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UNDERSTANDING THE DRIVERS OF LONG-TERM YOUTH UNEMPLOYMENT: MICRO-LEVEL EVIDENCE FROM SOUTH AFRICA

Abstract:

Significantly high youth unemployment rates have become a prominent economic and social feature around the globe. The situation from a South African perspective has reached critical stages with an ominously high and increasing number of unemployed youth contributing to excessive poverty and inequality levels. Whilst concerns surrounding their inability to access decent employment opportunities have become prominent, the longevity of the cohort's failure to secure work has undoubtedly become the leading trepidation for the country's economic development objectives. Academic discourse surrounding the issue has continuously emphasised the potential scarring effects for young people, reiterating the loss of valuable future human capital levels as well as the risk of social exclusion. Despite these concerns, evidence, especially from developing regions, as to what drives long-term unemployment among the cohort still remain novel, necessitating analyses on both the demographic and work-related factors contributing to the situation. As such, the primary objective of the study was to identify the main microeconomic drivers of long-term youth unemployment in South Africa. A quantitative approach and cross-sectional research design were employed by using secondary data obtained from Statistics South Africa's 2019 Quarterly Labour Force Survey. The sample comprised a total of 4544 unemployed job seekers. The statistical analysis included the use of descriptive statistics, cross-tabulations and the use of a binary logistic regression. The study's findings revealed the long-term nature surrounding cohort's unemployment to be affected by an array of factors. Amongst the more prominent of these included a lack of experience, skill mismatches and an underlining preference amongst the cohort for highly job secure work opportunities. In addition to this, various inter-regional disparities, high job search costs and low social capital levels all seemed to increase the likelihood of being unemployed for longer than 12 months. Henceforth, addressing this situation necessitates a multi-pronged approach. This requires the creation of a sustainable and inclusive economic growth path that stimulates the demand for a variety of skills in various sectors. Moreover, government at all levels should exude a strong political will to enhance the current education system and create an enabling environment in which much needed public-private sector partnership formation can take place. The latter should specifically seek to provide quality work-integrated learning programmes that promote the development of both soft and technical skills, smoothing the successful transition of the cohort to the labour market.

Keywords:

Youth, unemployment, long-term, South Africa, labour market.

JEL Classification: J01, J13, J64

Introduction

Over the course of the last two decades, the South African political and economic landscape has experienced significant changes (Sidiropoulos, 2019). The transition from a highly protectionist regime characterized by the exclusion of many towards a free democracy has seen the access to pivotal opportunities for a vast majority of the population (Masipa, 2018). Despite this progress, over the last ten years, the country has struggled to recover from global instability brought about through primarily the financial crisis of 2007. Since then, the prevailing socio-economic climate has been earmarked by some of the direst circumstances (OECD, 2017). Growth performances have been largely subdued and non-inclusive on the back of declining global demand for commodities. Whilst this has inferred lower per capita gross domestic levels, standards of living have been significantly low (World Bank, 2018). Most recent estimates suggest that more than half of the population find themselves in an impoverished state (StatsSA, 2017). In addition to this, income inequality levels within the country across different measures have been regarded as amongst the highest in the world (Bond & Malikane, 2019). This has all unequivocally meant that for many South Africans the idea of a more inclusive and better life has not been realized.

Based on the aforementioned, the much needed economic development levels needed to rectify the imbalances of the past has been largely absent with the comprehension of the current situation proving largely intricate (Meiring *et al.,* 2018). Whilst numerous factors have contributed to the current subdued environment, no more so has the lacklustre performance of the labour market been evident (Bhorat *et al.,* 2016). In fact, since 1997 labour absorption has been significantly low whilst unemployment (based on official definitions) figures have doubled from 14 percent to more than 28 percent in more recent times (StatsSA, 2019). Although largely attributed to the lack of decent and sustainable economic progress, these challenges have mirrored a labor market that has both adequately struggled to overcome the shortcomings of the past whilst similarly failing to adapt to continuously changing structural market processes moving into the future. This has all brought with it important implications for society as the population and subsequently the labor force continues to grow. For many work seekers though, especially those who are entering the labor market for the first time, are left with feelings of despair and hopelessness of ultimately securing decent employment (CDE, 2017).

