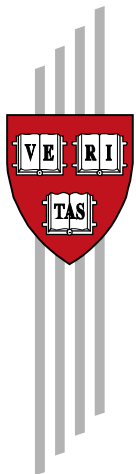


Diagnosing South Africa's High Unemployment and Low Informality

Kishan Shah

CID Research Fellow and Graduate Student
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The Growth Lab at Harvard University

September 2022

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Executive Summary

This report analyzes the causes and consequences of South Africa's high rates of unemployment and the unique nature of labor market exclusion in the country. It leverages a combination of new quantitative analysis using South African datasets and international datasets for benchmarking, together with synthesis of existing literature and case studies. The goal is to: (1) characterize the challenge of labor market exclusion in South Africa, (2) identify ways in which this is similar and different to other countries, (3) understand what drives the unique challenges of the labor market in South Africa, and (4) narrow down what policy areas are most important to address the underlying drivers. This report takes a diagnostic approach to understand the causes of South Africa's unique pattern of low informality.

South Africa faces three interacting challenges: abnormally high poverty rates, the highest rate of inequality in the world, and the highest rate of unemployment in the world.

Whereas most middle-income countries have all but eradicated extreme (dollar-a-day) poverty, South Africa's poverty rate remained at over 18% prior to the COVID-19 pandemic. This is consistent with extreme inequality in the nation, where the poorest 10% of the population in South Africa are as poor as the poorest 10% across low-income Sub-Saharan countries, and the richest 10% of South Africans are as rich as the richest 10% in Eastern Europe. The low incomes at the bottom of the income distribution are partially reflective of labor market exclusion. More than 30% of South African households do not have any working adults and are reliant on non-labor market sources (especially government grants) for their livelihoods. Social grants have contributed most to poverty alleviation in South Africa's recent history, but sluggish income per capita growth since the Global Financial Crisis (GFC) has also come with little progress on poverty and inequality and rising rates of unemployment.

When we put South Africa's labor market issues in an international context, South Africa's first labor market challenge is similar to that of other developing countries: expanding formal, wage work. As countries grow richer and experience structural transformation of their economies, their labor markets also tend to transform into having more formal, wage work. In this respect, South Africa has the amount of wage work that would be expected of a country at its level of development (~40% of its working age population). But growth since the post-Apartheid period has had a mixed record in expanding such employment over time. The expansion of formal, wage work has stagnated with the stagnation of growth post-GFC. Expanding formal, wage employment is the key medium- and long-term challenge for South Africa to provide decent livelihoods to its population. South Africa is far from unique as this challenge of igniting inclusive growth and structural transformation is common to almost all developing countries. Still, it is the key challenge it must prioritize.

Where South Africa is unique is that it additionally faces the challenge of having a labor market where those excluded from wage work are more likely to be unemployed rather than working in informal, own-account jobs. In other developing and middle-income countries, unemployment rates are lower because those that do not find jobs in the formal sector are able to make some sort of livelihood in the informal sector, albeit with low pay and often under more vulnerable conditions. In South Africa, this does not happen to the same extent. As a result, the primary difference between the employment structure of South Africa and other countries is not just in its high unemployment rate, but also its very low rate of informal and own-account work. A simple regression would predict that South Africa should have closer to 20% of its adult population in own-account work compared to the 4% it does have. This difference of 16% would cover the anomalous size of South Africa's unemployment compared to other

countries. This combination of average levels of wage employment, low levels of informal, own-account work, and high levels of unemployment is a puzzle and points to something happening in the South African labor market that creates such exclusion.

There is also a large wage penalty for informal work (or premium for formal work) in South Africa that is consistent with the labor market outcomes we see. We estimate there to be gross wage penalty for informal wage work and informal self-employment of about 50%. This is high compared to other countries. Prior estimates for countries like Brazil and Mexico measure penalties closer to 9-15% for wage work or even a premium for informal self-employment in these two countries. A situation where informal work is especially poorly paying or formal work especially high paying — or a combination of the two — must explain why people in South Africa would choose to remain unemployed rather than taking on informal work. This points to drivers that either “pull” people towards remaining unemployed (e.g., high minimum wages, education premia, social grants) or drivers that “push” people away from informal work (e.g., crime, regulations of informal work, transport costs).

Section III of this report examines potential “push” and “pull” factors and finds little evidence for the various “pull” explanations. Social grants may have some impact on employment and self-employment at the margin especially for the elderly and mothers, but the overall impact sizes are small. Despite high levels of minimum wages, the weight of evidence suggest that the wage aspects of unions and bargaining do not constrain employment or informal work. Non-wage labor regulations are also not any stricter in South Africa than in comparator countries. Lack of education also does not emerge as an explanation for low informality, as education levels have risen while informality remains low.

The diagnostic evidence of the informality puzzle emphasizes the need for more research and policy attention on issues of space, transport, density, and urban regulation. Among push factors that make informal and own account work less attractive, barriers of space, urban land regulation, density, and transportation appear to be large frictions for individuals’ participation in the labor market. While the diagnostic evidence does not allow us to size the contribution of each of these challenges, evidence suggests they would good places to explore further and put more policy attention. Further research and some policy experimentation itself could help in determining both the magnitude of these constraints and what needs to be done to address them. Meanwhile, comparisons with other countries and across areas in South Africa show that although crime levels are high, this is not a critical factor pushing down informal work.

Growth through inclusion in South Africa must include addressing the problem of low formal work, but also should include higher levels of informal work. The goal is for all South Africans to find good quality jobs in the formal sector. This should be the focus of a larger strategy on growth. But the lack of informal work has implications for unemployment, poverty, and welfare. Thus, trying to reduce the barriers that cause the lack of informality can help reduce some of the structural challenges preventing people from participating in the broader economy. Additional redistribution will likely not address the longstanding barriers people face in participating in South Africa’s economy. This paper instead finds that efforts at understanding and experimenting in areas of urban space, regulations, transportation, housing, and density are essential to addressing labor market exclusion and South Africa’s triple challenge. These issues can be impacted through local policy innovations with national support.

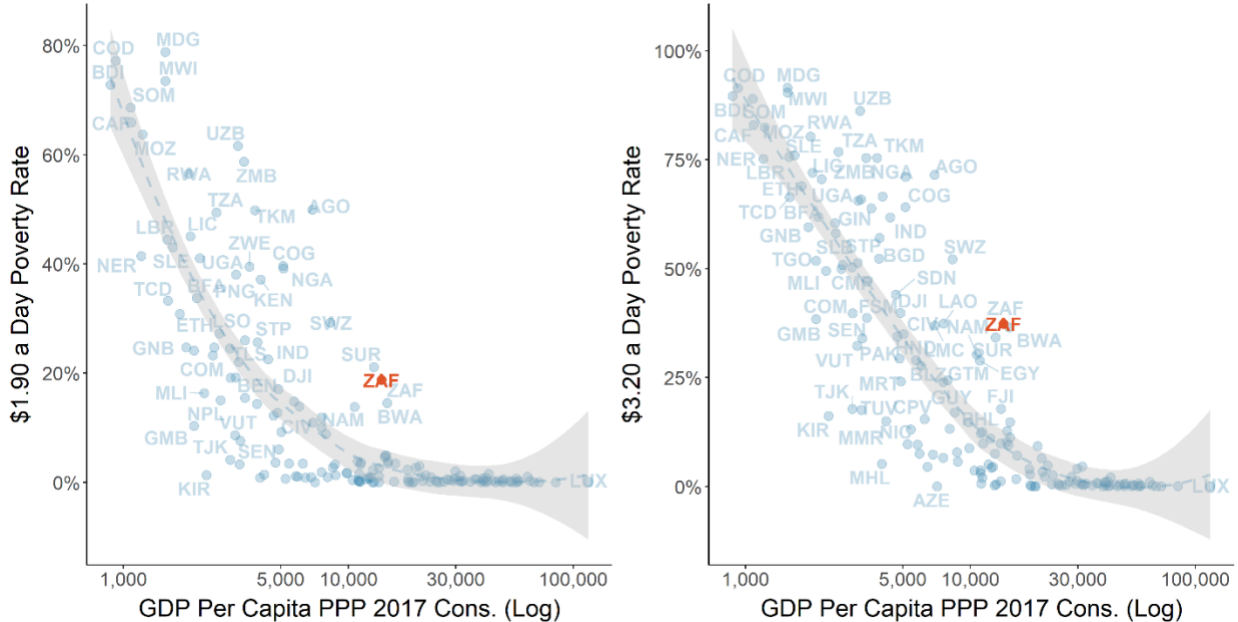
1. Poverty, inequality, and labor market exclusion

South Africa faces three interlinked challenges of high poverty, high inequality, and high labor market exclusion. This section describes how South Africa is a negative outlier globally all three of these dimensions and key interactions between the problems. We will see that exclusion from the labor market drives lower incomes for those most vulnerable, pushes up poverty, and makes inequality worse. This section then discusses how redistribution through social grants has been the main approach used to compensate for exclusion and the implications for such a strategy in light of the descriptive analysis.

1.A. Poverty

There is usually a strong relationship between economic growth, income per capita, and poverty. Figure 1 shows the relationship between the poverty headcount ratio for USD 1.90 2011 international dollars (i.e., dollar-a-day extreme poverty), USD 3.20 2011 international dollars, and GDP per capita in 2017 constant international dollars. There is a strong relationship between average incomes and poverty rates.¹ On average, a 1% increase in GDP per capita reduces the extreme poverty headcount ratio by 1.5%. By the time, a country reaches middle-income status, it has usually all-but eradicated extreme poverty. As a result, among upper middle-income countries (not including South Africa), the average extreme poverty rate was approximately 2% in 2014 and approximately 1.4% in 2019.

Figure 1. Poverty Headcount Ratio and GDP Per Capita (Latest Year Available)



Source: Own calculation; World Bank World Development Indicators

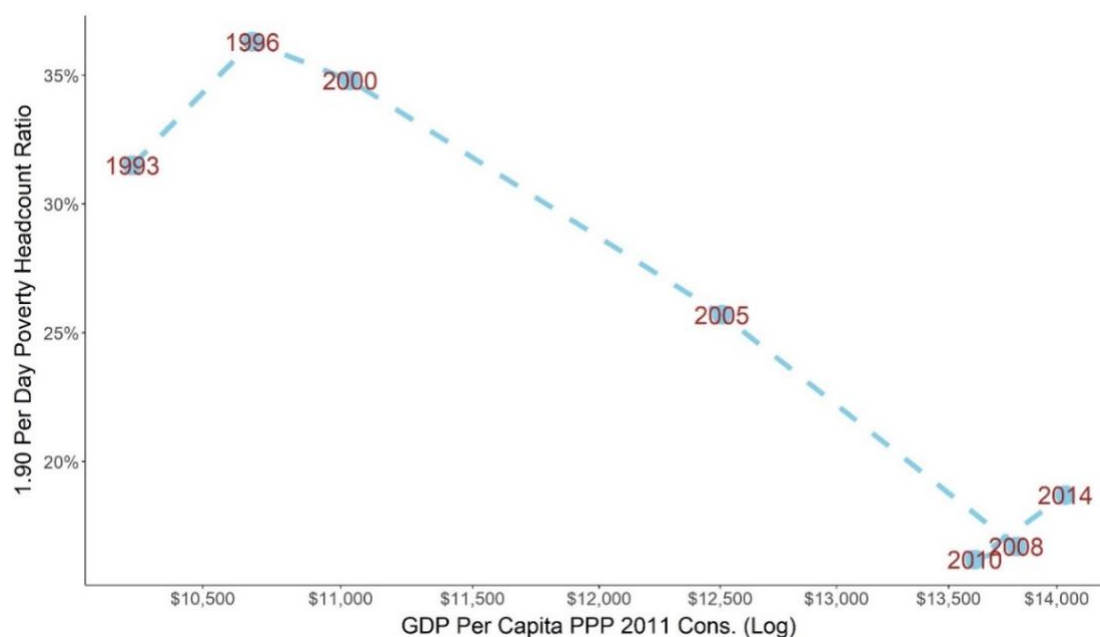
South Africa is an anomaly in this respect. Despite its upper-middle income status, South Africa has a poverty rate that is in line with that of a much poorer country. In 2014, South Africa had a GDP per capita of USD ~14,000 (in 2011 constant international dollars), and yet it had an extreme poverty rate of ~19%. For comparison this is approximately the same level of extreme

¹ Lant Pritchett, "Basically, Economic Growth Is Enough, and Only Economic Growth Is Enough for the Basics," n.d., 44.

poverty that Bangladesh had in 2010, despite Bangladesh only having an income level of USD ~2,900 (i.e., 4.8x less) at that time. Today, Bangladesh despite being much poorer has a lower extreme poverty rate.² If we take the higher threshold used for middle-income countries, the poverty situation in South Africa looks even more extreme. At the USD 3.20 per day threshold, South Africa's poverty rate is more than 37%.

One reason for this high rate is that South Africa began with a high poverty rate at the end of apartheid. When South Africa transitioned from the apartheid regime to full democracy in 1993, nearly a third of all South Africans could be classified as below extreme poverty. In the tumultuous times after full democracy, extreme poverty reached over 35%. This was even though South Africa already had a GDP per capita above USD 10,000 at this time. The legacies of apartheid had meant that this wealth was narrowly held by a very small minority.

Figure 2. Poverty and GDP Per Capita in South Africa (1993 – 2014)



Source: Own calculation; World Bank World Development Indicators

After transitioning to democracy, high poverty rates reflect the nature of South Africa's growth. Research by Leibbrandt et al. (2010) has shown that the large declines in poverty between 1998 and 2008 were entirely due to government transfers rather than income increases at the bottom of the distribution.³ In fact, during this period the authors document that only the top two income deciles saw an increase in real monthly incomes, whereas the bottom 80% saw a decline, with the bottom decile seeing a decline in monthly earnings of nearly 43%.⁴ Thus, the growth that occurred during the boom years was not pro-poor. Instead, it was able to help create more resources for the government to expand social grants to the elderly and mothers with children, and it was these transfers that drove declines in poverty rates.

High poverty rates also reflect South Africa's overall low rate of the growth since 1993 and especially since 2008. Between 1993 and 2014, South Africa's GDP per capita grew at

² Calculations using World Bank World Development Indicators

³ Murray Leibbrandt et al., "Employment and Inequality Outcomes in South Africa," *University of Cape Town: Southern Africa Labour and Development Research Unit*, 2010, 45-46.

⁴ Ibid.

about 1.5% per year. In that same period, poverty fell by about 2.5% per year (slightly more than the expected 2.25% per year predicted by cross country regressions). During a period of economic growth between 1996 and 2008, when income growth averaged ~2.2% year, poverty rates fell by more than almost 7% per year for a total of over 20 percentage points in the 12-year period. However, with growth having stagnated since 2008, poverty rates have also stopped falling and have instead increased, undoing some of the previous gains. COVID-19 is a new shock that risks further backsliding.⁵ Even prior to COVID-19, Schotte et al. (2022) show that not only is poverty highly persistent for households in South Africa, but there are also a significant portion of non-poor households that are just above the poverty line and are at high risk of falling into extreme poverty.⁶ Addressing persistent and rising poverty will be a critical task for the South African government, even as it tries to also revive overall growth.

1.B. Inequality

South Africa has the highest level of inequality in the world. One of the most common measures of inequality is the Gini coefficient. Figure 3 shows the relationship between the Gini coefficient and GDP per capita. In general, there is not a strong relationship between the two variables especially at low- and middle-income levels. However, the Gini does tend to decline as countries transition from middle-income to high-income. The Gini coefficient for South Africa currently sits at 0.63-0.67. This high Gini has been persistent over time, falling only slightly over the last decade from a high of 0.65 in 2009 after increasing from a low of 0.58 in 2000. South Africa's Gini coefficient is the highest in the world, beating out values for other highly unequal countries like Latin America like Brazil and Mexico.

Differences in income among those employed especially at the top contribute most to South Africa's high Gini. Hundenbord et al. (2018), has shown that ~90% of measured inequality in South Africa is driven by differences in labor market income.⁷ In contrast, differences in non-labor-market income and differences in household labor participation explains much less. Other research has shown that the change in inequality in South Africa has been driven by the rapid rise in incomes at the top of the income distribution versus the stagnation of incomes at the bottom.⁸ For example, Bassier et al. (2020), show that incomes of the top 5% grew rapidly in the years between 2003-2015, partly due higher returns to human and physical capital. This was even though overall GDP per capita during this period stagnated and thus incomes for the rest of the population stagnated or even declined.⁹

⁵ World Bank, *Poverty and Shared Prosperity 2020: Reversals of Fortune* (Washington, DC: World Bank, 2020), <https://doi.org/10.1596/978-1-4648-1602-4>.

