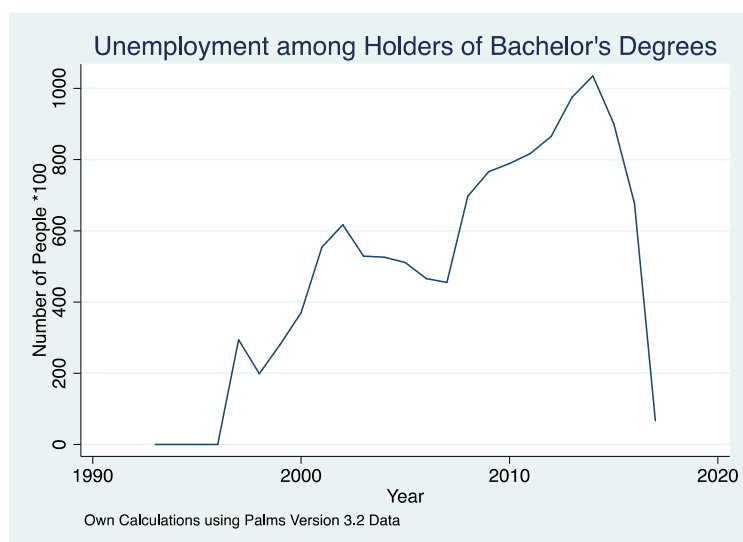


Figure 3. Unemployment among Holders of Bachelor's Degrees in Actual Numbers

In response to this debate, I present Figure 3 above that shows trends in the unemployment of graduates. In line with Van der berg & Van Broekhuizen's (2012) concern that aggregating all post-tertiary qualifications will bias the unemployment of graduates upward, I solely focus on the relationship between possession of a bachelor's and the likelihood of an employment status. Figure 3 shows that, in real numbers, unemployment among holders of bachelor's degrees has indeed been increasing from the late 1990s, but such a trend appears to have stopped in 2015. I suspect that the reversal of the trend is artificial and can be at least partially attributed to the shutdown of universities in South Africa between 2015 to 2017. During this period, the academic year was often interrupted and or postponed due to protests. As such, graduation rates for this period were low, and therefore played a part in lowering the number of bachelor's degree holders (Hodes, 2017; Jansen, 2017). That said, merely using Figure 3 alone, which shows an increase in the incidence of unemployment since

the late 1990s, does little to settle the debate on the extent of degreed unemployment. This is because a mere observation of an increase in incidence levels fails to contextualize the phenomenon and therefore does little to augment our ability to discern these trends appropriately.

To contextualize the trends in incidences of graduate unemployment, I begin by mapping the unadjusted likelihood of being unemployed associated with the possession of a bachelor's degree. As Figure 4 below shows, the odds of degreed unemployment relative to non-degreed unemployment have consistently been lower from 1997 to 2017. This means that, across almost the entire duration of the study, people with degrees tend to be associated with less odds of unemployment than people without degrees. This finding is consistent with observations by scholars such as Pauw et al. (2008) and Seekings & Nattrass (2008) who note that degree holders benefitted the most from post-apartheid labor force growth. Indeed, these results may even support claims by scholars such as Van der Berg & Van Broekhuizen (2012) that graduate unemployment is "exaggerated" because they tell the story of relatively better outcomes for degree holders than non-degreed counterparts (p. 2). Yet, it is important to note that comparatively better odds of unemployment here do not necessarily mean that the effect of a degree in improving one's chances of being employed is constant across both the period of study and different populations groups. Indeed, it is not that scholars claiming that degreed unemployment is on the rise are arguing that non-degreed people are having better employment opportunities in the first place, rather, these scholars are arguing that specific sub-populations within degree holders are increasingly finding it harder to gain employment in contemporary South Africa (Baldry, 2016; Kraak, 2010; Mlatsheni & Rospabé, 2002). For this reason, it is therefore crucial to decompose the distribution of the unemployment, especially among bachelor's degree holders.