The latter has become a central theme amongst the youth cohort in the country. Youth unemployment in this regard has depicted itself as the most pressing socio-economic concern for policymakers in the modern democratic era (De Lannoy *et al.,* 2018). With broad unemployment rates amongst those aged between 15 and 24 years exceeding the 60 percent threshold whilst more than two-thirds of these individuals who have been in this state for longer than 12 months, the situation has been earmarked as a ticking time bomb (Meyer, 2017). The latter has especially raised concern as it not only represents serious structural challenges but poses a major threat both socially and economically for the country. Graham and Mlatsheni (2015) explain in this regard that long-term unemployment among the cohort infers the loss of future possible resources but likewise deprives a central group of becoming financial independent whilst also prevents their coherent social integration, all of which are notable requirements towards a much needed inclusive and empowering economic growth path. Based on these imperatives, the study seeks to identify the drivers of long-term youth unemployment within a developing context. In doing so, it seeks to broaden the understanding surrounding the intricate nature of youth unemployment whilst additionally providing insight which could potentially enhance policy formation directed specifically towards improving the socio-economic climate for the cohort.

Literature review

As a theoretical concept, the conceptualization of not being able to find employment has endured over time with various academics and scholars providing significant insight (Stocker *et al.,* 2015). These theoretical understandings have ascribed the occurrence of being unemployed from various ideological thoughts. For example, from aggregate perspectives and earliest of views theorists have posited that the inability of labor markets to clear could be largely described to the cyclical nature of economic activity (Pigou, 1933). From these perspectives, the difficulty of those seeking work was considered voluntary and temporary and largely hinged on the rigidity and flexibility of the wage-setting process (Marshall, 1920). Notwithstanding the importance of these views but as time has progressed critics have come to reject the notion that wages and inadvertently labor markets are self-regulating (Gul *et al.,* 2014). In advancing the understanding, many, even still today believe that unemployment is rather the result of a lack of the necessary demand in the macroeconomic environment and that both monetary and fiscal policy attribute significant roles towards rectifying any economic imbalances that restrict the job creation process (Keynes, 1936; Alonso-Rodriguez & Sorolla, 2015).

Whilst the aforementioned perspectives have largely viewed unemployment based on more aggregate interpretations and the failure of market forces to shortcomings, the fact that labor markets are different and that each individual seeking work has its own unique features suggest that there are idiosyncratic characteristics that influence labor market success (Tvrdoň, 2016). It is in this regard that explaining unemployment as a market failure goes beyond the interpretations of more macroeconomic theories (Hall, 1999). Rather based on the fact that experiences in the difficulty towards securing a decent employment opportunity differ across countries and regions have centralized the understanding of unemployment from more microeconomic schools of thought (de Jongh, 2017). Downes and Bernie (1999) explain that unemployment in this sense must be seen as a macroeconomic phenome which attributes microeconomic foundations. Based on the acknowledgement much like macroeconomic theorists, various microeconomic expositions have been formulated which have included human capital theory (Schultz, 1964; Mincer, 1974) that have attempted to explain labor market outcomes based on the difference in work-seekers accumulation of education and knowledge. In addition to this, job search theory (McCall, 1970; Mortensen, 1986) ascribes the occurrence of unemployment due to the imperfect and decentralized nature of labor markets and the struggles of work seekers to obtain the necessary information (Franklin, 2016).

In line with these theoretical expositions, global trends in labor market activities have revolved around both the macro and microeconomic conditions. Amongst the more telling of these has seen global growth show notable declines over recent years, especially in regions where it is needed most (UN, 2019). Labor markets in this regard have failed to create the needed capacity required to facilitate the formation of new employment opportunities for the additional labor market entrants (ILO, 2018). This has consequently seen an increase in the number of people employed in vulnerable and insecure employment positions (ILO, 2019a). In addition to these trends, unemployment from more developing regions have likewise been shown to be intertwined with work-seekers who lack the necessary soft and hard skills required by employers whilst large employment disparities exists between urban and rural locations. Furthermore, key role players and policymakers have strongly acknowledged the rapidly changing nature of labor markets moving into the fourth industrial revolution, noting the rapidly changing demand of skill sets from employers and a digital divide that is exposing many middle-skilled positions (OECD, 2019).

Whilst the South African case attributes various similarities to the global perspective, the country's unique and controversial past has brought with it its own challenges (Oosthuisen *et al.,* 2016). Even from a regional point of view, labor market characteristics have significantly differed compared to other African countries (Yu, 2017). Most notable from this point of view has been significantly high unemployment rates and an underdeveloped informal sector. In addition to this, absorption into the labor market has been sluggish (DPRU, 2017). This has all been exacerbated by an economy that has failed to facilitate the needed inclusive growth, especially over the last decade and adverse market policies that have instilled a rigid labor market system (De Lannoy *et al.,* 2018). Whilst all of these factors have contributed to the pervasive nature of unemployment in the country, the shift in the demand towards higher skill levels with the movement into the fourth industrial has likewise inferred a range of implications for low skilled job seekers.