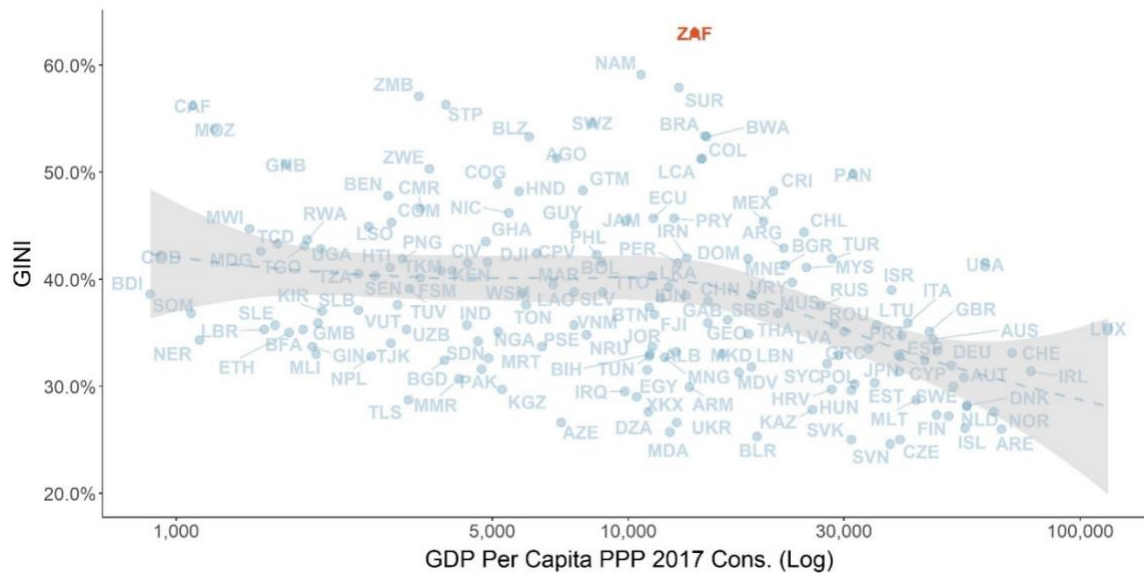
⁶ Simone Schotte, Rocco Zizzamia, and Murray Leibbrandt, "Snakes and Ladders and Loaded Dice: Poverty Dynamics and Inequality in South Africa between 2008 and 2017," *South African Journal of Economics* n/a, no. n/a (2022), <https://doi.org/10.1111/saje.12308>.

⁷ Janina Hundenborn et al., *Drivers of Inequality in South Africa*, 162nd ed., vol. 2018, WIDER Working Paper (UNU-WIDER, 2018), <https://doi.org/10.35188/UNU-WIDER/2018/604-3>.

⁸ Ihsaan Bassier, Ingrid Woolard, and UNU-WIDER, *Exclusive Growth? Rapidly Increasing Top Incomes amid Low National Growth in South Africa*, 53rd ed., vol. 2020, WIDER Working Paper (UNU-WIDER, 2020), <https://doi.org/10.35188/UNU-WIDER/2020/810-8>.

⁹ Ibid.

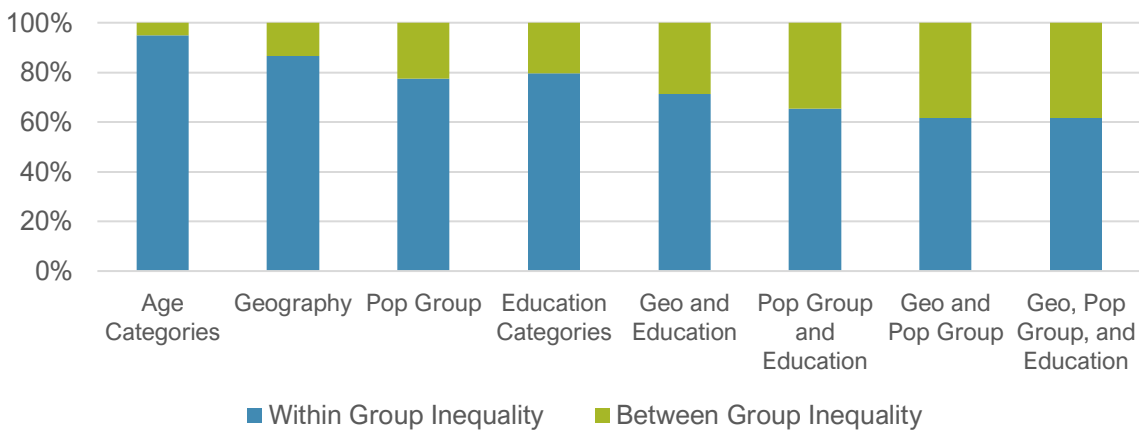
Figure 3. Gini Coefficient and GDP Per Capita (latest year available)



Source: Own calculation; World Bank World Development Indicators

Inequality in South Africa cuts across many (overlapping) dimensions, like race, education, and geography. One way of differentiating these is to compare between and within group contributions to inequality using the Theil Index which has the advantage over the Gini index in that it is decomposable by groups. When we look at different dimensions, the three that are most prominent in explaining inequality in household income and consumption are geography (i.e., urban vs rural), education, and population group (i.e., race). Figure 4 uses the data from the 5th round of the National Income Dynamics Study (NIDS) in 2017 to decompose inequality by different dimensions to understand how much is between vs within inequality.

Figure 4. Decomposition of Theil Household Income Inequality



Source: Own calculation; National Income Dynamics Study 2017

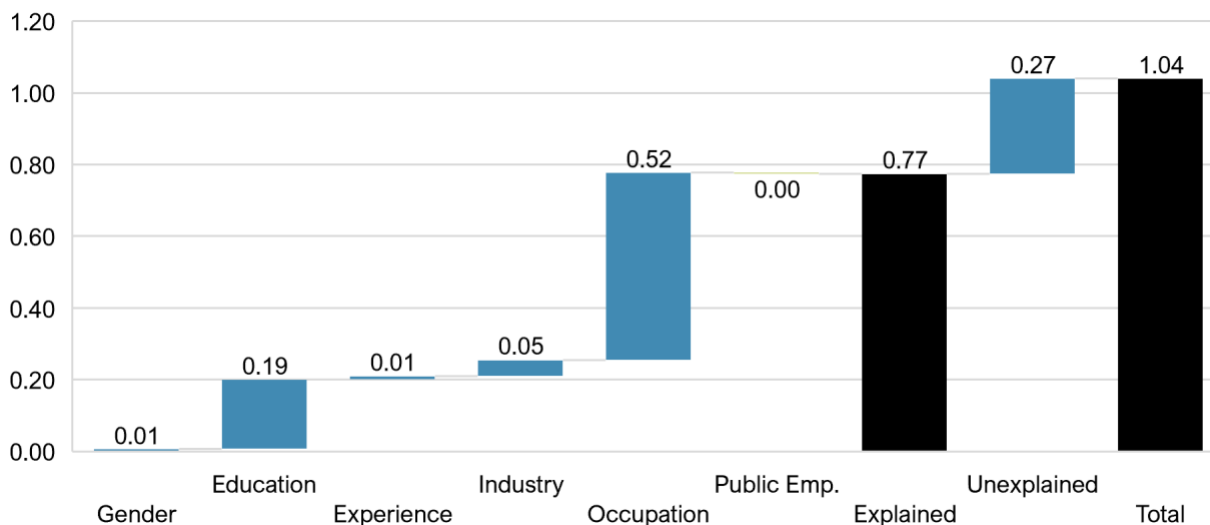
In general, within group inequality is higher than between group inequality. This means that the inequality within a specific geography (urban or rural), or population group, or education level (less than primary, secondary, or less, or some tertiary) explains more of total inequality than does the inequality between groups. Even when we combine these factors, the between

inequality is at most 40%. The fact that the between group inequality does not change much when we include all three of geography, education, and population group versus when we have any two of them, is an indication that these variables are correlated with one another. This is especially true of population group and education. While education by itself can explain 16% of total inequality and education adds more explanatory power when added with geography or population group, it does not add much when added to geography and population group.

Part of the reason within group inequality is so high is because earning differences between groups are largely due to differences in access to education and occupations.

The figure below shows an Oaxaca-Blinder decomposition of the earnings differences between white and non-white South Africans. This allows us to see what of this overall difference can be explained by observable and non-observable dimensions. The analysis shows that most of the explained differences in earnings are due to differences in education and occupation, although about a quarter of the overall difference in earnings is not explained by any of these observable characteristics. Access to education and thus certain occupations is limited to those that can afford access. Those that can access them seem to earn much more. As differential access to education declines between groups, the differences within groups in things like education and occupational access become more important.

Figure 5. Oaxaca-Blinder Decomposition of White and Non-White Earnings (2017)



Source: Calculations using Post-Apartheid Labor Market Series.¹⁰

Another reason for lower between group inequality has been the success of South Africa’s system of taxes and transfers. Existing research on South Africa’s main social grants shows that they are progressive and well-targeted towards the bottom part of the income distribution. In fact, they help drop South Africa’s pre-tax and transfer Gini considerably. One study that South Africa’s system of grants and transfers positively reduces its Gini the most out of a set of developing countries.¹¹ However, the pre-tax and transfer Gini is so high that, even after these

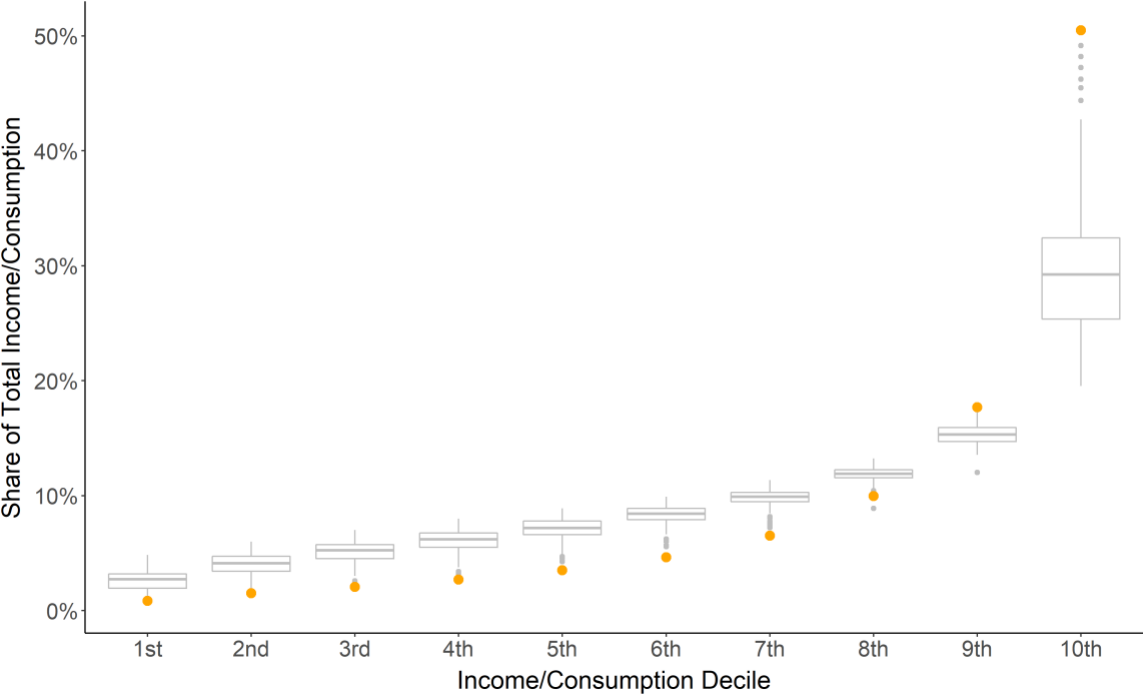
¹⁰ Andrew Kerr, Martin Wittenberg, and Lam, “Post-Apartheid Labour Market Series 1993-2019 [Dataset]” (DataFirst, 2019), <https://doi.org/10.25828/GTR1-8R20>.

¹¹ Gabriela Inchauste et al., “The Distributional Impact of Fiscal Policy in South Africa” (Washington, DC: World Bank, February 2015), <https://doi.org/10.1596/1813-9450-7194>.

large grants and transfers, inequality in South Africa remains among the highest in the world. Chatterjee et al (2021) find that between 1993 and 2019, South Africa’s system of taxes and transfers was able to almost compensate the dramatic rise completely in pre-tax income inequality. During this time, the pre-tax incomes of the poorest 50% fell by a third while those of the top 1% grew by 50%.¹² Thus, if not for the taxes and social grants, inequality in South Africa would have been even worse than it is today. Though South Africa’s system of taxes and transfers has shown success in avoiding even more inequality, the high level of existing inequality means that even after these taxes and transfers, South Africa remains one of the most unequal countries in the world.

Besides high incomes at the top, South African inequality is also a consequence of particularly low-income shares at the bottom of the income distribution. Figure 6 shows income or consumption shares for 171 countries by decile. South Africa is highlighted in orange. The top two deciles in South Africa receive the highest share of income/consumption among all countries in the sample. Conversely, the bottom 8 deciles receive the lowest (or second lowest in the case of the 8th decile) share of income/consumption among all countries. The bottom decile in South Africa receives less than 1% of all income/consumption. This is after including taxes and transfers.

Figure 6. Income Shares by Decile for South Africa (orange) and 170 Other Countries (latest year)



Source: Calculations; PovCalNet

1.C. Labor Market Exclusion

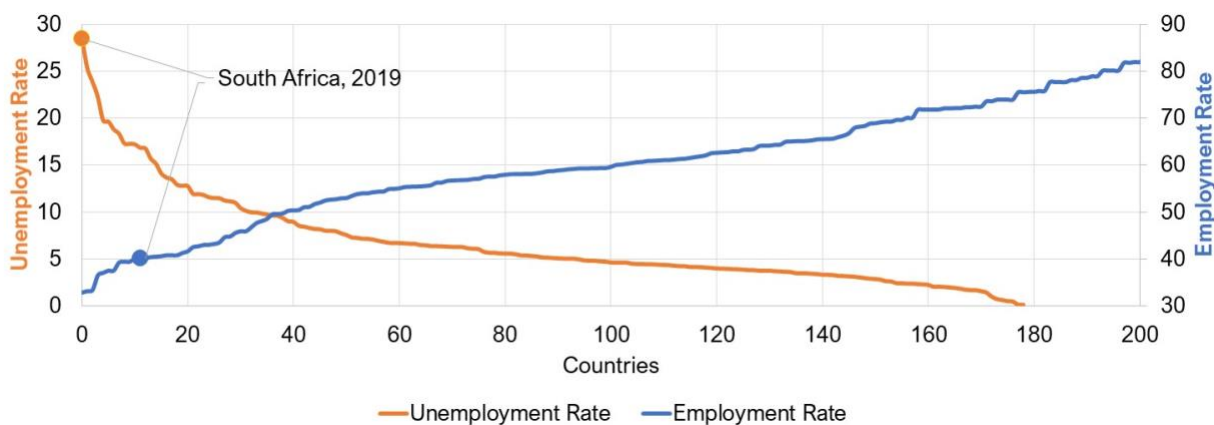
By many different labor market measures, South Africans are unable to participate in the labor market. Even prior to COVID-19, South Africa had the highest unemployment rate in the

¹² Aroop Chatterjee, Léo Czajka, and Amory Gethin, “Can Redistribution Keep Up with Inequality? Evidence from South Africa, 1993-2019,” September 2021, 71.

world at nearly 30%. This is also reflected in one of the lowest employment-to-population ratios in the world (see figure below). The unemployment rate for youth (ages 15 to 24) is especially high, at over 50%. The challenge of high unemployment is well-known and has been a persistent issue for South Africa since its transition to democracy.

South Africa saw a relatively sharp rise in unemployment rates in the years after the transition to democracy as labor supply grew faster than labor demand. In the 1990s and 2000s, South Africa saw multiple positive shocks to labor supply. First, the working age to population rate grew from ~55% in 1988 to ~65% by 2008.¹³ Second, there was a large rise in the labor force participation of non-whites, especially women, as apartheid era restrictions on movement to cities and employment for the non-white population were relaxed. Labor demand, however, was not able to keep up with this rise in labor supply. Banerjee et al. (2008) document that the change in participation rates between 1995 and 2005 alone could account for the change in unemployment rates that we see during this same period.¹⁴ This begs the question of why the labor market was not able to absorb the increase in the labor force. Many other countries have seen a rapid increase in their labor forces due to demographics or the increased participation of women, but it does not necessarily lead to an increase in unemployment. In fact, in other countries the period of demographic dividend coincides with a period of increased growth and deepening of the labor market. This, however, has not occurred in South Africa.