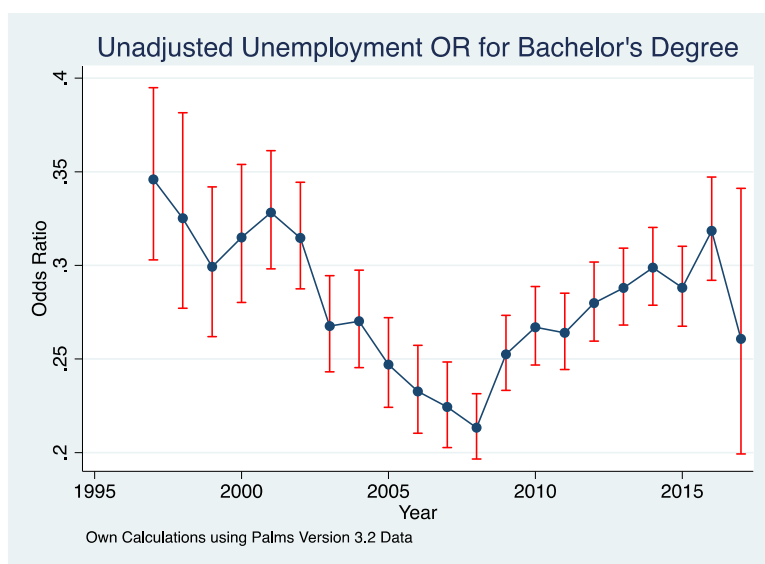


Figure 4. Unadjusted unemployment odds ratios associated with holding a bachelor's degree plus CIs.

Variance in the Likelihood of Unemployment Associated with a Bachelor's among Graduates

Although the odds ratios discussed above present a relatively better account of the association between possession of a bachelor's degree and the likelihood of being unemployed than merely counting incidences of unemployment among degree holders, such unadjusted estimates are

limited. First, because the odds reported here use non-degreeed people as a comparison group (this includes people who did not complete basic education) it is likely that they will show that, on average, degree holders have better employment prospects anyway. Second, by presenting unadjusted estimates of ratios of degreeed unemployment, these odds ratios conceal significant differences in the actual probability of unemployment among degree holders. As Mlatsheni & Rospabé (2002) caution, “unemployment is not spread homogenously among the different population groups” (p. 16). Crucially, such unevenness in unemployment patterns typically occurs along race, gender, age, and place (Baldry, 2016; Kraak, 2010; Mlatsheni & Rospabé, 2002). For this reason, it is therefore prudent to consider how the likelihood of unemployment associated with possessing a bachelor’s degree is distributed among various social groups.

The continued salience of social and geographic factors in shaping unemployment patterns.

Table 1

Abridged version of the Estimated Likelihood of Unemployment Status from 1993 to 2017

Independent Variable	Odds Ratio	Confidence Intervals on Odds Ratio	p
Bachelor’s	0.22	(0.218 - 0.230)	***
Racial Groups			
African/Black	3.83	(3.781 - 3.876)	***
Colored	2.43	(2.399 - 2.464)	***
Indian/Asian	1.80	(1.767 - 1.832)	***
Other	1.55	(1.274 - 1.880)	***
Gender			
Female	1.37	(1.363 - 1.383)	***
Age Category			
Under 26	7.25	(7.200 - 7.290)	***
Key Interactions			
Bachelor’s*Under26	0.82	(0.768 - 0.872)	***
Race*Female*Under26	1.01	(1.007 - 1.007)	***
Intercept	0.14	(0.139 - .1445)	***
Pseudo R ²	0.1581		
N	3 394 550		

Note. Reference Categories are the following: a) Non-Bachelor’s, b) Whites, c) Male, and d) 26+years. Asterisks indicate statistical significance at these levels: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. See appendix for full regression table with provincial and year estimates.