In light of the aforementioned young and new labor market entrants have found it extremely difficult to undertake successful transitions from school to work (de Jongh, 2018). In fact, the country attributes amongst the highest youth unemployment rates globally. Most recent estimates posit that the unemployment rate amongst those between the ages of 15 and 24 years within the South African economy stands at approximately 53.4 percent (ILO, 2019b) much higher than those shown in both developed and developing categories. This includes countries such as Spain (34.3%), Greece (39.9%), Nigeria (18.3%) and India (10.1%). Notwithstanding the importance that these estimates provide, but more concerning indicators such as the burgeoning number of young people that are neither in employment, nor in any form of education and training (NEET) (20.9%) as well as those that have been unemployed for longer than 12 months (67.5% of total unemployed) point to a severe crisis (StatsSA, 2019). The latter, especially amongst inexperienced and young labor market entrants, impose severe consequence not only on an individual level but more so for the future of both national and regional economic structures (Shankar *et al.,* 2016). Shi *et al.* (2018) explain that being unemployed for young work seekers in this regard especially over enduring periods induces a lowering of human capital levels through the erosion of skillsets also known as "scarring effects". More importantly though is that for economies where these occurrences are high it infers a potential labor force with lower experience levels and less productivity, all requirements that are much needed for future economic progress (Abebe *et al.,* 2019).

Based on this background, understanding not only the nature of unemployment but the causes and drivers that contribute to the erosion of their future employment potential has become imperative. Despite the recognition of the issue at hand, comprehension from both a theoretical and empirical perspective, especially within the developing context has been significantly limited (Roberts, 2016). Evidence from several studies, however, have noted that the problem does not present itself as one-dimensional but rather must be seen as a multifaceted phenomenon (de Jongh, 2017; Mncayi, 2016, De Lannoy *et al.,* 2018). Amongst the most telling factors that have been cited include the cohort's high sensitivity to business cycle fluctuations (Matsumoto *et al.,* 2012). Pastore (2018) reiterates that when economies fail to grow sustainably, the "*first out, last in*" experience becomes particularly evident due to low levels of experience. In addition to this, Bertrand and Crépon (2014) have cited long durations of unemployment among young people based on the lack of labor market knowledge and with this poor social networks. This is further compounded by the use of misdirected job search methods when these individuals lack certainty of which jobs are available.

Again, for many young South Africans seeking employment, it seems these factors are all prevalent. However, based on the context-specific nature of the economy and its various phases of development, the labor market dynamics for the youth have shown several idiosyncratic features. Amongst these Orr and Van Meelis (2014) signal that even after 20 years of democracy many young work-seekers chances of finding employment are highly dependent on bot racial and gender backgrounds. This primarily emanates from historically low education levels and the lack of intergenerational transfers, especially for Black / African job seekers. In addition to these difficulties, geographical location has also been suggested to play a significant role in prolonging joblessness amongst especially young work seekers (De Lannoy, 2018). Von Fintel (2018) attributes this to the large spatial inequalities the country exhibits in terms of its centralized economic activity. For many young South Africans that are still largely dependent on families, the inability to find employment can be ascribed to being situated far from possible employment. In searching for work these individuals' struggle is compounded by overcoming high job search costs whilst likewise being subjected to prolonged job matching processes (Roberts, 2016).

Whilst scholars have shown agreement amongst these factors, the impact that social welfare has had on employment outcomes, especially over the long-term, has contrastingly raised contentious debates. Some believe that the presence of these grants has imposed voluntary decisions on abstaining from searching processes consequently reducing labor supply (Klasen & Woolard, 2009). Others, however, posit that these welfare payments assist in subsiding and overcoming high search costs providing much-needed assistance in eradicating the geographical barriers faced by many young South Africans (Stapleton, 2015). In light of these intricate dynamics, the study seeks to add to the body of knowledge specifically surrounding the nature of long-term nature of joblessness amongst the youth not only in South Africa but likewise in developing contexts.

Methodology

This section of the study elaborates on the methodology that was used during the inquiry. More specifically, it explains the main purpose of the study whilst additionally describing the research design and method that was adopted. Thereafter the section discusses the sample period and data that was used. Finally, the various techniques that were utilized during the analysis are elaborated on which also includes the specification of the binary logistic regression model which is employed to determine the impact on the likelihood of being unemployed on a long-term basis (for longer than a 12-month period).