Figure 7. Employment and Unemployment Rates (2019)



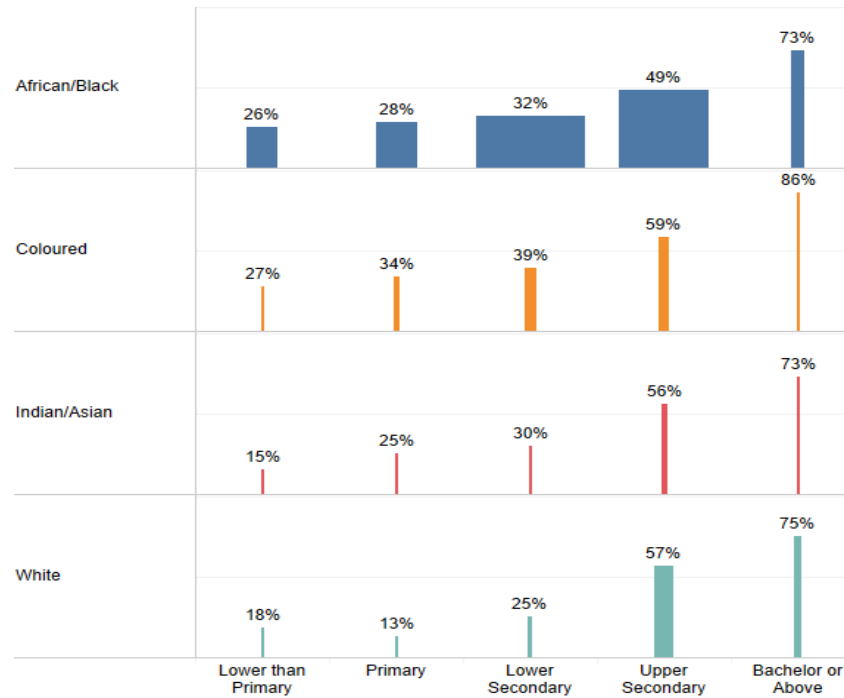
Source: Own calculation; World Bank World Development Indicators

Labor market exclusion varies greatly by dimensions like population group and education. Like with inequality, differences by education and population group are key determinants of labor market outcomes. Figure 8 shows employment rates by the interaction of education levels and population group. The width of each bar represents that sub-group’s share of the entire population. Employment rates do not vary much by race once we condition on education. Those with a bachelors have similar employment rates regardless of their race. On the other hand, population groups differ greatly by their education levels. From an employment point of view, Africans and Whites with a bachelor’s or above have similar employment rates. However, Africans without less than a bachelor’s degree make up a much larger part of the overall population.

¹³ Calculations using World Bank World Development Indicators

¹⁴ Abhijit Banerjee et al., “Why Has Unemployment Risen in the New South Africa?1,” *Economics of Transition and Institutional Change* 16, no. 4 (2008): 715–40, <https://doi.org/10.1111/j.1468-0351.2008.00340.x>.

Figure 8. Employment Rate by Education and Population Group (2019)

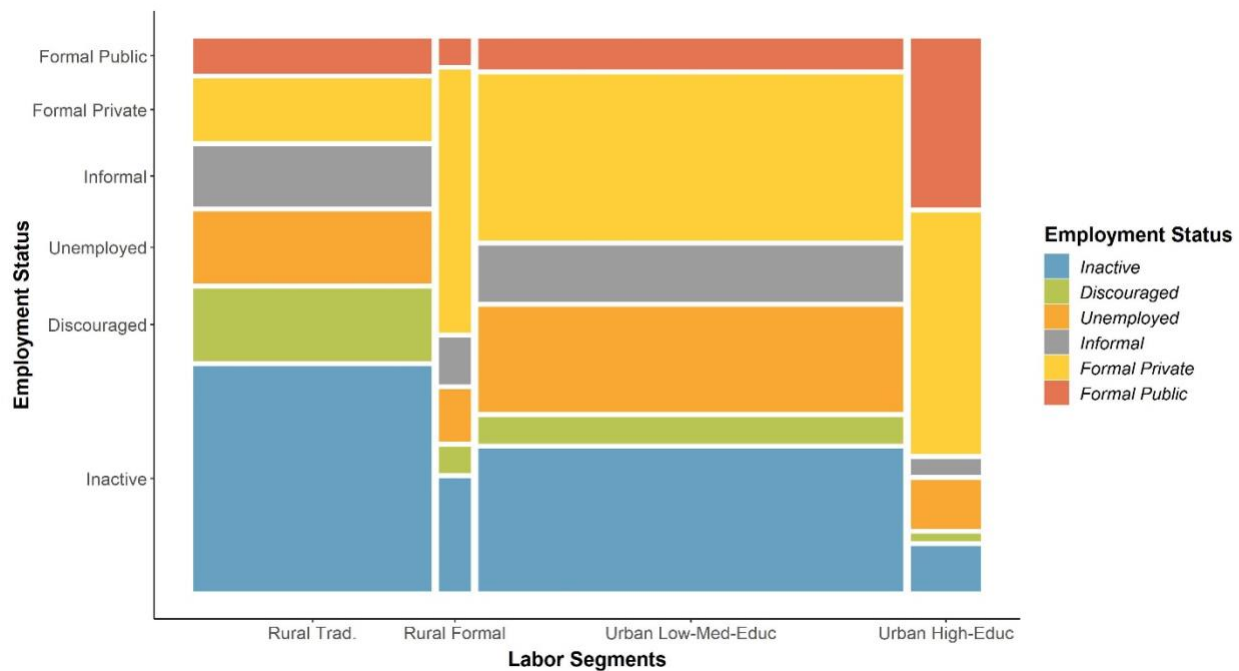


Source: Calculations using Post-Apartheid Labor Market Series; size of bar represents share of total population.

Labor market exclusion also varies by geography, especially between the rural traditional areas that made up the former homelands and urban areas. The areas that made up the former homelands have much lower employment and worse overall employment outcomes.¹⁵ We can see this in Figure 9 below. Overall employment — especially formal private and formal public employment — is low in rural traditional areas, and that the population in these areas is much larger than the population of rural formal areas. On the other hand, employment outcomes are much better for rural formal areas and for the those with at least 12 years of education (i.e., “high education” for the purposes of this analysis) in urban areas. Adults with less than 12 years of education and who live in urban areas have higher formal private employment rates than adults in rural traditional areas, but unemployment is higher.

¹⁵ See Lochman, Alexia. Growth Lab. “Finding Pathways Out of Spatial Exclusion.” [Unpublished Manuscript]. 2022

Figure 9. Employment Status by Geography and Education for Ages 18-59 (2017)



Source: Calculations using Post-Apartheid Labor Market Series; High education is 12 years of education or more; Informal employment is based on registration of firm and/or presence of a written contract or other forms of social protection.

There are many households in South Africa that have no access to the labor market. In 2017, approximately 30% of households reported having no working members.¹⁶ This translates to more than 15M people living in households that receive no income from the labor market. These households rely on non-labor income especially government grants and remittances to get by. A similar percentage of people (~29%) live in households where there is at least one adult that is either unemployed or is available to work but has become discouraged (i.e., is broadly defined as unemployed). In addition, 10% of individuals in South Africa live in a household that has no working adults and where at least one individual is broadly defined as unemployed, and thus available to work.¹⁷ Reliance on government grants for income is thus very high in South Africa. Even though grants make up a small portion of total household income in aggregate, the high inequality of labor market income means that the bottom 50% of households rely on grants and other non-labor sources for most of their income.¹⁸

1.D. Linkages Between Poverty, Inequality, and Labor Markets

The challenges of inequality and poverty in South Africa are highly linked. By construction, South Africa's high poverty rate, despite its level of GDP per capita (i.e., average income), must imply higher inequality. South Africa is different from other highly unequal countries like Mexico and Brazil, which have somewhat similar levels of income and high inequality, but much lower levels of poverty. For example, South Africa in 2014 and Brazil in 2009 had very similar levels of GDP per capita (~USD 14,000 in 2011 constant international dollars) and both were among the world's most unequal countries. However, while South Africa had a GINI of 0.63, Brazil had a slightly lower one of 0.54. Thus, while South Africa's level of extreme poverty was ~19%,

¹⁶ Calculations using National Income Dynamics Study Wave 5

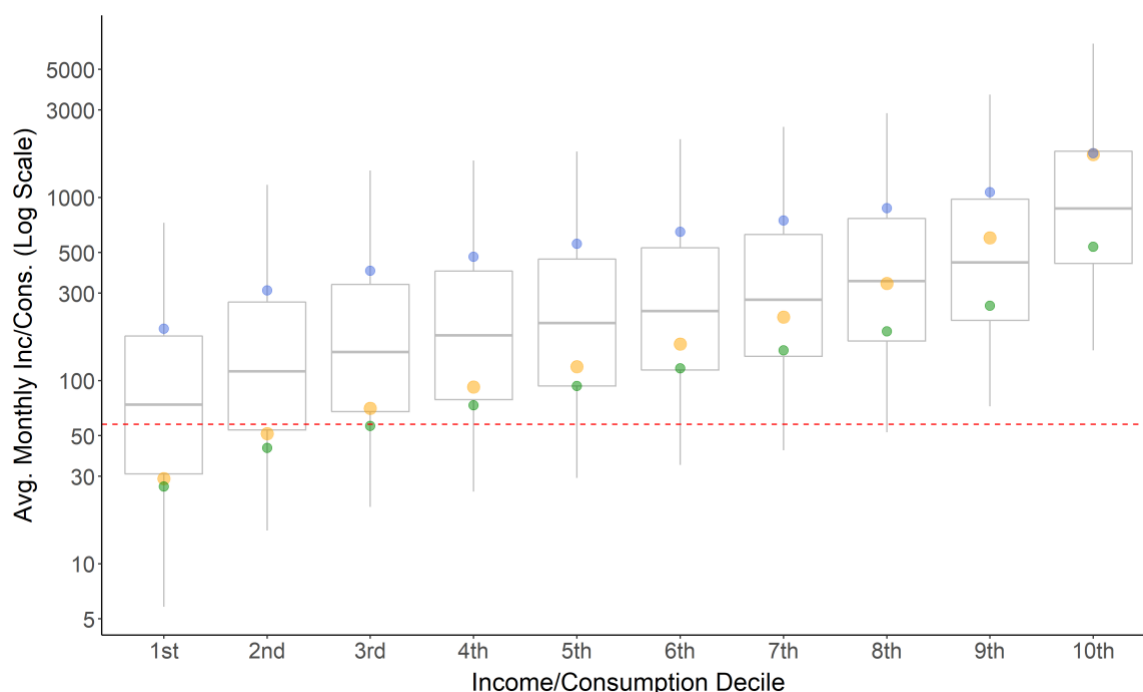
¹⁷ Ibid.

¹⁸ Leibbrandt et al., "Employment and Inequality Outcomes in South Africa."

Brazil's was only ~5%.¹⁹ South Africa is especially unequal and has low shares of income at the bottom of the distribution which also means it has much higher levels of poverty.

South Africa's concentration of income at the top is particularly severe and the share at the bottom is particularly low. Figure 10 shows the absolute levels of average consumption per capita by decile for all countries while also highlighting South Africa, Greece, and Cameroon. The red line represents the USD 1.90 extreme poverty line. In this figure, we can see that the lowest deciles in South Africa have an average consumption per capita level on par with the lowest deciles in Cameroon. However, the highest decile has a consumption per capita on par with the highest deciles in Greece. South Africa is about six times as rich as Cameroon, Greece is two and half times as rich as South Africa. despite its middle-income status, the poorest in South Africa are as poor as the poorest in much of sub-Saharan Africa. The richest in South Africa are on par with the richest in much richer countries. These especially low incomes at the bottom help drive higher rates of poverty in South Africa that would normally be seen in a much poorer country.

Figure 10. Average Income (PPP) by Decile for South Africa (Orange), Greece (Blue), and Cameroon (Green) Compared to All other Countries



Source: Calculations using PovCalNet

Part of what drives such low incomes at the bottom of the distribution is the exclusion from the labor market that makes many households reliant on non-labor income sources. Individuals living in households that are *de facto* excluded from the labor market are more likely to be poor. A crude measure of exclusion might be households where there is no one working or where there is at least one person who is broadly defined as unemployed. In 2017, ~46% of people in South Africa lived in excluded households. For individuals living in excluded households the poverty rate was ~26%.²⁰ Most poor households fall into this category. Using

¹⁹ Calculations using PovCalNet

²⁰ Calculations using National Income Dynamics Study Wave 5

data from the 5th wave of the National Income Dynamics Study, ~18% of South Africans in 2017 lived in households below the international extreme poverty. Two thirds of these individuals living under poverty lived in households where there were either no working adults or where there was at least one person defined as broadly unemployed. Meanwhile, having labor market income greatly decreases the likelihood that individuals are poor. 56% of individuals live in households where there is at least one person working and where there are no adults defined as broadly unemployed. Of these, only 9.8% fall below the poverty line.²¹

1.E. Conclusion: Inclusion and Redistribution

South Africa faces the difficult challenge of simultaneously addressing issues of high poverty, high inequality, and high labor market exclusion. Incomes at the bottom of the distribution are particularly low. In part this is because so many of these individuals and households are not able to earn anything from the labor market and thus are reliant on non-labor market income sources. Those that are not excluded from the labor market are much less likely to be poor. Exclusion from the labor market, especially at the bottom of the income distribution, contributes to higher inequality

Research has shown that redistribution through transfers has largely been the most successful approach used by South Africa to date to address poverty. Slow growth and unequal growth have led to little progress on increasing labor market inclusion, and incomes at the bottom of the wage distribution have declined. Instead, social grants have done much of the heavy lifting on reducing poverty and preventing even larger rises in inequality. As successful as social grants have been in this respect, they have only been able to keep up with underlying increases in labor income inequality rather than substantially reducing existing inequality.

Further reliance on only redistribution to compensate for exclusion may not be sustainable. First, as progressive, and well-targeted, South Africa's social grants and transfers have been, they do not address the underlying causes for why so many South Africans are unable to participate in the labor market. Second, South Africa's fiscal space is more limited today, and there are competing priorities other than redistribution that are important. Specifically, there is a need for fiscal adjustment to keep debt levels sustainable and to re-ignite growth especially in the wake of COVID-19. South Africa's fiscal situation in the wake of COVID highlights the need for South Africa to carefully choose how it spends its limited fiscal space after the most recent accumulation of debt.²² Meanwhile, evidence suggests that South Africa's slowdown in growth is due to micro-issues in areas like electricity and network industries.²³ Solving some of these other bottlenecks will require fiscal resources. The combination of these two things means that South Africa likely cannot rely on additional redistribution alone to help improve measures of inequality and poverty. Instead, South Africa will need to diagnose and treat the causes for such high exclusion.

²¹ Ibid.

²² Growth Lab. Fiscal Policy in South Africa: Debt Sustainability and Focus Under High Unemployment, 2022.

²³ Ricardo Hausmann et al., "Macroeconomic Risks after a Decade of Microeconomic Turbulence: South Africa (2007–2020)," WIDER Working Paper, vol. 2022, WIDER Working Paper (UNU-WIDER, January 2022), <https://doi.org/10.35188/UNU-WIDER/2022/134-1>.

2. South Africa's Labor Market Exclusion Through an International Lens

Since labor market exclusion is a central challenge that underlies high poverty and inequality, this section seeks to understand why exclusion is high by international standards. This section shows that South Africa has two labor market challenges. The first is the challenge of expanding formal, wage employment to more of its population. The second challenge is that those in South Africa that cannot find formal work are more likely to become unemployed (or inactive) than to work in the informal sector as own account workers. In other countries, the informal sector can absorb many who are excluded from the formal sector, but exclusion from informal work is unusually high in South Africa. This abnormal outcome is important for explaining South Africa's triple challenge.

2.A. Dualism, Structural Transformation, and Economic Growth

An important fact about labor markets in developing countries is that they are usually marked by dualism. Dualism refers to when there are multiple (at least two) sectors in the economy that have very different labor market outcomes for similar individuals.²⁴ After being first documented in the 1950s, dualism has been a common observation of labor markets in the developing world.²⁵ The typical story is one where there is a modern, formal sector that starts off small in terms of employment but grows as the country develops. There is a large informal or subsistence sector for those that are shut out of the formal sector and, as a country grows and experiences structural transformation, more and more of the labor force is employed by that modern, formal sector.

In more modern versions of the dualist story, the focus is also on the large observed informal sector that acts as an alternative for those not able to work in the formal sector. In Lewis's original version of dualism and structural transformation, the focus was on subsistence agriculture as the source of surplus labor, which is gradually absorbed by the expanding, modern sector. La Porta and Schleifer (2014) observe that informality is large in many developing countries, but rather than becoming formal, the formal sector expands, and the informal sector becomes a smaller and smaller portion of the overall economy.²⁶

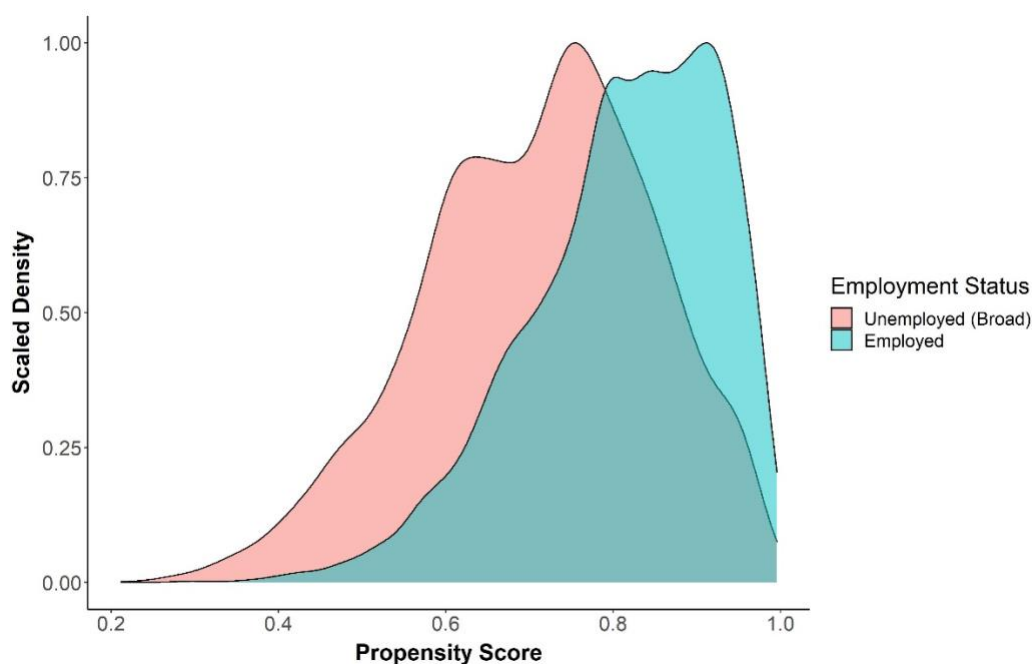
Labor market exclusion in South Africa is marked by dualism, where very similar individuals can have very different labor market outcomes. As shown in Section 1, the probability of employment varies based on observable characteristics like population group and geography. However, these factors are not enough to explain who is employed and who is not. To see this, the figure below graphs the distribution of propensity scores that try to predict the probability of individuals being employed or unemployed based on observable characteristics. There is substantial overlap between these two curves of propensity scores which include age, race, gender, education, marital status, province, and geography as covariates. This means that similar individuals — at least with respect to these observable characteristics — often have very different labor market outcomes.