As Table 1 shows, the multinomial logistic regression model (1) estimates that, on average, relative to not holding a bachelor’s, possession of a degree is associated with a 22% less likelihood of being unemployed, *ceteris paribus*, and that such a finding is statistically significant. Crucially, though, the model predicts that the likelihood of being unemployed is correlated with key demographic parameters that have already been identified by scholars such as Baldry (2016), and that such correlations are statistically significant (see also, Kraak, 2010; Mlatsheni & Rospabé, 2002). In regard to race, the model estimates that, relative to Whites, Blacks tend to be 3.83 times more likely to be unemployed, *ceteris paribus*, and that such odds are statistically significant. In fact, as the coefficients on Colored and Indian/Asian also show, the odds of unemployment tend to be less for

White people than any other race. Regarding gender, the model estimates that, on average, females are 1.37 times more likely to be unemployed, *ceteris paribus*, than male counterparts and the differences in these odds are unlikely due to chance. With respect to age, the model predicts that, people between the age of 15 and 25 are 7.25 times more likely to be unemployed relative to those aged 26 to 65 years, *ceteris paribus*, and that such odds are statistically significant. However, when we combine the possession of a degree with age, the model estimates that the odds ratio for bachelor's degree holders for those under 26 is 0.82 times less than that for people over the age of 26, and such differences in odds ratios is statistically significant.

In regard to geographical factors, Table 3 (see appendix) shows that, in general, people in the province of Gauteng are less likely to be unemployed than other provinces, with the exception of the Western Province, and such odds differences are statically significant. A note here is that, although model (1) included an assessment of the influence of being in a metropolitan area relative to a non-metropolitan area, data analysis showed that *Province_j* was collinear with *Metro_s*. This collinearity is likely a function of the fact that household surveys are mostly administered in urban areas. Thus, the model does not find variation between *Province_j* and the *Metro_s* indicators because the provincial data is largely reflective of metro data. With respect to yearly fixed effects, the model predicts that, on average, the odds of unemployment across the years have shifted in both direction and magnitude relative to the year 1994. However, I will not pursue this result further because some of the odds ratios associated with year changes were not statistically significant.

Although the odds ratio estimates from the regression model presented above provide a useful strategy to compare whether someone who identifies with or possesses a particular characteristic (in this case having a degree, a particular racial identity, gender, age, and gender) are more or less likely than someone without that attribute in experiencing an outcome of interest (unemployment in this case), this approach is hindered by two key limitations. Firstly, the “interpretation is framed in terms of odds ratios and not probabilities” (Norton et al., 2018, p. 84). Secondly, the magnitude of the odds ratio from a logistic regression is scaled by an arbitrary factor (equal to the square root of the variance of the unexplained part of the binary outcome) and therefore is sensitive to the addition of more powerful explanatory variables to the model (Mood, 2010). As a result, the addition of more independent explanatory variables to the model will increase the odds ratio of the variable of interest due to dividing by a smaller scale (Norton et al., 2018). Consequently, “different odds ratios from the same study cannot be compared when the statistical models that result in odds ratio estimates have different explanatory variables because each model has a different arbitrary scaling factor” (Norton et al., 2018, p. 84). Therefore, the implication is that we cannot compare the magnitudes of the odds ratios reported in Table 1 and Table 2 (Mood, 2010).

To address the crucial limitation of making comparisons within a multivariate logistic regression framework, I estimate the predicted probabilities of unemployment for specific groups. The idea here is that, by setting bachelor's and other covariates at their means and then estimating probabilities of unemployment while accounting for the unique person-level characteristics such as race, gender, age, and the interaction of age and being in possession of a bachelor's, we derive probabilities of unemployment that can enable a systematic way of assessing the differential/marginal effect of a bachelor's across selected categories (Finocchiaro & MacKenzie, 2017). Further, I make use of multi-dimensional social categories that are made up of race, gender, age, and recent graduate status (see Table 2) to evaluate the intersectional character of social categories rather than as mutually exclusive markers.