Research method and data

The main objective of the study was to identify and determine the key drivers of long-term youth unemployment in South Africa. Towards achieving this objective, the study made use of a quantitative research approach with a cross-sectional research design. Based on this design, secondary data were used that were collected from Statistics South Africa (StatsSA) collected during the second quarterly labor force survey (QLFS) of 2019. StatsSA is a national government department solely responsible for the collection of data on various levels of the population including both household and individual-based inquiries. The QLFS is a household-based sample survey which is carried on a quarterly basis. The survey is primarily used to collect comprehensive micro-level data pertaining the labor market activities of all individuals from age 15 and above. In conducting the surveys, StatsSA uses a master sampling technique in which the

sample is drawn from primary sampling units (PSUs) that are equally divided into four subgroups and rotated for each quarter. The method ensures that each quarterly sample is representative across various aspects, including provincial level, metro and non-metro areas as well as geography type (urban and informal). Through the use of the data set, a final sample size of 4554 labor market participants that were either unemployed on a short-term (fewer than 12 months) or long-term (longer than 12 months) basis were included. Given that the main purpose was directed towards understanding the labor market dynamics of specifically the youth, only those individuals between the ages of 15 and 34 years were included.

Data analysis and model specification

Once the data were obtained from the StatsSA database it was subject to various analysis techniques. From this point of view, the data analysis included three levels. The first made use of descriptive statistics to report on the composition of the sample and provide insight into the background of the individuals' labor market status and activities. Thereafter, a cross-tabulation analysis was employed with the purpose to identify any differences within specific sub-stratum regarding the nature of the labor market participants' unemployment status. Finally, towards identifying the key drivers of long-term youth unemployment and subsequently determining their impact on the likelihood of being without a job for longer than 12 months the study made use of a binary logistic regression. The regression model that was utilized is represented as follows:

$$UD_i = \beta_1 AGE_i + \beta_2 GEN_i + \beta_3 PG_i + \beta_4 MS_i + \beta_5 AREA_i + \beta_6 GL_i + \beta_7 ED_i + \beta_8 SG_i + \beta_9 PA_i + \beta_{10} EQ_i + \beta_{11} SA_i + e_i \quad ..(1)$$

Where UD_i is the binary dependent variable and refers to the unemployment duration, AGE_i represents the age of the participants, GEN_i the gender, PG_i the population group and MS_i the marital status, $AREA_i$ the municipal area of the participants GL_i the geographic location ED_i the respective education levels, SG_i the presence of social grants within the household, PA_i the referring to placing adverts in the job search method, EQ_i the use of direct enquiries and SA_i the use of family and/or friends to look for a job. In addition to this $\beta_1, \beta_2\ \beta_3 \ldots \beta_{11}$ represents the coefficients and e_i the error term. The aforementioned variables represented a combination of continuous and categorical variables. Table 1 shows each of the selected variables, their denotation as well as their assigned coding criteria.

Table 1: Included dependent and independent variables and their coding descriptions

Variable	Denotation	Associated coding
Unemployment duration	UD_i	Categorically coded where 1 = Long-term unemployed and 0 = Short-term unemployed
Age	AGE_i	Age measured in number of years
Gender	GEN_i	Categorically coded where male = 1 and female = 0
Population group	PG_i	3 dummy variables created. African = 1 and otherwise = 0, Colored = 1 and otherwise = 0, Indian/Asian = 1 and otherwise = 0. White used as the reference group.
Marital status	MS_i	Categorically coded, where living together or married = 1 and not married = 0.
Municipal area	$AREA_i$	Categorically coded where metro = 1 and non-metro = 0.

Variable	Denotation	Associated coding
Geographic location	GL_i	Categorically coded where 1 = rural and urban = 0.
Education level	ED_i	3 dummy variables created where 1 = Primary schooling and 0 = Otherwise, 1 = Secondary schooling and 0 = Otherwise, 1 = Tertiary education and 0 = Otherwise. No schooling was used as the reference group.
Social grant	SG_i	Categorically coded where 1 = yes and 0 = no.
Placed adverts	PA_i	Categorically coded where 1 = yes and 0 = no.
Enquiries	EQ_i	Categorically coded where 1 = yes and 0 = no.