²⁴ Gary S. Fields, "A Guide to Multisector Labor Market Models," November 1, 2004,

²⁵ W. Arthur Lewis, "Economic Development with Unlimited Supplies of Labour," *The Manchester School* 22, no. 2 (1954): 139–91,

²⁶ Rafael La Porta and Andrei Shleifer, "Informality and Development," *Journal of Economic Perspectives* 28, no. 3 (August 2014): 109–26.

Figure 11. Propensity Scores of the Employed and Unemployed



Source: Calculations using National Income Dynamics Study (NIDS) Wave 5

Note: Propensity scores are calculated by fitting a model to predict probability of being employed among those in the labor force (including those that are discouraged workers) using age, years of education, gender, marital status, province, geographic type (Tribal Authority, Urban Formal, Rural Formal, and Urban Informal), and population group.

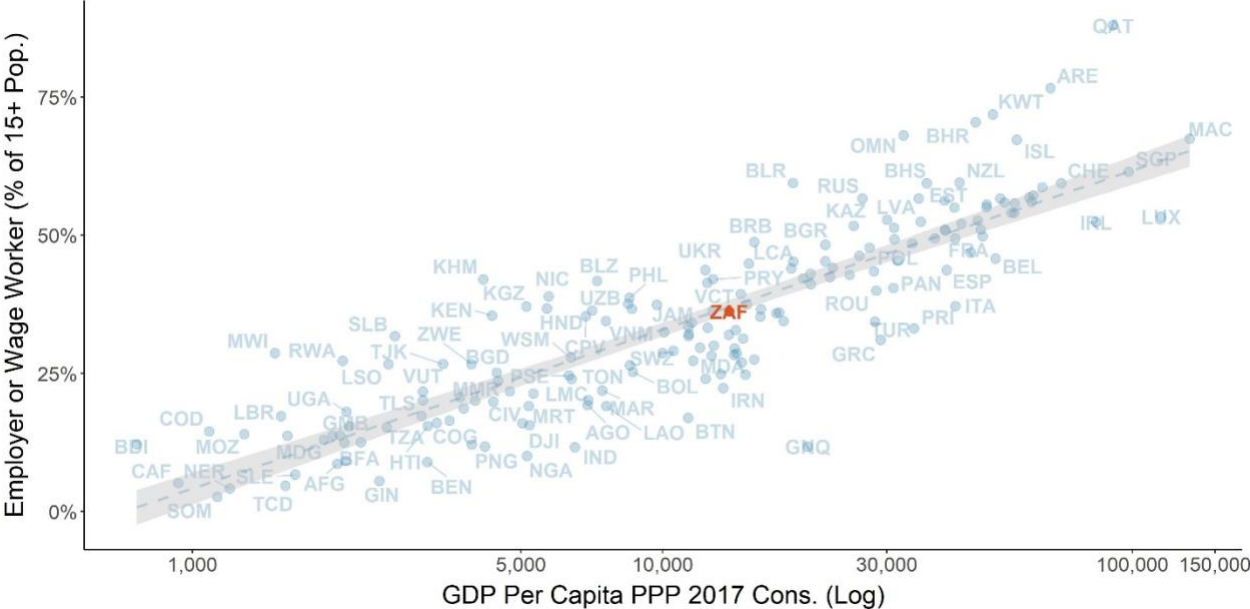
A natural place to start in comparing South Africa internationally is to see where South Africa is on its journey of structural transformation and expansion of the formal, wage sector. As countries get richer, employment in wage work (i.e., in formal firms) increases over time. The challenge for many countries is expanding wage work in formal firms which provide higher paying and better-quality jobs for more of their population. Figure 12 illustrates this idea. There is a strong relationship between incomes per capita and the proportion of the adult population employed in wage work or as employers (i.e., people that hire others). In general, every 1% increase in GDP per capita increases the wage and employer employment rate by 0.21% (~3.8% percentage points).²⁷ As countries grow and experience structural transformation, more and more of their population is engaged by the modern, formal sector that is more likely organized into firms.

South Africa's level of wage and employer employment is what we would expect for its level of income, but it is still low. In 2019, ~35% of the population over the age of 15 was employed either as a wage worker or was an employer of wage workers. As Figure 12 shows, this is almost exactly the average level of such employment we would expect for a country with South Africa's level of income. However, in richer countries more than 60% of the 15-plus population is employed in wage work. And so, there is still much room for South Africa to increase inclusion in the formal labor sector. Too many South Africans are still shut out of the modern, more dynamic part of the economy where good jobs lie. Thus, like other developing

²⁷ Calculations using World Bank World Development Indicators

countries, South Africa’s long-term growth challenge is to expand wage and formal employment to more of its population.

Figure 12. Wage and Employer Employment vs GDP Per Capita (2017 PPP Cons. Dollars)



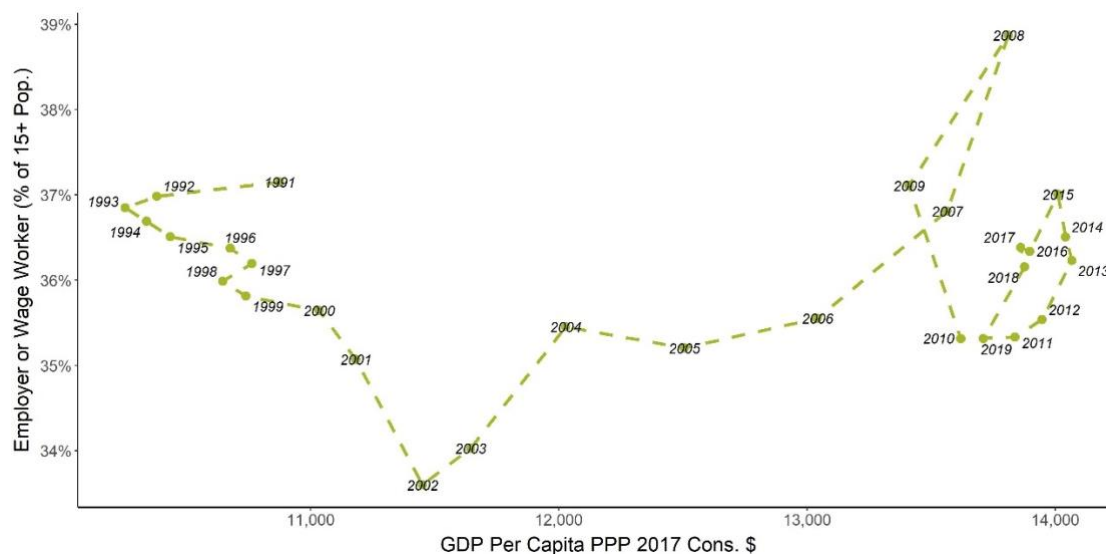
Source: Calculations using World Bank World Development Indicators

While South Africa’s current level of wage employment is about average, its performance in expanding that employment has been non-linear since its transition to democracy. Figure 13 shows the evolution of the percentage of the 15-plus population that is employed in wage work or as an employer. Between 1993 and 2019, South Africa’s GDP per capita grew at an annualized rate of 1.1% per year, growing from about USD 10,253 to USD 13,710. However, overall wage and employer employment fell slightly by 1 percentage point. The overall average hides a great deal of heterogeneity within the time period. From 1993 to 2002, the wage employment rate fell even as GDP per capita continued growing. This coincided with the struggles South Africa had in the initial years it was transitioning to full democracy. From 2002 to 2008, wage employment and GDP per capita grew strongly. During this boom period, GDP per capita grew at a about 3.2% per year while the rate of wage employment grew 6 percentage points (~2.4% per year). Between 2008 and 2019, GDP per capita growth was very volatile and so by the end of the period, income levels were about the same as they were in 2008. However, during this period the wage employment rate fell by 4 percentage points, taking back much of the earlier progress.

The challenge for South Africa in increasing inclusion in the formal sector is to revive inclusive growth. Like its performance on poverty, part of the challenge for South Africa is the stagnation in GDP per capita for the last ten plus years. During the boom period, formal sector employment grew more than what would have been expected with growth. However, this was from a low base and the growth during the boom was not sustainable post Global Financial Crisis (GFC). Reigniting growth requires diagnosing and addressing the key constraints on short-run

and long-run growth from the microeconomic challenges in areas like electricity and policy uncertainty, to the constraints on further structural transformation and dynamism.²⁸

Figure 13. Wage and Employer Employment vs GDP Per Capita (2017 PPP Cons. Dollars) – South Africa



Source: Calculations using World Bank World Development Indicators

South Africa’s challenges with growth and structural transformation are reflected in its poor trajectory in economic complexity. Economic complexity uses international trade data to understand what productive capabilities an economy possesses and what it might be able to produce in the future. There is a strong relationship between economic complexity and future diversification, current levels of income, and future growth.²⁹ As of 2019, South Africa was ranked 60th out of 133 countries in terms of economic complexity. This is among the highest ranks on the African continent. However, since 1995, South Africa has seen a steady decline in its economic complexity ranking. It has fallen from being ranked 47th at a lower level of income to 60th position. This is indicative of South Africa’s inability to diversify into new areas. The key to South Africa’s long-term growth will be in understanding why South Africa seems to have failed to diversify further and why structural transformation has stalled.

But in these respects, South Africa is not especially different from other developing countries. The expansion of good jobs in the dynamic, modern part of the economy is in some ways the fundamental challenge of economic growth and structural transformation. All developing countries (and many developed countries) aim to further expand good quality jobs to those that are currently left behind. The challenge of reigniting growth is also one that many other middle-income countries face, even if South Africa’s growth performance since the GFC has been especially weak and its economic complexity dynamics have been negative.

2.B. What makes South Africa’s Labor Market Unique?

The other side of the increasing modern, formal sector is the decrease in relative size of the non-formal (i.e., informal sector). La Porta and Schleifer (2014), argue that the informal

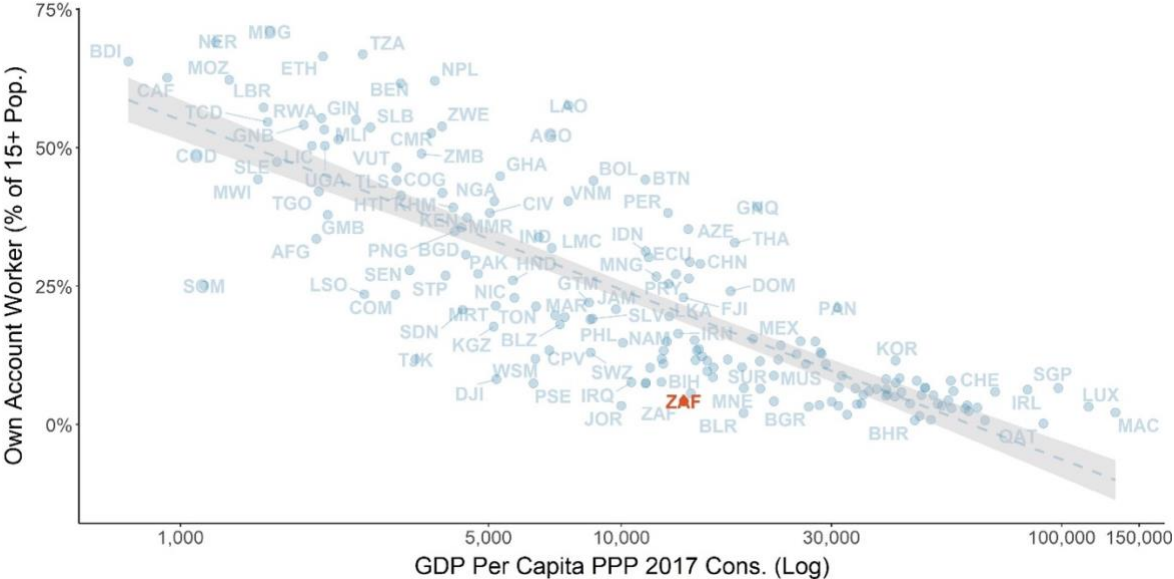
²⁸ Hausmann et al., “Macroeconomic Risks after a Decade of Microeconomic Turbulence.”

²⁹ César A. Hidalgo and Ricardo Hausmann, “The Building Blocks of Economic Complexity,” *Proceedings of the National Academy of Sciences* 106, no. 26 (June 30, 2009): 10570, <https://doi.org/10.1073/pnas.0900943106>.

sector in most countries which includes informal, own account agriculture as well as unregistered businesses, is made up largely of single-person, necessity entrepreneurs.³⁰ These individuals work in the informal sector because they cannot find work in the formal sector. In other words, the informal sector becomes the refuge of those that are excluded from the formal sector. In poorer countries we normally expect to see more informal and own account work rather than open unemployment. Research by Poschke (2019) shows that there is a natural evolution of employment status with development.³¹ Poor countries have very little wage employment and a lot of own-account employment. As countries get richer, more of the labor force is in wage employment and much less is in own account. As a result, over time, fewer people shut out of the formal, wage sector of the economy will be own-account workers and more will be unemployed. At poorer income levels, those shut out of the formal economy cannot afford to not work and so will engage in some sort of subsistence activity out of necessity.

South Africa’s informal and own account sectors are relatively small compared to other countries especially at similar levels of development. The figure below shows the percentage of the population above the age 15 that are employed as own-account workers (i.e., self-employed without hiring anyone else) versus a country’s GDP per capita. Here we can see the converse of the relationship in Figure 12. As countries grow, they tend to have fewer people in own account self-employment, as many more people are in wage employment. South Africa lies well below the average for countries at its level of income. In 2019, South Africa had only about 4% of its population above the age of 15 employed in own account work. A simple regression model of own account employment and income would have predicted South Africa to have an own account employment rate closer to 20%.³² This difference in 16 percentage points is roughly the same size of South Africa’s higher unemployment rates compared to other countries.

Figure 14. Own Account Employment vs GDP Per Capita (2017 PPP Cons. Dollars)

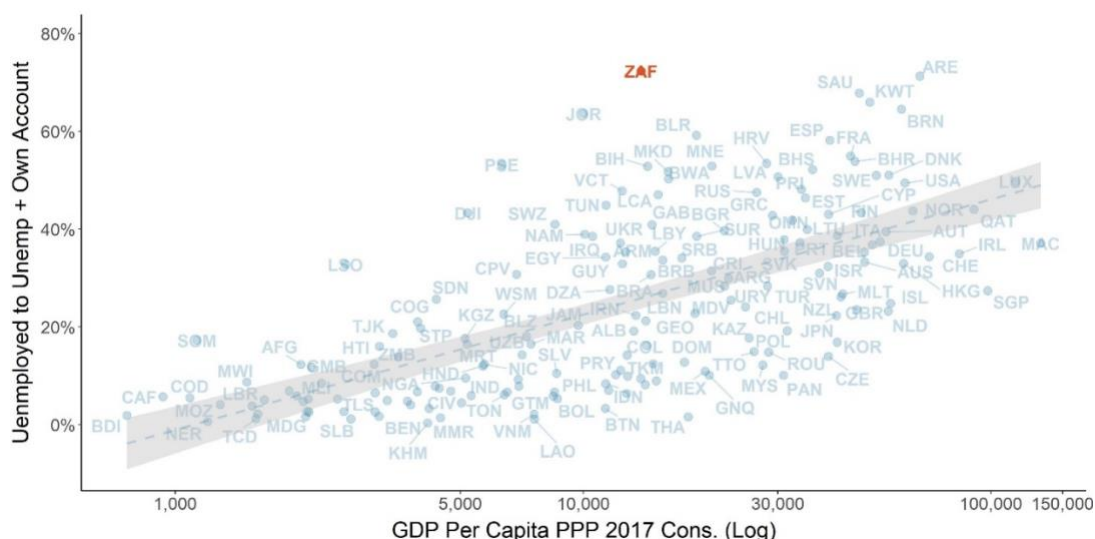


³⁰ La Porta and Shleifer, “Informality and Development.”
³¹ Markus Poschke, “Wage Employment, Unemployment and Self-Employment Across Countries,” SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, May 1, 2019), <https://doi.org/10.2139/ssrn.3401135>.
³² Calculations using World Bank World Development Indicators.