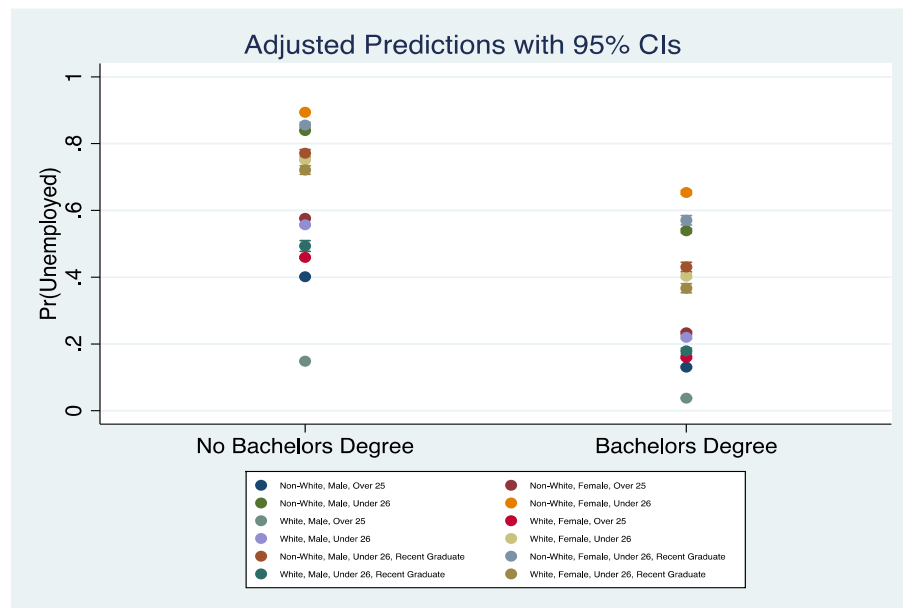


Figure 5. Predicted Probabilities of Unemployment by Social Categories

Note: Circles are predicted probabilities of unemployment associated with a shift in bachelor's status setting other covariates at mean values.

Figure 5 shows a) the predicted probabilities of being unemployed for different racial, gender, age, and recent graduate status when we factor out the effect of a bachelor's degree and b) the predicted probabilities of being unemployed for different racial, gender, age, and recent graduate status when we factor in the effect of a bachelor's degree. As the distribution of probabilities shows, White males aged 26 and above are the least likely category to be unemployed with a 16% probability of unemployment in the absence of a bachelor's. Next, and relatively further from this group, is the non-White males aged 26 and above group that has a 40% probability. This group is followed by the White females aged 26 and above cluster that has a 44% probability of being unemployed. At the end this distribution are the non-White females under 26, and the non-White males under 26 clusters that have 90% and 88% probabilities of being unemployed respectively. These predicted probabilities clearly show that unemployment is unevenly distributed among different social categories when we discount the effect of a bachelor's degree. I term this asymmetry in employment opportunities the social unemployment gap. In other words, this is the estimated gap of unemployment in the absence of a merit-based mechanism (in this case a bachelor's degree) for the entire population.

Beyond discounting the effects of a bachelor's on the probability of unemployment, Figure 5 and Table 2 also show how a unit positive shift in bachelor's status alters the probability of unemployment. There are two main results from this thought experiment. First, the rank order in the distribution of unemployment probabilities across the different categories remains unchanged. That is to say, the model estimates that, on average, the rank order of unemployment probabilities across the different social categories is maintained even if we grant that all the different population categories have a bachelor's degree. Second, although the model estimates that, on average, the rank order remains similar for the social categories considered, it also shows that the marginal effect of a bachelor's varies across groups. For instance, although the White males aged 26 and older group still retains the least probability of unemployment at 16%, this category is associated with the least

magnitude in the change of probabilities when we account for the effect of a bachelor's degree (12-percentage points).