Source: Author's own compilation

Subsequent to the use of the model, as shown above, various diagnostic tests were run in order to ascertain the reliability of the results. This involved the use of correlation analysis to determine any multicollinearity was present. Furthermore, this was supplemented by the use of Variance Inflation Factors (VIF) as well as tolerance values. Finally, towards ensuring the adequacy of model fit, both the Hosmer and Lemeshow test, as well as the Omnibus test of model coefficients, were employed.

Results and discussion

This section of the study elaborates and discusses the findings that were obtained during the analysis of the data. As eluded to in the methodology, various analysis techniques were employed including descriptive statistics, cross-tabulations as well as a binary logistic regression model. Towards discussing the findings, the section is divided into three sub-sections, the first describes the demographic background of the sample. This is followed by reporting on the use of cross-tabulations, chi-square statistics and effect size estimates. Finally, the section concludes with a discussion on the regression results that eluded to the identification of the key drivers for long-term unemployment among the youth cohort in South Africa.

Demographic composition of the sample

Table 2 below shows the results relating to the demographic and socio-economic background of the participants. From these results, it seems that the sample was approximately evenly distributed between males (48.5%) and females (51.5%). A similar distribution for the age categories of individuals between the ages 20 to 24 years (31.6%), 25 to 29 years (36.2%) and 30 to 34 years (34.7%) were also noted, however only 4.2 percent of the sample were between the ages of 15 and 19 years, reflecting the early stages of these individuals' labor market entry. These age-dependent characteristics were also evident within the participants' marital status, where more than 80 percent of the sample indicated that they were either living alone or not married. Based on their level of education, results from Table 2 reflect that majority of the individuals had some form of secondary education, followed by those that attributed a tertiary qualification. Only 0.6 percent indicated that they had no form of schooling. The findings in this regard tend to signify some of the failures of the secondary education system. Whilst holding a meaningful qualification (Grade 12 / Matric) young labor market entrants still significantly struggle to find work, highlighting the inability of the education system to adequately equip young people

undertaking their transitions from school to work with the skills demanded by the labor market (De Lannoy *et al.,* 2018).

Table 2: Demographic composition of the sample

Aspect	Sub-cat.	*F*	%	Aspect	Sub-cat.	*F*	%
Gender	Male	2206	48.5	Education level	No schooling	27	0.6
	Female	2338	51.5		Primary	279	6.1
Population group	African	4118	90.6		Secondary	3796	83.5
	Colored	347	7.6		Tertiary	442	9.7
	White	33	0.7	Province	Western Cape	421	9.3
	Asian / Indian	46	1.0		Eastern Cape	524	11.5
Age	15 – 19 yrs	191	4.2		Northern Cape	144	3.2
	20 – 24 yrs	1437	31.6		Free State	330	7.3
	25 – 29 yrs	1647	36.2		Kwazulu-Natal	586	12.9
	30 – 34 yrs	1579	34.7		North West	253	5.6
Marital status	Married / Living together	759	16.7		Gauteng	1529	33.6
					Mpumalanga	488	10.7
	Not married / Living alone	3785	83.3		Limpopo	269	5.9
				Geography type	Urban	3286	72.3
Unemployment duration	Short-term	1367	30.1		Traditional	1181	26.0
	Long-term	3177	69.9		Farms	77	1.7

Source: Calculations from QLFS data (2019)

From a racial perspective, results from Table 2 seem to reflect the national composition (StatsSA, 2019), where majority of the participants were African / Black (90.6%), which was followed by those who were Colored (7.6%) whilst only a small proportion identified themselves as Asian / Indian (1.0%) as well as White (0.7%). Moreover, participants from all nine provinces were included, where approximately a third lived within the Gauteng province (33.6%), also known as the economic hub of the country (Meyer & de Jongh, 2018:103). More rural provinces such as the Limpopo province (5.9%), North West (5.6%) and the Northern Cape (3.2%) however attributed the least participants. Finally, towards identifying the degree of difficulty in obtaining employment, results relating to the unemployment duration seem to confirm the structural challenges many work seekers in South Africa face in finding a job (Dagume & Gyekye, 2016). In fact, more than two thirds (69.9%) of the unemployed work-seekers identified themselves as being without employment for longer than 12 months.