Source: Calculations using World Bank World Development Indicators

Given its high unemployment rate and low own account rate, South Africa is an outlier on the proportion of the labor force outside of the formal sector that is unemployed rather than in informal work. The figure below graphs the portion of the labor force not in wage or employer employment (i.e., all of those that are unemployed or who are own account) against GDP per capita. As reflected in other research, there is a general rise in the proportion that is unemployed as countries get richer (though the variance is high). Despite the variance, South Africa clearly emerges as an extreme outlier. About 70% of the labor force that is shut out of wage employment are unemployed. This is much higher than the average for South Africa's income group. In South Africa, those not able to work in the formal, wage sector are doubly excluded. Besides being excluded from the modern, formal part of the economy, workers in South Africa are not able or not willing to work in the informal sector.

Figure 15. Unemployed as Proportion of Non-wage Labor Force (2018)



Source: Calculations based on World Bank World Development Indicators

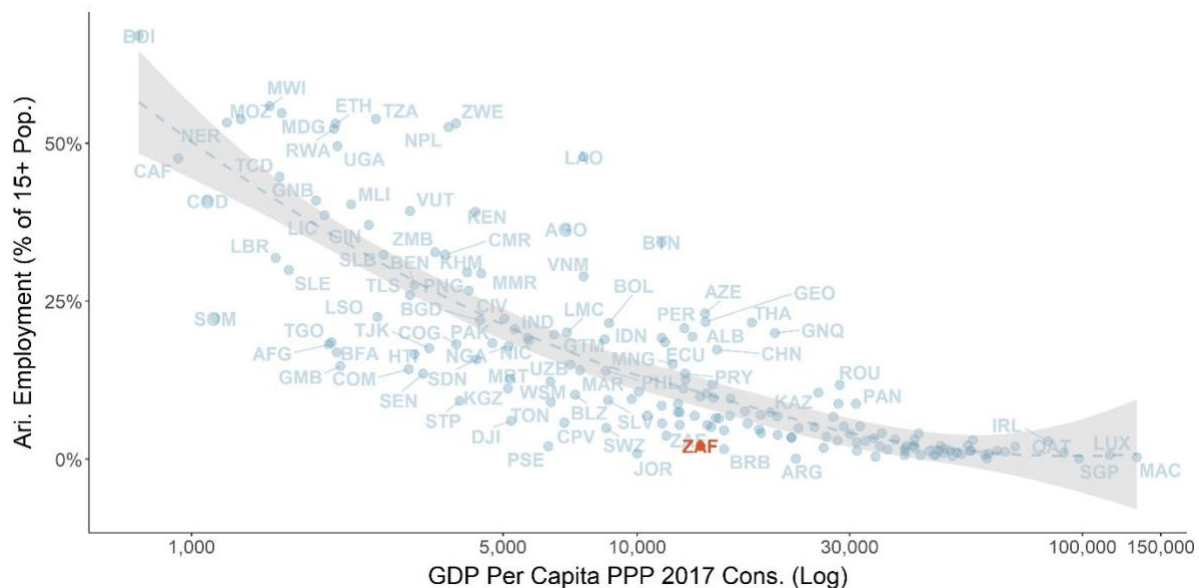
2.C. Agriculture and Mismeasurement

Defining the boundaries of the informality is a difficult task, and there are no uniform ways of doing so. Following, guidelines set by the ILO *Revision of the 15th ICLS resolution concerning statistics of employment in the informal sector and the 17th ICLS guidelines regarding the statistical definition of informal employment*, there are two important axes to consider when trying to define informality. The first is the informal sector which is defined by the status of the firm or entrepreneur. In the South African case, some surveys like the regular labor force surveys and NIDS allow us to know whether a firm is registered with VAT or not. In thinking of the informal sector, we take this presence of VAT registration as proxy of the informal sector. However, it is often not possible to create coherent statistics on the total workforce in the informal sector with this data and so often we will instead consider informal employment which relies on the relationship of the employee to the firm. Following international standards, we take a legal and social protection view and try to define informal employment based on the presence of absence of a written contract, medical and pension benefits, and contributions to UIF.

One of the most prevalent types of informal and own account work in many developing countries is in subsistence agriculture. A key stylized fact of global growth and structural transformation is a transition of employment out of agriculture, especially subsistence agriculture, and then into manufacturing and services. Developing countries are usually marked by many informal, single-family farmers that rely on agriculture for much of their own subsistence.³³ The legacy of Apartheid restrictions on agriculture for Africans likely still creates barriers for households to make livelihoods from even subsistence agriculture. South Africa's low level of agricultural workers is likely explained by deliberate policies in the Apartheid era that included expropriating land from African farmers, forced removal to homeland areas where land was less productive, and regulations on many activities, including how much livestock households were allowed to hold.³⁴ As a result, today, South Africa has a very large and relatively thriving commercial agriculture sector, but the subsistence sector is much smaller.

By some measures South Africa has much less agricultural employment than is expected. Figure 16 shows that South Africa has less agricultural employment than might be expected of its level of income. In 2019, approximately 2% of South Africa's adult (above 15) population was employed in agriculture (representing more than 800,000 workers), down from about 5% in 1994. A simple linear log regression would have predicted that South Africa's level of agricultural employment to have been closer to 13% (or 5.3 million workers). Recall that South Africa has about 4% employment in own account work but that this is much less than the 20% that is the average for its level of income. It is possible that much of the "missing" own account work we see in the data is due to a lack of agricultural employment.

Figure 16. Agricultural Employment versus GDP Per Capita (2018)



Source: Calculations using World Bank World Development Indicators

However, we need to treat these estimates with caution because of data limitations in measuring informal and subsistence agriculture through the official StatsSA surveys and the data series built on them. Neyens and Wittenberg (2016) document how there are differing

³³ "Women and Men in the Informal Economy: A Statistical Picture. Third Edition," Report (WIEGO, April 30, 2018).

³⁴ J. B. Peires, "Rural Apartheid," ed. Fred T. Hendricks, *The Journal of African History* 33, no. 2 (1992): 342–44.; Colin Bundy, *Ebook of The Rise and Fall of the South African Peasantry* (David Philip, 1988),.

definitions of work and effort at including self-employed agricultural workers (SEAW) across years and different survey instruments.³⁵ In particular, South Africa's current set of labor market surveys, the Quarterly Labor Force Survey (QLFS) does not count subsistence farmers as employed and instead treats subsistence farming as a non-market activity even if it is the primary source of livelihood and consumption for a household.

Another possible measurement issue beyond agriculture is that the official surveys undercount own account, informal workers. There is some evidence to suggest that surveys in South Africa do not do as good of a job capturing other types of informal and own account work as well. A study of the KwaZulu Natal Income Dynamics Study (KIDS) where researchers followed up on households surveyed in the KIDS survey, found that KIDS missed a large amount of informal and casual work.³⁶ The KIDS survey uses a similar questionnaire and methodology to the LFS (survey prior to 2008) and QLFS and so these surveys may also suffer from the same undercounting of informal work. There was also a large methodological change between the LFS and QLFS noted by several researchers. One of these changes had to do with how informal workers are categorized. The LFS surveys seemed to capture more informal self-employed work in both urban and rural areas.³⁷

Another nationally representative survey that focuses on MSMEs finds twice the number of micro-enterprises as the official statistics. A report by the International Finance Corporation (IFC) looked at different sources for sizing the MSME segment of enterprises in South Africa. They compared official StatsSA numbers with the World Bank Global Entrepreneurship Monitor (GEM) surveys, and another nationally representative survey of MSMEs conducted by the FinMark Trust. StatsSA and GEM numbers which focus more on formal, registered enterprises seem to be in line. According to the StatsSA numbers, there were about 2.3 million (on the lower end) small businesses in South Africa. The FinScope 2010 survey conducted by FinMark Trust counted more than 5.7 million MSMEs owners. The IFC report argues that the FinScope survey potentially captures more survivalist entrepreneurs in the informal sector.³⁸ In their 2020 version of the MSME survey, FinMark trust adjusted their survey methodology to remove entrepreneurs who were operating out of their own residences and did not have any employees. This allowed them to have aggregate numbers more in line with the StatSA numbers.³⁹ This suggests that the self-employed individuals FinScope found in their 2010 survey do exist but are not covered well by the official statistics.

Analyzing the Finscope 2010 survey in greater detail, more than 70% of the surveyed business owners operate their business from their own residence and the vast majority are own account. Nearly 80% of businesses were in some sort of retail and 67% percent of businesses were own account hiring no employees.⁴⁰ More than half of these business owners report net profits of less than Rand 1,000 a month.⁴¹ The picture that the FinScope survey gives

³⁵ Liz Neyens and Martin Wittenberg, "Changes in Self-Employment in the Agricultural Sector, South Africa: 1994-2012," *SALDRU Working Papers*, SALDRU Working Papers (Southern Africa Labour and Development Research Unit, University of Cape Town, 2016)

³⁶ Michelle Adato, Francie Lund, and Phakama Mhlongo, "Methodological Innovations in Research on the Dynamics of Poverty: A Longitudinal Study in KwaZulu-Natal, South Africa," *World Development* 35, no. 2 (2007): 247-63; Imraan Valodia, "Informality in South Africa," in *The Oxford Companion to the Economics of South Africa* (Oxford: Oxford University Press, 2014),

³⁷ Derek Yu, "The Comparability of Labour Force Survey (LFS) and Quarterly Labour Force Survey (QLFS)," *Stellenbosch University, Department of Economics, Working Papers*, January 1, 2009; Debbie Budlender, "Measuring Informal Employment in South Africa: The New Quarterly Labour Force Survey," *Wiego Statistical Brief*, no. No. 7 (May 2011): 6.

³⁸ "The Unseen Sector: A Report on the MSME Opportunity in South Africa" (International Finance Corporation, November 2018).

³⁹ "Virtual Launch of FinScope MSME South Africa 2020 Results" (FinMark Trust, July 29, 2021).

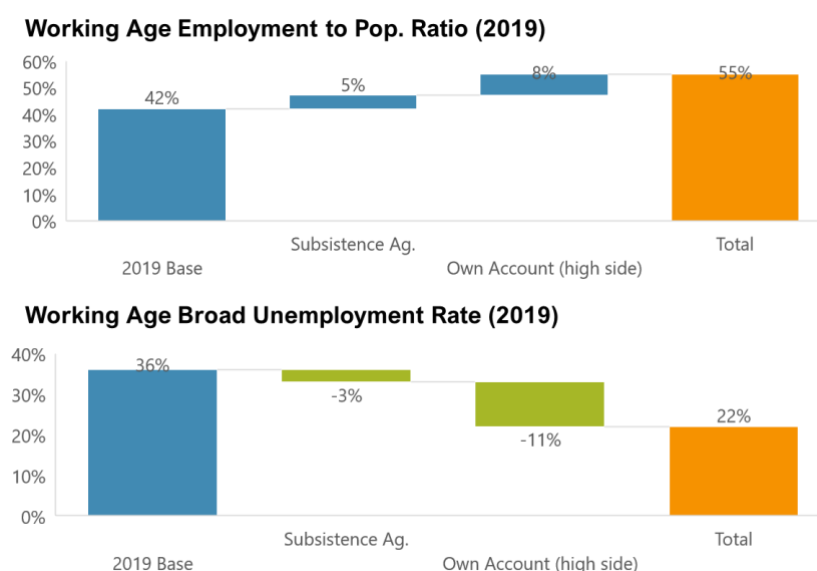
⁴⁰ "FinScope South Africa Small Business Survey 2010" (FinMark Trust, 2010),

⁴¹ Calculations using FinScope South Africa Small Business Survey 2010

is one where there are many more informal, own account workers in South Africa who operate their businesses from their home making very low amounts. It is unclear whether these individuals would have otherwise been counted as unemployed or inactive.

We check if these measurement issues could be enough to explain South Africa’s exceptionally low informality and find that they cannot. If we essentially add subsistence agriculture workers and made generous assumptions on the undercounting of informal workers, South Africa’s employment levels would still be low, and its unemployment rate would still be high. A roundtable of experts convened by the Center for Development and Enterprise noted that in 2010, the QLFS counted 1.5 million individuals as being engaged in subsistence farming.⁴² Of these, 15% were classified as unemployed and the other 85% as economically inactive. We can do a similar back of the envelope exercise for the most recent QLFS data and make a generous assumption that all the additional micro-entrepreneurs counted in the FinScope survey exist and would otherwise have been counted as unemployed. Figure 17 shows what would happen to employment and unemployment rates. These results indicate that even after mismeasurement, South Africa exhibits a pattern where informal work absorbs unusually little of the working age population that is not engaged in formal work.

Figure 17. Back of the Envelop Correction for Mismeasurement



Source: FinScope (2010); World Bank World Enterprise Surveys; Labor Market Dynamics Survey 2019

Low informality also aligns with other signals we tend to see in other data and surveys.

Despite data limitations and the difficulty in measuring the informal sector, the low informality is a consistent feature of almost all labor surveys other than a few we mentioned above. In addition, we find that other data is in line with a world where informality in South Africa is low. For example, according to the firm surveys by the World Enterprise Surveys, only 4% of all firms in South Africa listed competition from the informal sector as a major constraint. This in contrast to 37% percent of firms in the rest of Sub-Saharan Africa and 28% of firms globally that consider competition from the informal sector a constraint.⁴³ As a result, though we must acknowledge

⁴² Centre for Development and Enterprise, “A Fresh Look at Unemployment,” *CDE - The Centre For Development and Enterprise* (blog), June 9, 2011, <https://www.cde.org.za/a-fresh-look-at-unemployment/>.

⁴³ Calculations using World Enterprise Surveys 2020

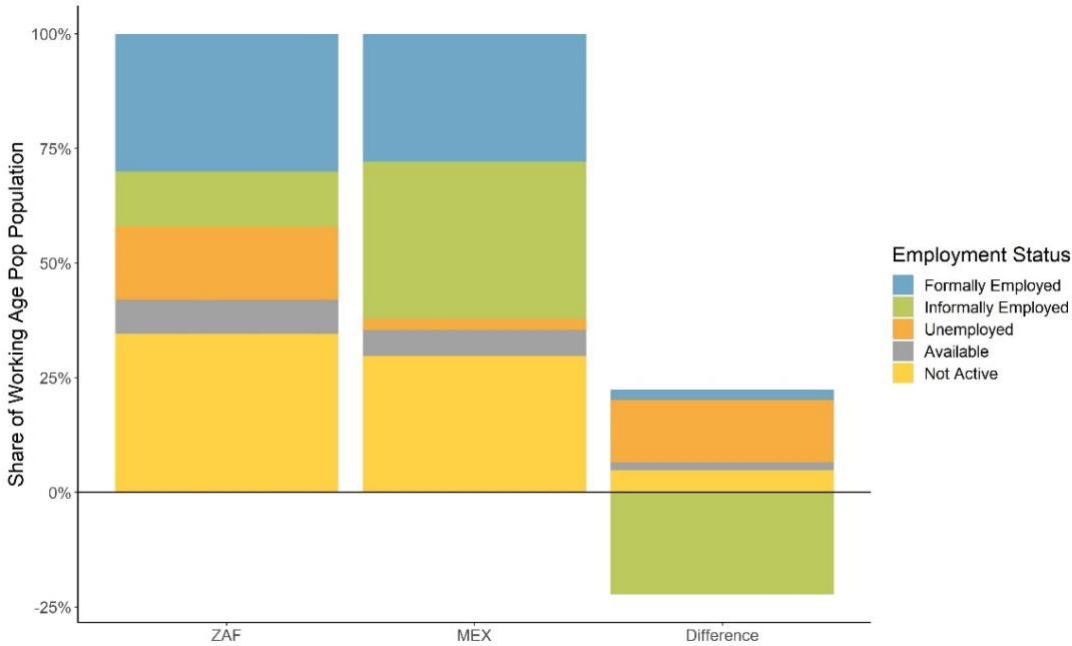
the likely mismeasurement of informal work in most of the data we use, the broader evidence leads us to believe that South Africa really does have relatively low levels of informality and high unemployment.

2.D. Conclusion: South Africa’s Two Labor Market Challenges

South Africa has two labor market challenges: (1) Expanding the formal, wage sector, and (2) Reducing exclusion from the informal, own account sector. The first challenge is one that it shares with many other countries and overcoming it will require a focus on re-igniting overall growth. The second challenge is one that is particular to South Africa. The proximate reason that South Africa has such high levels of unemployment compared to other countries has less to do with the lack of wage jobs and more to do with the lack of informal ones.

To illustrate this, the figure below compares the structure of employment among the working age populations in South Africa and Mexico. These two countries are at similar levels of income with Mexico being slighter richer. The figure shows that the two countries have very nearly the same level of formal employment and similar levels of their working age populations that are not active. The big difference is that South Africa has much less informal employment and much more unemployment, whereas Mexico has much more informal employment and very little unemployment. This general pattern also holds for both urban and rural areas.⁴⁴ Thus, South Africa and Mexico share the first labor market challenge, but South Africa also faces the second.