Table 2

Decomposing the Marginal Effect of a Bachelors Degree on the Probability of Unemployment using Social Categories

Rank	Multi-dimensional Identity Schema				Change in Probability
	Race	Gender	Age	Recent Grad Status	
1	White	Male	26 and older	No	-12
2	Non-White	Male	26 and older	No	-28
3	White	Female	26 and older	No	-28
4	White	Male	Under 26	Yes	-32
5	White	Male	Under 26	No	-34
6	Non-White	Female	26 and older	No	-34
7	White	Female	Under 26	Yes	-34
8	White	Female	Under 26	No	-34
9	Non-White	Male	Under 26	Yes	-36
10	Non-White	Male	Under 26	No	-30
11	Non-White	Female	Under 26	Yes	-30
12	Non-White	Female	Under 26	No	-22

Note. Rank is based on predicted probabilities of unemployment for select groups estimated using model (1)

The highest estimated differences in probabilities of unemployment associated with attaining a bachelor's are for the non-White male graduates under 26 cluster whose probability of being unemployed changes by 36-percentage points. In terms of magnitude of differences in probabilities, this group is followed by the White males under 26, the non-White females aged 26 and older, the White female graduates under 26, and the White females under 26 groups that are all associated with 34-percentage point change. Taken together, the trends in the predicted probabilities show that, although the marginal effect of a bachelor's degree is, on average, associated with a reduction in the probability of unemployment, the social unemployment gap that exists between these groups in the absence of a bachelor's remains similar. That is, while a bachelor's degree reduces the likelihood of unemployment for all demographic groups, it does not alter the preexisting social hierarchy in the odds of gaining employment. Indeed, the continued salience of race, gender, and age in shaping employment opportunities in South Africa's labor market means that an intervention that only focuses on access to a university qualification will unlikely close the social unemployment gap.

Implications

The Alarm around Graduate Unemployment has Empirical Credence

In light of the evidence discussed in this paper, it is clear that graduate unemployment is a serious concern for South African policy makers. While it is true that, on average, relative to not having a bachelor's, the possession of a degree tends to be associated with lower odds of being unemployed, the predicted probabilities of unemployment show that social factors still significantly shape the distribution of opportunities. This finding is consistent with research by scholars such as Baldry (2016) who claim that "the education variables play[s] a very small role in determining graduates' employment prospects" (p. 806). Further, I also find evidence that decoupling

“graduates” by various social categories reveals that recent graduates who are White males and White females tend to have relatively less probabilities of unemployment in comparison to their non-White male and female counterparts. This aspect of the differential effects of the bachelor’s is lost in Baldry’s (2016) claim. In principle, my findings here are not necessarily in conflict with Baldry’s (2016) research. Indeed, given that the effect of education is dissimilar in magnitude for various social categories, it is therefore expected, as Baldry (2016) points out, that the aggregate effect of education on unemployment would be small relative to other variables. However, the challenge with Baldry’s (2016) narrative is that it is based on the aggregate effect of the bachelor’s. The problem here is that, the use of an aggregate estimate obscures the uneven effect of a bachelor’s among different holders of this qualification. Further, Baldry’s (2012) use of odds ratios to support her claim is methodologically wanting. This is because, as I pointed earlier, recent research in applied statistics shows that it is methodologically erroneous to compare magnitudes in odds ratios that have different explanatory variables (Norton et al., 2018).

In regard to Van der berg & Van Broekhuizen’s (2012) claim that “graduate unemployment in South Africa is an exaggerated problem”, my evaluation of their claim, as well as the data, suggests that they may have erred in interpreting the evidence (p. 21). By their own admission, they note that “Black graduates have the highest unemployment rates” and, more importantly, “Black graduates are steadily increasing their share and would soon become the largest group, given the racial composition of new graduates” (p. 16). Using canonical economic principles, if the data shows that unemployment is high among Black graduates, the laws of supply and demand will dictate that the logical end of increasing the supply of graduates that happen to be majority Black will further increase graduate unemployment (Cainarca & Sgobbi, 2011; Ehrenberg & Smith, 2012). Indeed, it is for this reason that they also observe that “there are consistently lower LFPRs [labor force participation rates] amongst the two youngest of the four [graduate] cohorts identified across the various surveys” (p. 15). Such a finding suggests that the year-to-year increase in the supply of degreed Black job seekers is associated with declining employment opportunities for this group. Therefore, it is puzzling that such observations would lead them to a conclusion that “graduate unemployment is exaggerated” (Van der berg & Van Broekhuizen, 2012, p. 2).