Cross-tabulation analysis

Subsequent to the demographic analysis, cross-tabulations together with the use of chi-square statistics and effect size estimators were employed. Results for these utilized techniques are reported in Table 3 below. Towards identifying any notable differences with the specific sub-stratum of the participants' unemployment status, results show that all selected characteristics apart from marital status (*Sig. = 0.112*) attributed significantly different (*at a 1% level of significance*) distributions with relatively high chi-square statistics and low p-values. Based on age, it seems that longer durations of unemployment are associated with higher age groupings

which potentially points to the scaring effects for the cohort. (Shi *et al.,* 2018) explain that early unemployment for young work-seekers adversely affects their chances of obtaining work in later stages of their careers which is associated with a loss of skills and the depreciation of expected human capital. In addition to this, distributions based on race, tend to highlight that more Black job seekers, compared to other population groups seem to attribute a higher prevalence of long-term unemployment. This also seems to be reflected when considering gender roles where more females (73.6%) compared to males (66.0%) were without work for more than 12 months. These findings tend to reflect those of similar studies which likewise indicated adverse employment outcomes across gender and racial lines within the South African context (Anand *et al.,* 2016).

Table 3: Results for the cross-tabulation analysis

Aspect	Sub-category	Long-term unemployed	Short-term unemployed	χ^2 *(Sig.)*	*Cramer's V*
Age	15 – 19 years	44.5	25.7	85.457 (0.000*)	0.137
	20 – 24 years	66.2	27.3		
	25 – 29 years	72.7	33.8		
	30 – 34 years	74.3	55.5		
Population group	African	70.9	29.1	19.719 (0.000*)	0.066
	Colored	60.2	39.8		
	White	60.9	39.1		
	Asian / Indian	63.6	36.4		
Gender	Male	66.0	34.0	31.236 (0.000*)	0.083
	Female	73.6	26.4		
Education Level	No schooling	74.1	25.9	14.922 (0.002*)	0.057
	Primary	68.1	31.9		
	Secondary	70.9	29.1		
	Tertiary	62.2	37.8		
Marital Status	Married / Living together	69.4	30.6	2.528 (0.112)	0.024
	Not married / Living alone	72.3	27.7		
Municipal area	Metro	67.3	32.7	15.609 (0.000*)	0.059
	Non-Metro	72.7	27.3		
Geography	Urban	65.1	34.9	19.159 (0.000*)	0.065
	Rural	71.8	28.2		
Social grant	Yes	73.7	26.3	7.168 (0.007*)	0.040
	No	69.1	30.9		

*Note: * Indicates significance at 1% level of significance; Cramer's V interpretation from Cramer (1946)*

Source: Calculations from QLFS data (2019)

Upon viewing the distributions according to education level, the likelihood of being unemployed on a long-term basis seems to diminish with higher levels of education. In fact, those with some form of tertiary education attributed approximately 11.9 percent, 8.7 percent and 5.9 percent fewer individuals within the long-term unemployed category when compared to those with no schooling, primary and secondary education levels respectively. This finding is potentially indicative of the demand for higher tertiary skills within the labor market (Adelzadeh, 2017).

Furthermore, results for both municipal area and geographic location tend to highlight the geographical barriers to employment for many work seekers. Results from this point of view showed that participants situated both within rural locations and non-metropolitan areas experienced a higher likelihood of being without work for more than 12 months. Mncayi (2016) in this regard reiterates that individuals living further away from urban areas are restricted based on the access to formal job markets and quality educational structures. As a means of ascertaining the strength of association between the various characteristics and the duration of unemployment, the Cramer's V statistic was used. Based on the results shown from Table 3, Education level (V = 0.057), Marital Status (V = 0.024), Municipal area (V = 0.059) and having a social grant within the household (V = 0.040) all attributed only small effect sizes. Results for population group (V = 0.066), Age (0.137), Gender (V = 0.083) and Geographic location (V = 0.065) however showed small to medium effect sizes.

Binary logistic regression results

As a means of identifying the drivers of longer durations of unemployment amongst the cohort, the study made use of a binary logistic regression model with the purpose to assert a view on how the dependent variable varies across different categories of explanatory variables. Results for the utilized model are reported in Table 4 below. From the table, it shows a positive coefficient for Age and low p-value of 0.000 suggesting that Age was a significant driver for longer durations of unemployment. The odds ratio of 1.063 in this regard infers that for each additional year of age increased the chances of being unemployed for more than 12 months by 6.3 percent. These findings lend credence to those highlighted in the cross-tabulation analysis which points to the scaring effects of longer durations of unemployment amongst the cohort. Whilst it reduces the potential human capital levels for the individuals, du Toit *et al.* (2018) assert that the occurrence likewise contributes to social exclusion and the lack of financial independence that brings with it various psychological implications.