Figure 18. Employment Status of the Working Age Population in South Africa and Mexico

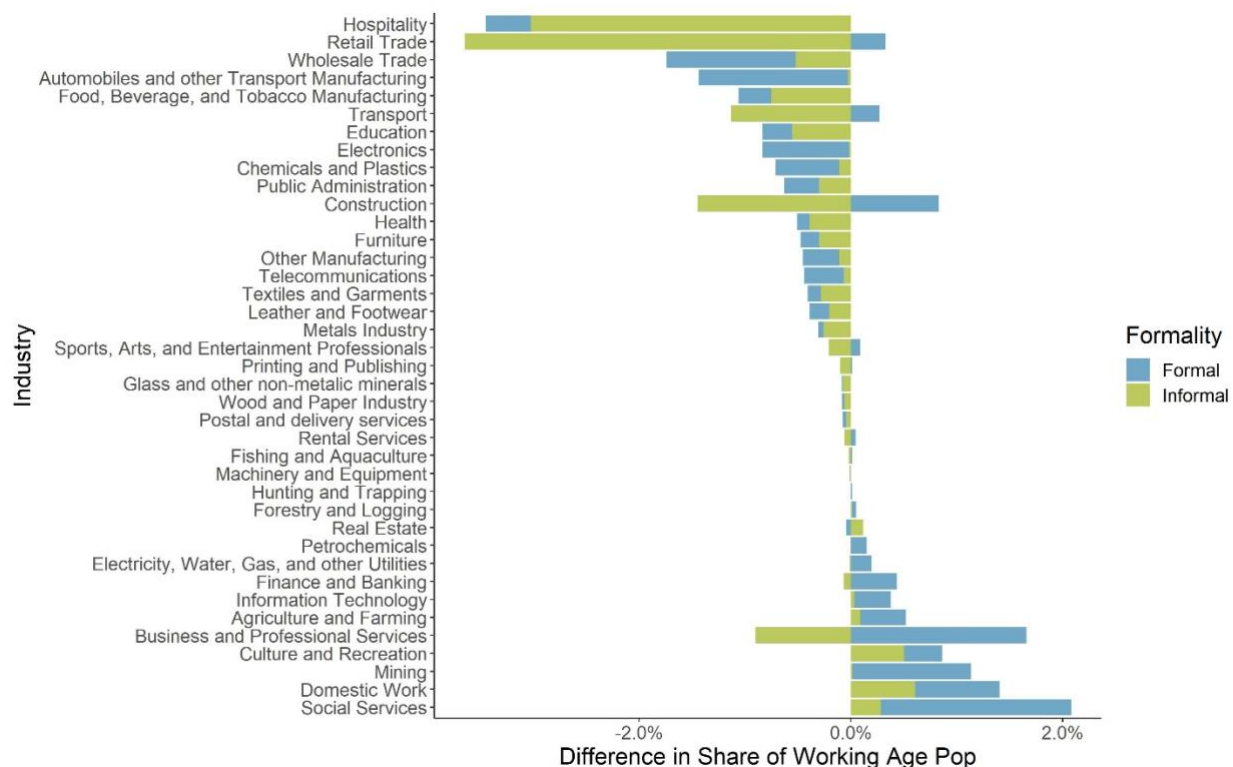


Source: Calculations using Post-Apartheid Labor Market Series and ENOE 2018

⁴⁴ Calculations using Post-Apartheid Labor Market Series v3 and ENOE 2018

Digging deeper, South Africa is “missing” informal jobs across many sectors but especially in retail and hospitality. Figure 19 looks at the difference in urban employment rates⁴⁵ between South Africa and Mexico at a more granular level. The figure shows the difference in employment shares of the working age population in urban South Africa and urban Mexico. It shows what employment in South Africa would look like if it had the same employment-to-population ratio as Mexico and if it had the same distribution of employment across industries. Some of these differences are due to fundamental differences in the two economies. For example, we see that Mexico has more employment in formal automobile manufacturing and South Africa has more employment in formal mining. Overall, Mexico has more employment in manufacturing, but this is offset by South Africa’s employment in mining and services. The starkest difference in employment, though, is that South Africa has much less employment in informal hospitality and retail. This employment includes street-hawkers and vendors, informal shops, street food, and home-based food establishments.

Figure 19. Difference in Urban Employment Shares of Working Age Population by Industry Between South Africa and Mexico



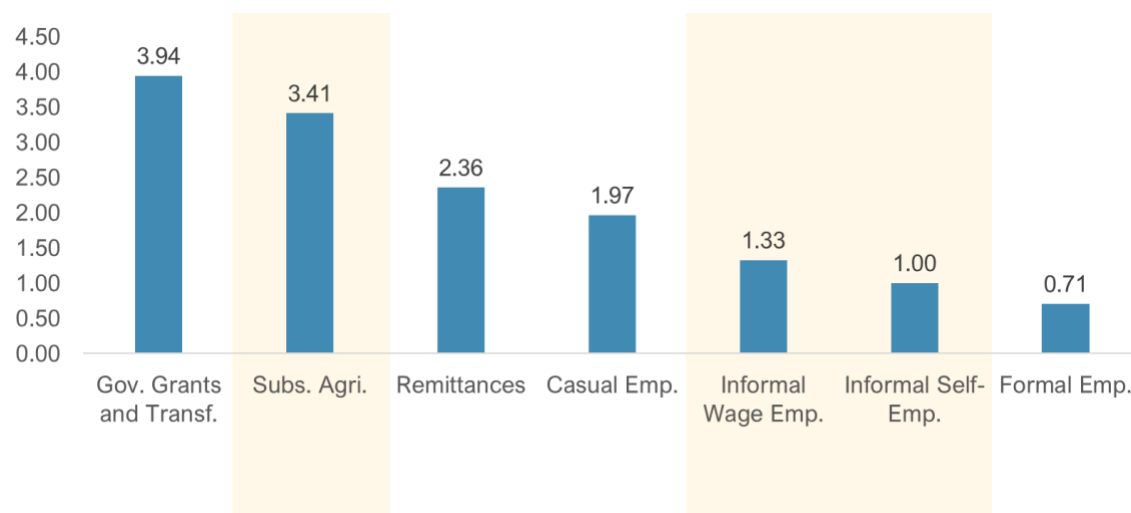
Source: Calculations using Post-Apartheid Labor Market Series v3 and ENOE 2018

Even though it is important to grow formal, wage employment in the long-run, informal, alternative forms of employment in the informal sector are important from a poverty and well-being perspective. Informal, own account jobs provide important sources of livelihoods for the poorest who cannot earn elsewhere. The lack of such sources of income likely

⁴⁵ As discussed, comparisons of South Africa’s rural employment are complicated by the fact that the official South African labor market surveys do not count subsistence agricultural employment

contributes to the low incomes of the poorest in South Africa. Following the methodology used by Cichello and Rogan (2020), Figure 20 shows poverty prevention (reduction) ratios based on Shapely decomposition of poverty for South Africa in 2017.⁴⁶ The Shapely decomposition tries to calculate what marginal contribution of different sources of income is to poverty alleviation. It does so by asking what the world would look like if different sources of income were removed from a population. In a sense, it captures to what extent a source of income is important for pushing individuals above or below the poverty line (USD 1.90 international here). We then calculate a “poverty prevention ratio” as the contribution of the income source to alleviating poverty divided by the share of that income source in total income.

Figure 20. Poverty Prevention Ratios by Type of Income (2017)



Source: Calculating using NIDS and the DASP STATA Module developed by Araar and Duclos (2022)⁴⁷

The Shapely decomposition shows that non-formal forms of employment have an important role in poverty alleviation. Formal employment income has a ratio of less than one. This means that its contribution to poverty prevention is less than its share of total income. It is punching below its weight because much formal employment income is concentrated to individuals and households that are far above the poverty line. In contrast, the ratios for informal work and subsistence agriculture are equal to or above one, meaning that they punch above their share in total income. Although these forms of income have a low income share overall, they are concentrated in the people that are most likely near the poverty line. Government grants and transfers are well targeted in South Africa and so it makes sense that they have the highest ratio. Given the low levels of non-formal and non-wage employment, there is perhaps room for expanding these other forms of employment in any poverty alleviation strategy.

⁴⁶ Michael Rogan and Paul Cichello, “(Re)Conceptualising Poverty and Informal Employment,” in *The Informal Economy Revisited* (Routledge, 2020).

⁴⁷ Abdelkrim Araar and Jean-Yves Duclos, “DASP: Distributive Analysis Stata Package” (PEP, World Bank, UNDP and Université Laval, 2022).

3. Explaining South Africa's Lack of Informal and Own Account Employment

This section applies a diagnostic approach to understand potential causes of South Africa's lack of informal and own account employment. The outcome of low informal work and high unemployment aligns with the fact that South Africa also has an unusually high wage premium for formal work over informal work (or, equivalently, a penalty for informal work in relation to formal work). This observation leads to two types of explanations for the labor market we see in South Africa. "Pull" factors like social grants, wage and non-wage labor regulations, and education could "pull" people towards formal work by making it more attractive. "Push" factors like crime, urban regulations on informal activities, and issues of transport/density could make informal work too low paying to be attractive. This section collects evidence to test which factors can help to explain the outcome of low informality (and thus high unemployment).

3.A. Informal Penalties and "Pull" vs "Push" Factors

High premia (penalties) for formal (informal) work can help to make sense of why the negative outcomes of the South African labor market remain in equilibrium. Specifically, think of a search and matching model where an individual had a choice between trying to search for an uncertain job under conditions of high unemployment or trying to make a living an informal self-employed worker. They might be more inclined to search for formal, wage work if either the returns to such work were very high or if the returns to informal work were particularly low. In that case, even with such a low probability of finding work, the potential worker would likely choose to search or drop out of the labor market completely rather than take on informal work. In other words, there should be a high premium for formal, wage work or penalty for informal, own account work.

South Africa does in fact have an unusually high informal wage penalty. Bargain and Kwenda (2010) compare the wages of workers in the informal and formal sectors in South Africa, Brazil, and Mexico.⁴⁸ They find that the earnings penalties for informal workers (especially self-employed) are very different in South Africa than in the other two countries. First, the authors observe that there is segmentation even within the informal sector. There is an "upper-tier" of informal workers and self-employed who may have some skills and in fact earn as much if not more than workers with similar characteristics in the formal sector.⁴⁹ Mexico has an especially large amount of these upper-tier informal self-employed, while Brazil also has some as well. This group of informal workers is much smaller in South Africa. The gross wage penalty for informal work is north of 50%. Bargain and Kwenda estimate a wage penalty of 62% for informal salary workers and 30% for the informal self-employed in South Africa relative to formal wage workers. This is contrast to a penalty of 9% and 15% for informal wage workers in Brazil and Mexico respectively and a premium of 11% and 13% for the informal self-employed in these two countries.

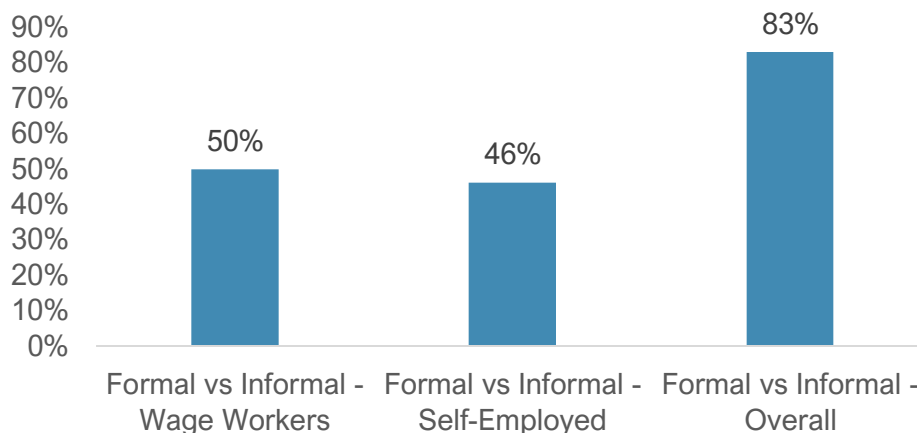
Figure 21 shows our own calculations of the gross wage penalty for formal versus informal workers, informal wage workers versus formal wage workers and the informal self-employed versus the formal self-employed. The penalty is high and considerably higher than

⁴⁸ Olivier Bargain and Prudence Kwenda, "Is Informality Bad? Evidence from Brazil, Mexico, and South Africa," *SSRN Electronic Journal*, 2010.

⁴⁹ See also Michael Danquah et al., *Informal Work in Sub-Saharan Africa: Dead End or Steppingstone?*, 107th ed., vol. 2019, WIDER Working Paper (UNU-WIDER, 2019).

the estimates for many countries. One study found global informal penalties to be -34% on average with a similar size for middle-income countries.⁵⁰

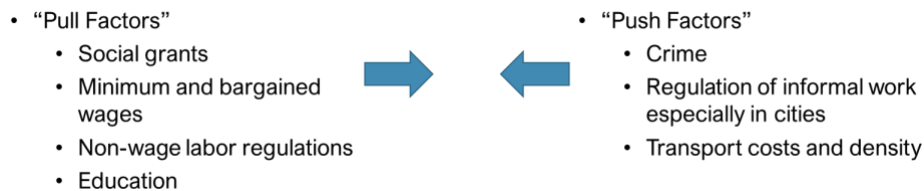
Figure 21. Gross Wage Formal (Informal) Premia (Penalty) 2017



Source: Calculations based on mincer regression using NIDS; covariates include education, experience, experience squared, gender, population group, urban/rural, with time and district fixed effects.

The presence of large informal penalties does not explain the causes of the labor market phenomena, but they point to two types of explanations: (1) “Pull” factors, and (2) “Push” Factors. “Pull” explanations are those that make searching or being unemployed more attractive at the margin. These can be thought of as actively pulling people towards searching with a high chance of becoming unemployed rather than working informally. Second, are “push” explanations that make informal work more difficult or less lucrative. These in a sense “push” people at the margin from working informally to searching for formal work instead. Kingdon and Knight (2004) put forth some high-level evidence for “push” factors being dominant and for unemployment in South Africa to be involuntary.⁵¹ They show that the unemployed have lower household incomes, lower consumption per capita, lower perceived well-being, and score lower on other metrics of well-being compared to those in informal work. This is despite both somewhat similar characteristics and locations of the unemployed and those that work informally. The figure below summarizes various pull and push factors that we will explore in the rest of this section.

Figure 22. Pull and Push Factors in South Africa



⁵⁰ T. H. Gindling, Nadwa Mossaad, and David Locke Newhouse, “Earnings Premiums and Penalties for Self-Employment and Informal Employees Around the World,” SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, February 15, 2016), <https://doi.org/10.2139/ssrn.2731986>.

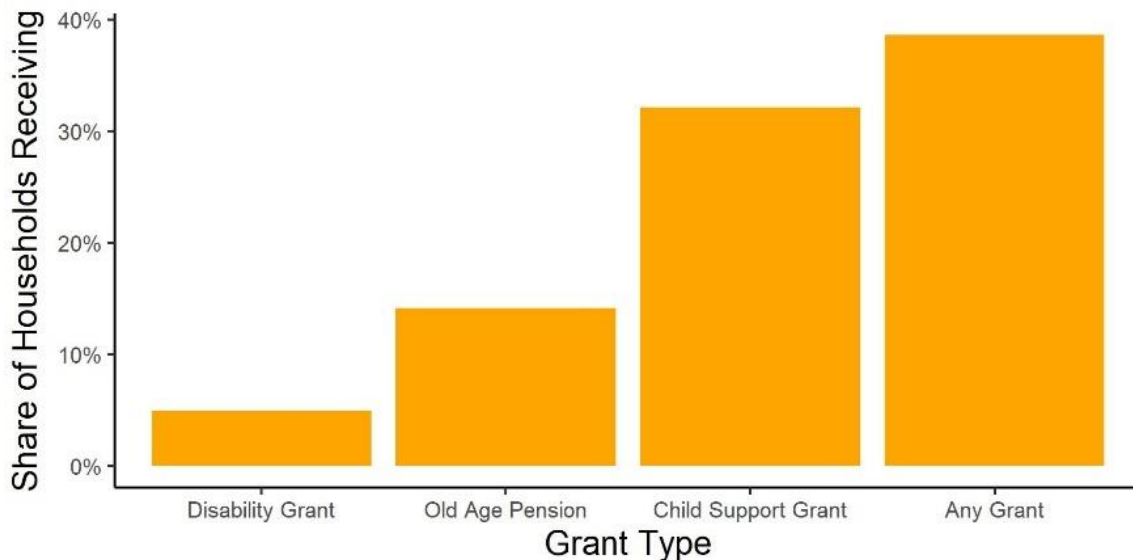
⁵¹ Geeta Kingdon and John Knight, “Unemployment in South Africa: The Nature of the Beast,” *Labor and Demography*, Labor and Demography (University Library of Munich, Germany, September 8, 2004).