With respect to the call for better methodological rigor in understanding graduate unemployment in South Africa, Van der berg & Van Broekhuizen’s (2012) injunction is a sober and constructive perspective in a debate that has been typified by a paucity of credible evidence. However, it is unfortunate that their own study does not sufficiently discuss how their methodological approach addresses the concerns they raise, aside from merely stating that they use survey data ranging from 1995 to 2011. In any case, by using a methodologically sound empirical strategy that used “representative data” and also limits the definition of graduate to “degreed unemployment” per their specification (Van der berg & Van Broekhuizen, 2012, p. 3), my findings confirm what they observed – but did not duly report – unemployment among Black graduates is a serious concern. Crucially, the gravity of this concern has been further magnified by the recent free tertiary education policy that is likely going to increase the number of young Black graduates seeking employment in a labor market that remains characterized by social barriers that are particularly unfavorable to this demographic group.

Toward Better Alignment of Education and Labor Market Policies for Effective Socio-economic Redress

There is no denying that the weight of evidence here suggests the South African labor market is characterized by a social unemployment gap that continues to structure employment opportunities. As the differential marginal effect of a bachelor’s degree shows, such barriers do not

vanish by merely ensuring that non-White groups, especially younger Black job seekers, are afforded the opportunity to gain bachelor's degrees. Indeed, the presumption that such groups can easily convert the currency associated with the possession of a bachelor's degree into material socio-economic changes via better labor force participation rates is tenuous. It is therefore clear that the success of the free tertiary education policy is highly conditional on other structural interventions, such as the eradication of social barriers in the labor market. Scholars like Seekings (2008) will point to the country's BBBEE policies as evidence that such structural interventions already exist and are functional. However, as many other scholars, including Seekings in his later work with Nattrass (2015) have shown, the implementation of BBBEE has been mired by challenges that range from inadequate formulation to corruption that massively hinder the effectiveness of such policies in delivering much needed structural transformation (Freund, 2007; Southall, 2010; Tangri & Southall, 2008).

This is not to say that BBBEE has completely failed, rather, it appears to have mostly benefitted Black males aged 26 and above. As the data shows, non-White males aged 26 and above are less likely to be unemployed than White females of a similar age category. In fact, non-White males aged 26 and above are the second least likely group to be unemployed. This finding is consistent with research on income distributions that show a decrease in the racial gap in the distribution of incomes for certain occupational groups (Bhorat, 2004; Crankshaw, 2002; Seekings, 2008; Seekings & Nattrass, 2015). Yet, importantly, this finding also suggests that, despite being a theoretically broad policy that recognizes that structural marginalization occurs along race, gender, age, and geographic lines, BBBEE has been race and age-centric in implementation. That is, rather than serve as a vehicle to address broad social barriers, as it espouses, the policy has arguably intensified asymmetries within the non-White population by creating a non-White hierarchy of employment opportunities in which young Black job seekers, especially females, are particularly disadvantaged. It is for this reason that I have theorized the unevenness of employment patterns as the social unemployment gap, rather than the racial gap, as many studies consistently postulate (e.g., Kingdon & Knight, 2004; Moleke, 2006). Indeed, given that a labor market in which BBBEE policies currently exist has, in practice, failed to substantially reduce the likelihood of unemployment for young Black job seekers, I call on policy makers to find more effective ways of ensuring that employment opportunities are not determined by long-established social hierarchies. Further, there is a clear need to align emancipatory education policies in ways that are attentive to the realities of structural marginalization in the labor market.

Conclusion

In conclusion, despite being progressive, the South African government's strategy to engender socio-economic redress via offering free higher education has the potential to intensify the social and political discontent that we witnessed during #FeesMustFall and related protests if the gains of education continue to be shared unequally among social groups. As it is, provision of tertiary education on the meritocratic assumption that success in college will result in a positive material shift in socio-economic outcomes via the labor market is, at least for young Black graduates, empirically tenuous. South Africa's policy makers need to move urgently to ensure that the link between attaining higher education and socio-economic mobility becomes real for recent non-White graduates whose prospects of transforming the currency of tertiary qualifications into material employment gains are increasingly diminishing. A viable approach to addressing this urgent concern is to ensure that there is stronger empirical research to advance the literature and guide policy decisions on the transformational potential of higher education. As the findings of this study

indicate, there is need for more intersectional approaches to future research and policy implementation to effectively address the social unemployment gap.