In accordance with the positive association, the coefficient for municipal and geographic location likewise was positive. The p-value for the latter was estimated at 0.000 which confirmed the null hypothesis (coefficient = 0) could be rejected at a 1% level of significance. In this regard, results suggest that being located in a rural and isolated area increases the chances of being unemployed for longer than 12 months by 36.7 (1.367 - 1.0) percent. Whilst living in isolated areas limits the access to formal job markets, various studies have likewise associated these geographical barriers with the inability of many work-seekers to cover significantly high job search costs (Graham & Mlatsheni, 2015; de Jongh, 2017). As a means of identifying which level of education was deemed significant in promoting the employability of the cohort, the study made use of four education levels respectively. In doing so, having some form of tertiary education was entered as the reference group. Results in this regard showed that having no form of education was associated with a 108 (2.081 – 1) percent higher likelihood of being unemployed when compared to those with a tertiary level education. Based on the results, this likelihood seems to diminish with higher levels of education where primary education attributed a 59.2 percent higher likelihood and secondary education only a 57.8 percent likelihood. These results correspond with those presented by Assan and Nalutaaya (2018) in which the study notes the presence of significantly large skills mismatches and the lack of technical skills for those making the transition from school to work.

Table 4: Results for the binary logistic regression model

Variable	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I for EXP (B) Lower	Upper
Age	0.061	0.008	57.851	1	0.000*	1.063	1.047	1.080
Municipal area (Non-metro)	0.086	0.079	1.184	1	0.277	1.089	0.934	1.271
Geographic location (Rural)	0.312	0.086	13.190	1	0.000*	1.367	1.155	1.618
Marital status (Married)	-0.147	0.095	2.357	1	0.125	0.864	0.716	1.041
Tertiary schooling (Reference group)			18.700	3	0.000*			
No schooling	0.733	0.463	2.500	1	0.114	2.081	0.839	5.162
Primary	0.465	0.171	7.084	1	0.008*	1.592	1.128	2.207
Secondary	0.456	0.109	18.226	1	0.000*	1.578	1.286	1.971
Black (reference group)			20.839	3	0.000*			
White	-0.375	0.311	1.458	1	0.227	0.687	0.374	1.263
Coloured	-0.525	0.120	19.260	1	0.000*	0.591	0.468	0.748
Asian / Indian	-0.347	0.371	0.871	1	0.952	0.707	0.342	1.464
Social grant	-0.027	0.100	0.071	1	0.790	0.974	0.800	1.184
Gender (Male)	-0.395	0.076	26.815	1	0.000*	0.674	0.580	0.782
Enquired	0.033	0.068	0.0241	1	0.624	1.067	0.847	1.104
Placed adverts	0.007	0.070	0.011	1	0.917	1.093	0.866	1.138
Constant	-1.627	0.383	18.014	1	0.000*	0.197		

*Note: * Indicates significannce at 1% level of significance; Hosmer and Lemeshow test: Chi-square = 11.784, p-value = 0.161; Omnibus model of coefficients: Chi-square = 165.069, p-value = 0.000 Nagelkerke R-Square = 0.358; Cox and Snell R-square = 0.254, VIF values = ranged between 1.0 and 2.0, Tolerance values = All larger than 0.2*.

Source: Calculations from QLFS data (2019)

Race within South Africa has been an important point in the consideration of labor market outcomes. For the purpose of this study, race was entered into the model using four categories. In doing so, being Black / African was used as the reference group. Coefficients for other racial groups were all negative which inferred that individuals from these groups were all less likely to be unemployed for longer than 12 months when compared to those that were Black / African. Whilst p-values for the White (Sig. = 0.227) and the Asian / Indian (Sig. = 0.952) suggest that the null hypothesis (coefficient = 0) could not be rejected even at a 10 significance level, results for the colored contrariwise was deemed statistically significant (1% level of significance). Towards explaining this finding, Graham and De Lannoy (2016) assert that the additional difficulties Black / African youth face in the labor market are instilled by various factors specifically surrounding the historically low investments in the group's education as well as a lack of intergenerational transfers of human capital.

As part of the survey, participants were asked whether someone in their household received a social grant. In light of this, a dummy variable was created where 1 = yes and 0 = no. Results from Table 4 indicate that the presence of a social grant in the household was negatively

associated with unemployment duration. Whilst findings on the relationship between grant recipients and labor market outcomes have been largely contentious, the results in this study suggest that the added income from these welfare payments assisted in reducing the likelihood of longer durations of unemployment. The p-value of 0.790, however, suggests that the null hypothesis (coefficient = 0) could not be rejected at a 10% level of significance. From a gender perspective, the coefficient was negative. Given that the reference group was entered as being male, the results infer that females were more likely to be in a long-term unemployed state. In fact, the odds ratio of 0.674 tends to suggest that males were 32.6 (0.674 – 1) percent significantly less likely to be unemployed for more than 12 months. These findings support those presented by Beukes *et al.* (2017) which likewise found labor market outcomes of females, even after 20 years of democracy to be less desirable than their male counterparts.