3.B. Social Grants

As mentioned in Section 1, South Africa has a wide-reaching system of social grants. Nearly 30% of households rely almost exclusively on these social grants for their household income. Compared to other developing countries, South Africa's system of grants is more extensive and generous. Studies have shown that the grant system that is targeted mostly to the elderly and poor mothers affect the structure of households.⁵² Given their size and reach, it is one reason sometimes given to explain the country's high unemployment rate and low levels of informality.

South Africa has several social grants, of which the child support grant and old-age pension are the most commonly received by households. Nearly 40% of all households in South Africa receive some sort of social grant. The most common is the child support grant which is received by about a third of all households, followed by the old-age pension that is received by 15% of households, as shown in Figure 23. The child support grant and old-age pension are means tested but eligibility is high among the target groups of mothers and elderly (above age 60) respectively. Poorer households are highly reliant on social grant income. Figure 24 below shows the portion of total household income that is made up of any social grant. For the bottom three deciles, social grants make up on average more than a third of all total income.

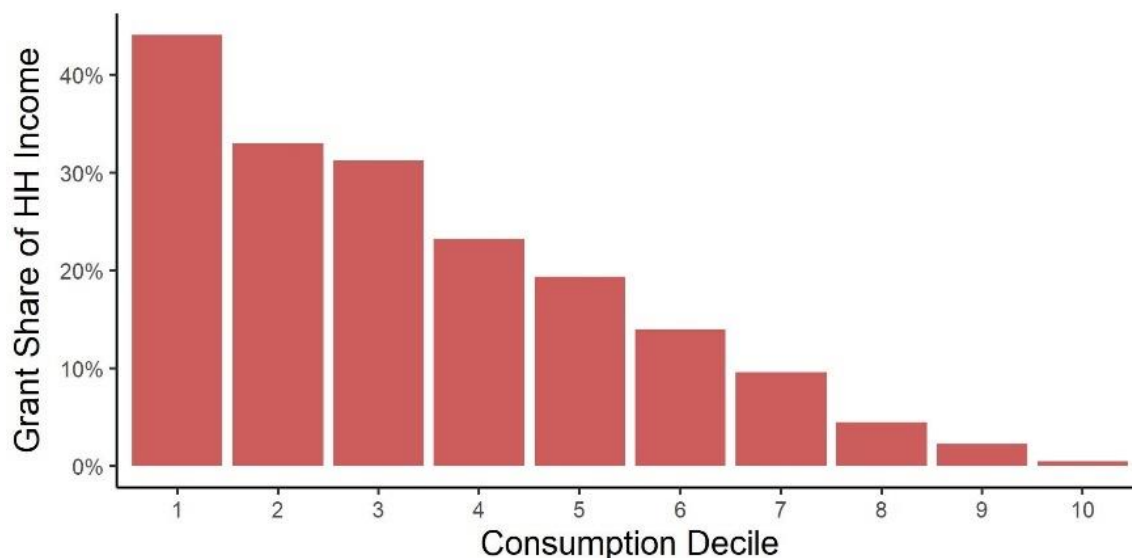
Figure 23. Household Coverage of Social Grants (2017)



Source: Calculations using NIDS

⁵² Cally Ardington, Anne Case, and Victoria Hosegood, "Labor Supply Responses to Large Social Transfers: Longitudinal Evidence from South Africa," Working Paper, Working Paper Series (National Bureau of Economic Research, September 2007), <https://doi.org/10.3386/w13442>.

Figure 24. Grant Share of Total Income by Decile (2017)



Source: Calculations using NIDS

Social grants in South Africa could have two opposite effects on informal and own account employment. On the one hand, social grants can raise the reservation wages of workers higher than the potential returns from informal work, making searching for a formal, better-quality job more attractive. This would especially be the case in a world where informal work was especially low value and done for necessity. On the other hand, since social grants like the child support grant and old-age pension are not tied to employment status but are means-tested, it could encourage more informal work if people are more easily able to hide informal work from authorities.

An initial test suggests that government grants do not affect the reservation wages of the unemployed. To test the first mechanism, Table 1 shows a mincer regression to look at the relationship between the reservation wages (as self-reported in NIDS) of the unemployed and the amount of government grants that an unemployed person's household receives. The regression includes other individual characteristics like education, age, rural/urban, and population group, as well as district and time fixed effects. There is no statistically significant relationship between government grants and reservation wages. The point estimate is actually negative, whereas if grants were raising the reservation wages of individuals above what informal work provides, we would expect this coefficient to be positive and significant.

Table 1. Determinants of Reservation Wages of Unemployed
Determinants of Reservation Wages

<i>Dependent variable:</i>	
Reservation Wage (log)	
Gov. Grants (log)	-0.004 (0.004)
Exp. Per Capita (log)	0.131*** (0.017)
Time FE	YES
DC FE	YES
Observations	9,551
R ²	0.185
Adjusted R ²	0.179
<i>Note:</i>	*p**p***p<0.01

Source: Calculations using NIDS; includes education, age, age square, sex, geography (i.e., urban/rural), and population group as additional regressors; errors are clustered at the DC level

Grants are also not directly associated with the likelihood that an individual shifts from being unemployed to informal employment. Table 2 below shows a regression of the employment status (1 for employed, 0 for not employed) for individuals that were observed as unemployed in the initial time period in a second wave (2 years later) as well as household government grants. It suggests that a 10% increase in grant size to the household is associated with a 0.1 percentage point decline in the probability that an unemployed person transitions to employment after approximately 2 years. While the relationship is significant, it is also small. There is, however, no relationship between grants and transitioning into informal self-employment. This could be consistent with a dynamic where at the margin, the unemployed are willing to remain unemployed a little bit longer to find a better-quality job if their household received government grants. However, the data does not suggest that individuals who receive less in grants are more likely to settle for informal work.

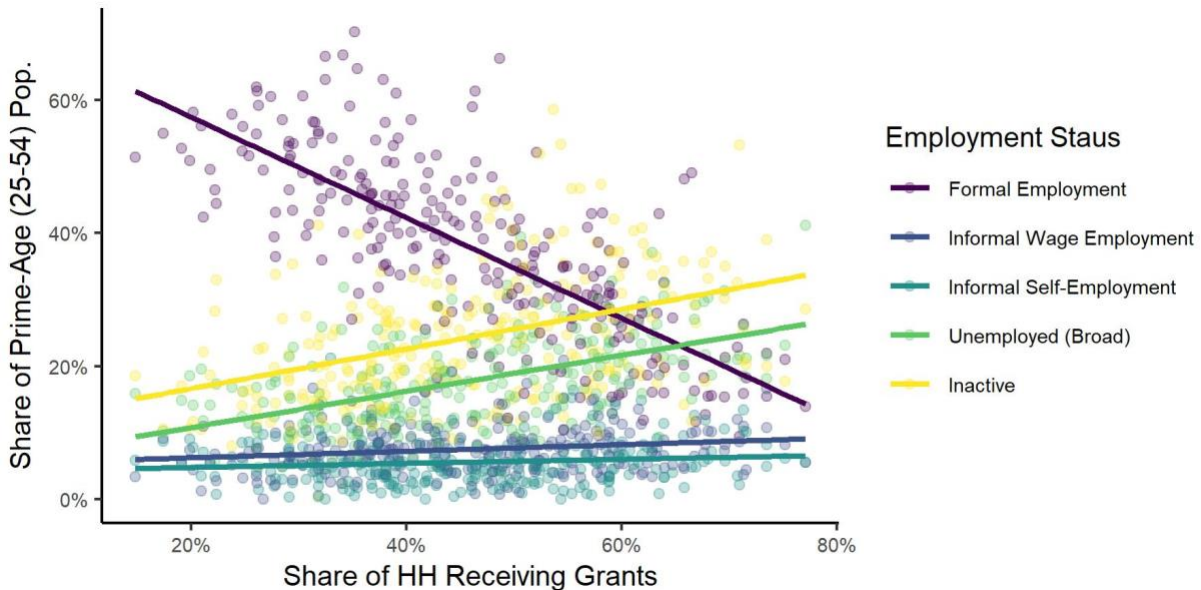
The challenge in measuring the impacts of social grants on overall employment outcomes is that the grants are well-targeted to reach the areas with the worst labor market. Figure 25 shows how the share of different employment outcomes changes with the share of households receiving grants at the district level pooled between the years 2008 and 2017. Unemployment and inactivity do rise with grant coverage. Informal work does not rise as fast and so areas that have high grant coverage do have a higher ratio of their labor force as unemployed versus informally employed. However, this seems to be due to the fact that formal employment is strongly negatively associated with grant coverage. Given that the grants are means-tested, this would make sense. And so, what could be happening here is that grants go to the areas that have the weakest labor markets and where there are many people shut out of the formal labor force. However, due to other structural issues unrelated to the grant, people are less likely to be informally employed and more likely unemployed.

Table 2. Relationship Household Grants and Probability of Transitioning to Employment

	<i>Dependent variable:</i>	
	Employment (1)	Inf. Self-employment (2)
HH Gov. Grants (log)	-0.010*** (0.002)	-0.001 (0.001)
HH Cons. Per Capita (log)	0.083*** (0.007)	0.017*** (0.003)
Time FE	YES	YES
DC FE	YES	YES
Observations	15,708	14,682
R ²	0.094	0.025
Adjusted R ²	0.090	0.021
<i>Note:</i>	*p**p***p<0.01	

Source: Calculations using NIDS; includes education, age, age square, sex, geography (i.e., urban/rural), and population group as additional regressors; Errors are clustered at the DC level

Figure 25. District Employment Shares of Prime-Age Population by Shares of HH Receiving Grants



Source: Calculations using NIDS.

In alignment with this mechanism, the relationship between grant coverage and the ratio of unemployed to informal or unemployed to informal self-employed goes away once we

include the overall employment rate or district fixed effects. Table shows four different regressions of the household grant coverage and either (1) the unemployed as a ratio of unemployed and all informal workers or (2) the unemployed as a ratio of the unemployed and informal self-employed workers. The first column shows that districts that have higher grant coverage also tends to have more unemployed relative to informal workers. But this effect goes away in column two once we control for the overall formal employment rate. The relationship between grant coverage and unemployed relative to informal self-employed is more robust, but it also disappears when we include district fixed effects. This suggests that there are district characteristics (like history) that might drive weak labor outcomes which then also get targeted by the grant system.

Table 3. District-wise Relationship Between Grant Coverage and Unemployment as Percent of Non-formal Labor Force Social Grants and Employment Outcomes

	<i>Dependent variable:</i>			
	Unemployment to Informal		Unemployment to Inform. Self.	
	(1)	(2)	(3)	(4)
% of HH Receiving Grants	0.154** (0.078)	0.073 (0.094)	0.205*** (0.061)	0.061 (0.123)
Prime-Age Form. Employment		-0.087 (0.055)	0.053 (0.041)	-0.040 (0.055)
Time FE	YES	YES	YES	YES
DC FE	NO	NO	NO	YES
Observations	260	260	260	260
R ²	0.076	0.083	0.097	0.352
Adjusted R ²	0.058	0.061	0.076	0.169

Note: *p<0.05 **p<0.01 ***p<0.001

Source: Calculations using NIDS. Errors are clustered at the DC level

Causal, micro studies do suggest that the child support grant seems to induce mothers to avoid informal work and search longer for a formal job at least at the margin. Tondini (2017a) exploits the differing eligibility of the different birth cohorts to the child support grant to identify the causal impact of the child support grant on mother's employment outcomes.⁵³ The study finds that in the short run, exposure to additional grant income increase mothers' unemployment rates and decreases their informal employment rate. However, in the longer run employment rates remain the same. The author uses as evidence that the grant allowed mothers at the margin to avoid necessity informal work and search longer for a better, quality job. However, the effects, while significant, are also small. When the author aggregates the micro effects for the country, they find that between 2002 and 2005, when the child support grant had its largest rate of growth, the implied decline in the informal sector is about 1 p.p.

Causal evidence on the impact of the old-age pension is more mixed. Ardington et al. (2007) found that households that receive access to the OAP see an increase in the labor force

⁵³ Alessandro Tondini, "The Impact of Unconditional Cash Transfers on Informality: Evidence from South Africa's Child Support Grant," 2017, <https://www.semanticscholar.org/paper/The-Impact-of-Unconditional-Cash-Transfers-on-from-Tondini/02a1f9fb70c6d1e33dd902e0db7c4a8935295dbb>.

participation rates of prime-age adults.⁵⁴ The authors find that the main mechanism is that in the households that received grants are more likely to have prime-age adults migrate to get work away from home. In contrast to these findings, Abel (2012) uses the national panel NIDS to look at the impact of households gaining or losing pension recipients on the employment rates of prime-age adults.⁵⁵ When households gain pension member overall employment rates fall by 4.9 percentage points, but when they lose pension member employment rates rise by 13.6 percentage points. In another study, Tondini et al. (2017b) finds that when there was an expansion in the pension eligibility age for men in 2008, greater access to the old-age pension decreased the elderly's rate of informal employment, but no change in formal employment as those leaving informal work dropped from the workforce.⁵⁶ In general, all these studies found asymmetric effects with much larger effects coming from households losing a pensioner rather than gaining one.

In summary, social grants can only explain a very small portion (if any) of the low levels of informal and own account work we see in South Africa. The impacts appear larger for mothers who are able to search longer for better quality work. The old-age pension also seems to impact the employment outcomes of not just the elderly but also prime-age adults. However, there is more mixed evidence and results generally are stronger for loss of a pensioner than gain while overall effect sizes are too small to be primary driver of the anomalous employment outcomes we see in South Africa. Furthermore, it would not be clear whether even the declines in employment in these cases would be a bad thing. It seems that the mechanism through which grants decrease employment and increase unemployment at the margin is that it allows households to better search for higher quality work.

3.C. Minimum and Bargained Wages

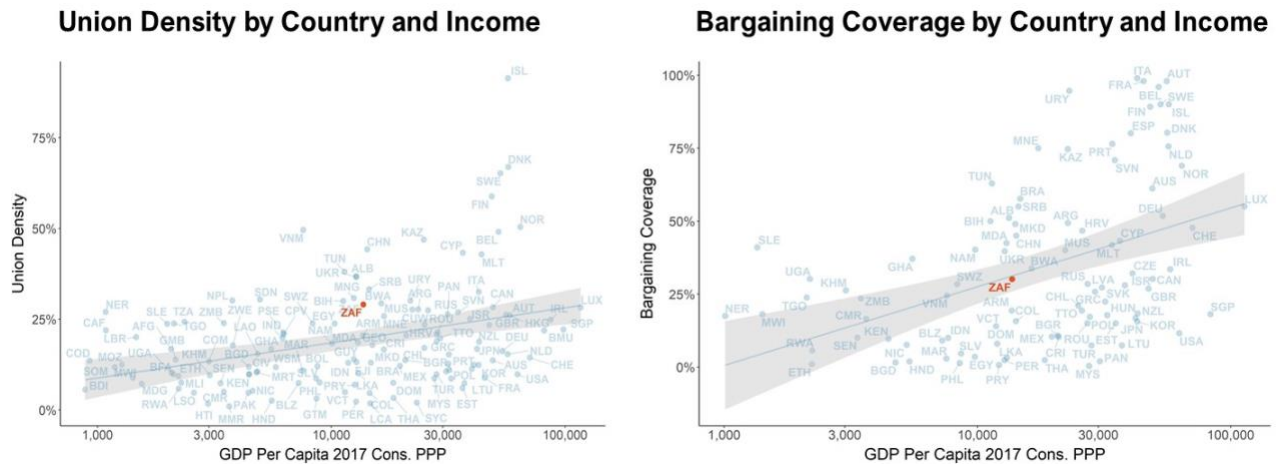
South Africa has historically had a strong set of labor market institutions. Unions and organized labor have been an important part of the history of South Africa from the struggle against Apartheid to today. As a result, South Africa has a robust set of labor laws and a system of wage bargaining that impacts many parts of the labor market. This includes, for example, a new national minimum wage law enacted in 2018. Union and bargaining council coverage sit at about 29% and 30% respectively (see Figure 26). This is roughly in line with South Africa's level of income. These rates have been roughly the same for the past decade. There has been more change in unionization when we look at specific sectors over a longer period of time. Figure 27 graphs the unionization rate of ten broad sectors in the South African economy. The mining sector has historically had the highest rate of unionization with very little change over time. This has recently been matched by the utilities sector, where the public sector is very active. Besides these two sectors, there have been significant declines over time in unionization in services, transport, and manufacturing, while most other sectors have seen very little change over time. Overall, union membership is strongest in the public sector and among those with tertiary education or higher.

⁵⁴ Cally Ardington, Anne Case, and Victoria Hosegood, "Labor Supply Responses to Large Social Transfers: Longitudinal Evidence from South Africa," Working Paper, Working Paper Series (National Bureau of Economic Research, September 2007).

⁵⁵ Martin Abel, "Unintended Labour Supply Effects of Cash Transfer Programmes: Evidence from South Africa's Old Age Pension," SALDRU Working Paper (Southern Africa Labour and Development Research Unit, University of Cape Town, 2013).