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Appendix

Table 3
Estimated Likelihood of Unemployment Status from 1993 to 2017

Independent Variable	Odds Ratio	95% CI on OR	<i>p</i>
Bachelor's	0.22	(0.218 - 0.230)	***
Racial Groups			
African/Black	3.83	(3.781 - 3.876)	***
Colored	2.43	(2.399 - 2.464)	***
Indian/Asian	1.80	(1.767 - 1.832)	***
Other	1.55	(1.274 - 1.880)	***
Gender			
Female	1.37	(1.363 - 1.383)	***
Age Category			
Under 26	7.25	(7.200 - 7.290)	***
Key Interactions			
Bachelor's*Under26	0.82	(0.768 - 0.872)	***
Race*Female*Age	1.01	(1.007 - 1.007)	***
Provinces			
Limpopo	1.83	(1.811 - 1.847)	***
Mpumalanga	1.28	(1.264 - 1.290)	***
KwaZulu Natal	1.53	(1.521 - 1.546)	***
Free State	1.30	(1.287 - 1.313)	***
Northern Cape	1.60	(1.582 - 1.622)	***
Western Cape	0.97	(0.962 - 0.982)	***
Eastern Cape	1.84	(1.825 - 1.859)	***
North West	1.66	(1.645 - 1.680)	***
Year Dummies			
Year 93	1.00	(.)	***
Year 95	0.97	(0.944 - 0.987)	**
Year 96	1.28	(1.246 - 1.316)	***
Year 97	1.33	(1.304 - 1.364)	***
Year 98	1.22	(1.186 - 1.249)	***
Year 99	1.01	(0.984 - 1.032)	
Year 00	0.79	(0.770 - 0.804)	***
Year 01	0.90	(0.883 - 0.920)	***
Year 02	0.98	(0.958 - 0.997)	*
Year 03	1.03	(1.010 - 1.048)	**
Year 04	1.06	(1.035 - 1.077)	***
Year 05	1.01	(0.987 - 1.028)	
Year 06	0.93	(0.908 - 0.945)	***
Year 07	0.94	(0.923 - 0.960)	***
Year 08	0.85	(0.838 - 0.870)	***
Year 09	0.94	(0.927 - 0.962)	***
Year 10	1.04	(0.962 - 1.061)	***
Year 11	1.05	(1.035 - 1.074)	***

Table 3 cont.

Estimated Likelihood of Unemployment Status from 1993 to 2017

Independent Variable	Odds Ratio	95% CI on OR	<i>p</i>
Year 12	1.05	(1.033 - 1.073)	***
Year 13	1.03	(1.009 - 1.048)	**
Year 14	1.02	(1.006 - 1.044)	*
Year 15	0.96	(0.941 - 0.977)	***
Year 16	0.98	(0.965 - 1.002)	
Year 17	0.96	(0.935 - 0.977)	***
Intercept	0.14	(0.139 - .1445)	***
Pseudo R ²	0.1581		
N	3394550		***

Note. Reference Categories are the following: a) Non-Bachelor's, b) Whites, c) Male, d) 26+years, f) Gauteng and g) Year 94. Asterisks indicate statistical significance at these levels: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

About the Author

Tafadzwa Tivaringe

University Of Colorado – Boulder

School of Education

tafadzwa.tivaringe@colorado.edu

<http://orcid.org/0000-0001-7262-3993>

Tafadzwa Tivaringe is a doctoral candidate whose substantive research interests examine possibilities and limits of education as a developmental strategy for economic, political, and social transformation. This work is aimed at ensuring that education is an effective lever for equitable human development. His methodological focus is on choice models, dynamic models, duration models, hierarchical linear models, spatial models, and causal inference.

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