Finally, as a means to identify whether any used job search methods assisted in reducing the likelihood of being unemployed on a long-term basis two variables were included. This involved the use of job advertisements and direct enquiries with potential employers. Results for both variables reflect positive coefficients which tend to suggest that the use of these methods did not reduce the likelihood of being unemployed for longer than 12 months. Both odds ratios of 1.063 and 1.093, in fact, suggest that the use of these methods increased the likelihood of falling within the long-term unemployment pool by 6.3 and 9.3 percent respectively. The explanation for this finding relates to the inefficiency of these methods in finding employment. The high p-values of 0.624, as well as 0.170, however, suggest that the null hypothesis (coefficient = 0) could not be rejected, not even at a 10% level of significance.

After the estimation of the regression results, multicollinearity diagnostics were utilized in order to ascertain if any of the predictor variables were highly correlated with one another. Midi *et al.* (2010) assert that the presence of multicollinearity in data sets is undesirable as it induces inflated parameter estimates as well as wider confidence intervals (CIs). As eluded to in the methodology, both VIF and tolerance values were used in order to determine if variables were highly correlated. Based on the results from the analysis all VIF values were below the prescribed level of 5 and tolerance values larger than the 0.1 threshold (Rogerson, 2001). This indicated the absence of any concerning multicollinearity levels and hence the rejection of any spurious or unreliable estimates. Furthermore, results for both the Hosmer and Lemeshow test (Chi-square = 11.784; p-value = 0.161) as well as the Omnibus model of coefficients (Chi-square = 165.069; p-value = 0.000) both suggested that the applied model was a good fit for the data that was utilized during the analysis.

Conclusion and recommendations

The main purpose of the study was to determine and identify the main drivers of long-term youth unemployment. In doing so, the study provided significant insight into the factors that contribute to the prolonged difficulties many young South Africans face in accessing employment opportunities. The findings showed that youth unemployment cannot be considered a unidimensional concern but rather should be viewed as intricate and diverse. From this point of view, results showed that long durations without work were influenced by numerous factors which emanate from both a structural nature as well as signifying the presence of various labor market inequalities. The cohort's struggles in this regard were largely driven by the lack of the needed skills required by the labor market which for specific demographic groups is perpetuated by historic imbalances and a lack of intergenerational transfers. This was also evident in the geographical barriers that were

identified. Young people in this regard are largely dependent on parental figures in areas which they reside. Not only do these factors limit access to formal job markets but many find it difficult to overcome the high job search costs associated with their localities. In addition to these idiosyncratic features, participants likewise illustrated the use of inefficient job search methods which indicated the lack of the needed labor market knowledge.

Based on the aforementioned, the results of the study hold notable implications for policymakers and key stakeholders alike. Amongst these, is the evidence that the study provides from the associated scarring effects that unemployment holds when it is experienced in the early stages of labor market entry. Not only does it contribute to lower and diminishing human capital levels but likewise induces various psychological consequences as well as an increased risk of social exclusion. Henceforth, towards addressing the issue strategies directed towards improving the quality of education structures within the country need to be proliferated. These should look to improve especially both the technical and soft skills instilled at learners as early as secondary education levels. Curriculums in this regard should be structured with the needed work-integrated learning (WIL) programs. From a policy perspective, lawmakers need to priorities the relaxation of labor regulations that will assist in the reduction of the cost of employment especially for those with lower experience levels. Additional recommendations include the establishment of local labor market information centers, the use of wage subsidies and the development of the informal sector. Whilst these strategies can all significantly assist in addressing the issue, the reality of the unemployment problem is largely structural and any means of addressing the issue requires a sustained and inclusive growth performance.

Given that the study adds to the body of knowledge surrounding the long durations of unemployment, it is important to note that the inquiry was not without its own limitations. This surrounded the cross-sectional nature of the design and an overarching focus on national developments which limited consideration into specific local and regional factors. As such, future studies should aim to adopt more longitudinal designs and comparative research approaches to identify the context-specific factors that can likewise contribute to the issue at hand.

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