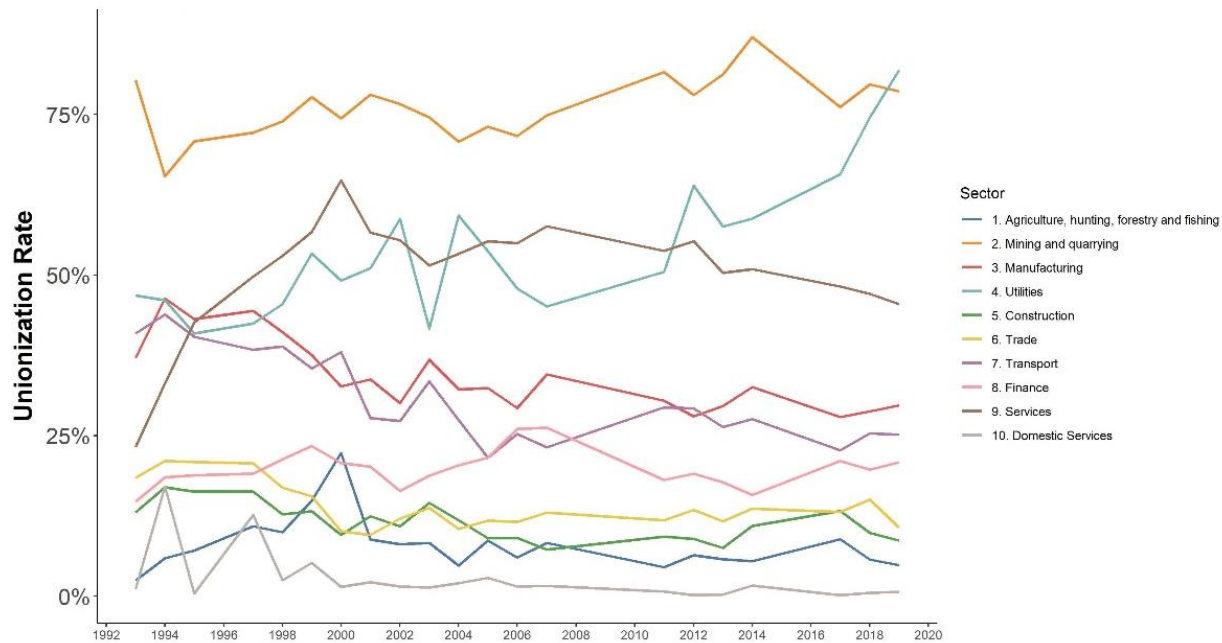
⁵⁶ Alessandro Tondini, Cally Ardington, and Ingrid Woolard, "Public Pensions and Elderly Informal Employment: Evidence from a Change in Retirement Age in South Africa," *SALDRU Working Papers*, SALDRU Working Papers (Southern Africa Labour and Development Research Unit, University of Cape Town, 2017), <https://ideas.repec.org/p/ldr/wpaper/206.html>.

Figure 26. Union Density and Bargaining Council Coverage vs Income Per Capita



Source: ILOSTAT; World Bank World Development Indicators

Figure 27. Union Density by Sector



Source: Calculations using Post-Apartheid Labor Market Series v3

Labor regulations and strong unions have often been cited as potential challenges that could drive unemployment in the South African economy. Broadly, there are three mechanisms through which labor regulations and labor market institutions might affect the labor market and make the unemployment challenge more acute. First, unions, bargaining councils, and minimum wages (combined with effective enforcement) can force wages to be higher than the market clearing wage. This would reduce employment in the sectors where these higher wages are enforced (i.e., the formal wage sectors). Second, there are non-wage mechanisms that can cause reductions in employment. Union, bargaining council contracts, and national level labor laws will cover everything from hours worked to working conditions, leave, and

policies around severance. If these regulations are too strict, then an employer might be hesitant to hire someone. Policies around firing and severance can be especially damaging for youth and new entrants as employers may not want to risk a new hire if it is difficult to fire them. Lastly, effective labor regulation and bargaining agreement enforcement can spill over to the informal sector. Usually, labor laws do not reach the informal sector but if enforcement is strong enough it can be a disincentive for informal work. Resolving some of the more rigid rules that constrain jobs growth in South Africa is a key priority for labor market reform.

Looking at the first mechanism, union premia in South Africa are relatively high. The union premium in South Africa controlling for worker characteristics is ~30%, though other estimates vary from 18-44%.⁵⁷ This is a relatively high premium for union workers. Other studies of BRICS have found union premia measured between 5% to 20%.⁵⁸ Other estimates of the bargaining council premium have measured a premium of 15% above the union premium.⁵⁹ Such a high premium can make it more attractive to continue searching for work that is covered by union or bargaining council wages rather than taking on lower paying work in the informal sector.

Minimum wage levels are high relative to median income, but this is not uncommon in many developing countries. In 2018, South Africa enacted a new minimum wage law that set a first national floor for almost all sectors and occupations at 20 rand an hour. A common way of comparing minimum wages across countries is to use the Kaitz index, which is the ratio of the minimum wage to the median wage, as shown in Figure 28. The idea is that a minimum wage that is too close or even higher to median wage, will likely be so high that employment would reduce. Recent work in the context of developed countries find that a Kaitz ratio up to 66% do not seem to have strong employment impacts, but there are negative employment effects beyond this point.⁶⁰ In 2019, the ratio of the minimum wage to median wage in South Africa was 92%. This is relatively high and certainly above the 66% threshold that is considered safe for developed countries. The figure below shows the Kaitz index for South Africa, OECD, and some developing countries. South Africa's Kaitz index is high especially relative to almost all OECD countries. But the story is more mixed when comparing to middle-income and developing countries. For these countries, the Kaitz index varies greatly.

However, the evidence that minimum wages have a large impact on employment outcomes in South Africa is mixed. Bhorat et al. (2013) found that sectoral minimum wage laws for the retail, domestic work, forestry, security, and taxi sectors between 2002 and 2007 did not have an impact on employment on the extensive margin but did result in reductions on the intensive margin of hours worked and had a larger employment impact on agriculture.⁶¹ Using administrative and tax data, Bassier (2021) finds that new bargaining contracts result in increases in wages but not a decline in firm size on average, adding that some of the results may be indicative of monopsony in the labor market.⁶² Kingdon and Knight (2003) find a negative relationship between unemployment rates and wages and an elasticity of -0.1 which is on par

⁵⁷ Martin Wittenberg and Andrew Kerr, "Wage Determination in South Africa: The Case of the Union Wage Premium since the End of Apartheid," 2019.

⁵⁸ Ibid.

⁵⁹ Ihsaan Bassier and UNU-WIDER, "The Impact of Centralized Bargaining on Spillovers and the Wage Structure in Monopsonistic Labour Markets," WIDER Working Paper, vol. 2021, WIDER Working Paper (UNU-WIDER, August 2021)

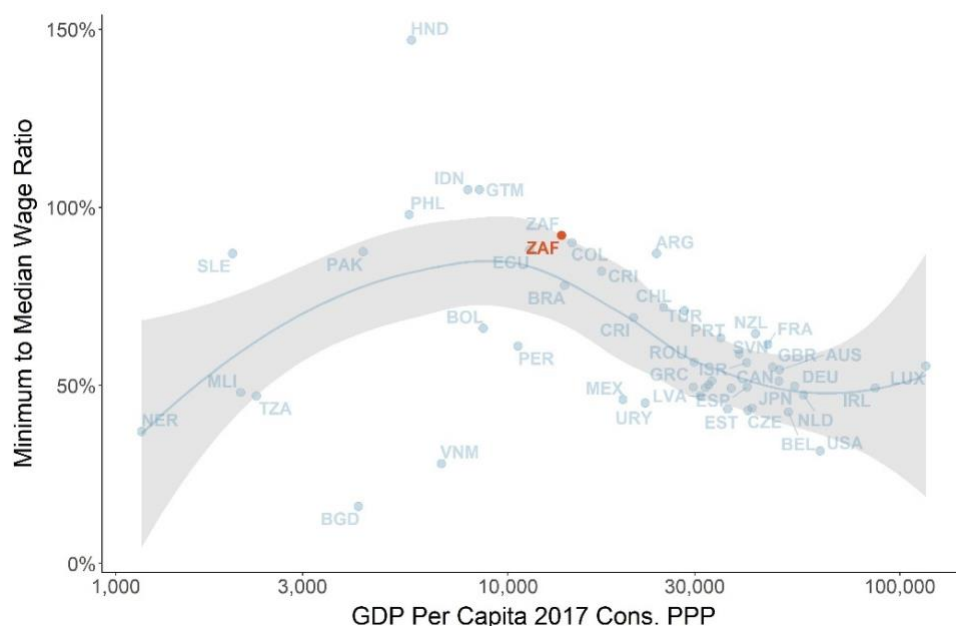
⁶⁰ Doruk Cengiz et al., "The Effect of Minimum Wages on Low-Wage Jobs*," *The Quarterly Journal of Economics* 134, no. 3 (August 1, 2019)

⁶¹ Haroon Bhorat, Ravi Kanbur, and Natasha Mayet, "The Impact of Sectoral Minimum Wage Laws on Employment, Wages, and Hours of Work in South Africa," *IZA Journal of Labor & Development* 2, no. 1 (January 17, 2013): 1.

⁶² Ihsaan Bassier and UNU-WIDER, "The Impact of Centralized Bargaining on Spillovers and the Wage Structure in Monopsonistic Labour Markets," WIDER Working Paper, vol. 2021, WIDER Working Paper (UNU-WIDER, August 2021)

with that of other countries like the UK and in the OECD.⁶³ A more recent analysis of the new national minimum wage law in 2018 similarly has found tentative evidence that the law had little impact on employment.⁶⁴ One reason for the low impacts could be one of enforcement. The wage distribution in South Africa does not tend to bunch around the minimum wage. Instead, Bhorat et al. (2017), finds that there is 30% noncompliance with minimum wage levels in South Africa and other African countries.⁶⁵

Figure 28. Minimum to Median Wage Ratio and Income Per Capita



Source: ILOSTAT; OECDstat; South Africa Labor Market Dynamics Survey 2019; Rani et al (2013)⁶⁶; ILO Global Wage Report 2020-21⁶⁷

Estimates of bargaining’s negative impacts on employment are small and do not impact self-employment or own account employment much. Magruder (2012) uses a spatial regression discontinuity design and spatial fixed effects model to look at the impact of coverage in bargaining council contracts on employment across firm sizes.⁶⁸ The paper estimates that being covered under bargaining councils reduces employment rates locally by between 8% to 13%. However, this is a small effect overall and at the high end would be equivalent to 1.5 percentage points of employment among the prime age population. In addition, they estimate that the effect is concentrated among small, formal firms and the impact on the self-employed was smaller and the impact on single-person enterprises (i.e., own account workers) was insignificant. As a result, the authors argue that “they [bargaining councils] cannot explain the

⁶³ Geeta Gandhi Kingdon and John Knight, “How Flexible Are Wages in Response to Local Unemployment in South Africa?,” *Industrial and Labor Relations Review* 59, no. 3 (2006): 471–95.

⁶⁴ Haroon Bhorat, Adaiiah Lilenstein, and Benjamin Stanwix, *The Impact of the National Minimum Wage in South Africa Early Quantitative Evidence*, 2021.

⁶⁵ Haroon Bhorat, Ravi Kanbur, and Benjamin Stanwix, “Minimum Wages in Sub-Saharan Africa: A Primer,” *The World Bank Research Observer* 32, no. 1 (February 1, 2017): 21–74.

⁶⁶ Uma Rani et al., “Minimum Wage Coverage and Compliance in Developing Countries,” *International Labour Review* 152, no. 3–4 (December 2013): 381–410, <https://doi.org/10.1111/j.1564-913X.2013.00197.x>.

⁶⁷ “Global Wage Report 2020–21. Wages and Minimum Wages in the Time of COVID-19,” n.d., 212.

⁶⁸ Jeremy R. Magruder, “High Unemployment Yet Few Small Firms: The Role of Centralized Bargaining in South Africa,” *American Economic Journal: Applied Economics* 4, no. 3 (July 2012): 138–66,

majority of unemployment in South Africa, and therefore bargaining councils are best understood as exacerbating an existing and severe problem.”⁶⁹

One concern might be that though minimum wages do not have an impact on average, that they would have a differential impact across regions with different productivities and costs of living. Median wage levels and cost of living tend to differ by location. There are often places with high productivity, high wages, and high costs of living in the same country as one with low productivity, low wages, and low costs of living. If these places have the same minimum wage, then the national level analysis might hide regional heterogeneity. A minimum wage that is not binding nationally, may be binding for a lower productivity firm in a low cost of living area as the real wage they would have to pay would be much higher. Boeri et al. (2019) tested this hypothesis for Germany and Italy, where Germany has more flexible wages at a local level (due to local bargaining) while Italy has much more rigid, nationally set wages. They find that in Germany, the more flexible wages result in more equal and lower unemployment rates across the country. In Italy, lower productivity places that face higher minimum wages in real terms see “labor queuing” where people will remain unemployed and wait for a job rather than moving to a high productivity area.⁷⁰

Replicating a similar analysis for South Africa, shows that while wages show some rigidity across space, it does not have large impacts on employment. We construct measures of nominal wages adjusted for individual and industry characteristics at the district council level as well as real wages adjusted for local prices using an index average rent per room following Moretti (2013)⁷¹ and Goes and Karpowicz (2017).⁷² Using SARS Tax data, we construct measures of productivity by calculating average GVA per worker in each district council. Figure 29 below shows the relationship between nominal wages and productivity at the local level. If wages were rigid due to bargaining, we expect a low elasticity. In South Africa we see an elasticity that is a little higher than what we see in Italy, though lower than those measured for Germany or the United States. Figure 30 shows the relationship between non-employment rates of the working age population and local productivity. There is a slight negative slope, but overall, the relationship is quite flat and mirrors Germany where employment rates are equalized across space more than Italy where there are vast differences in employment rates by productivity. This is in line with a model of bargaining that is more flexible to differences in local employment and productivity conditions. Finally, Figure 31 shows the relationship between real local wages (where nominal wages are adjusted for local prices of housing) and productivity. This relationship is flat and does not show evidence of the labor queuing we see in Italy.

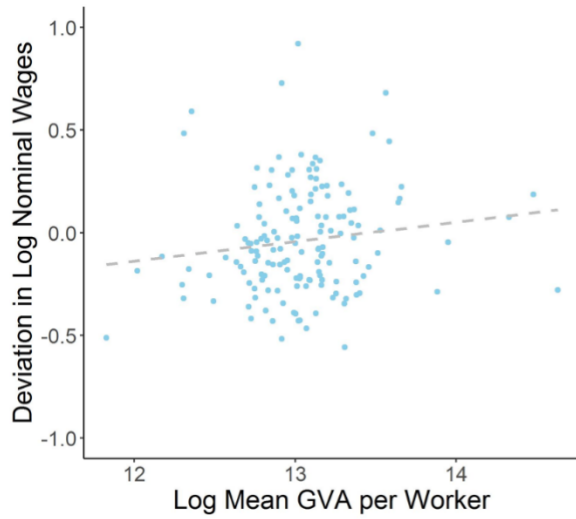
⁶⁹ Ibid.

⁷⁰ Tito Boeri et al., “Wage Equalization and Regional Misallocation: Evidence from Italian and German Provinces,” SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, February 1, 2019).

⁷¹ Enrico Moretti, “Real Wage Inequality,” *American Economic Journal: Applied Economics* 5, no. 1 (January 1, 2013): 65–103.

⁷² To do this we adjust nominal wages by individual characteristics, occupation, and industry. For local prices we construct a rent per room index as in Carlos Góes and Izabela Karpowicz, “Inequality in Brazil: A Regional Perspective,” *IMF Working Papers* 17 (January 1, 2017): 1, <https://doi.org/10.5089/9781484324776.001>.

Figure 29. Nominal Wages and Productivity at the District Council Level in South Africa



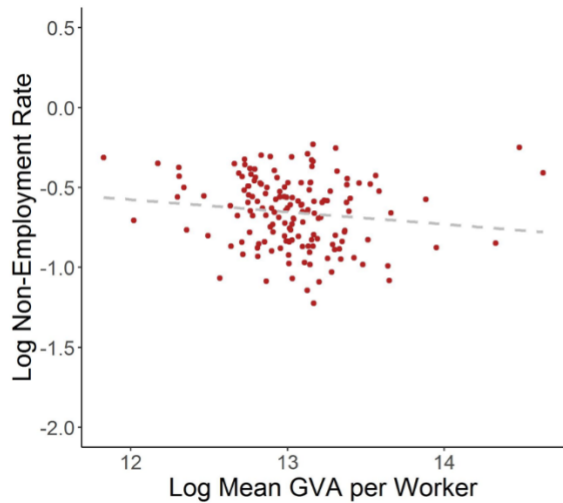
Regression of mean nominal wages on mean value added

	Dependent variable:	
	Log Nominal Wage	
	(1)	(2)
Log GVA Per Worker	0.084 (0.088)	0.084 (0.086)
Gauteng or WC		-0.004 (0.076)
Time FE	YES	YES
Region FE	NO	YES
Observations	154	154
R ²	0.004	0.004
Adjusted R ²	-0.016	-0.023
Residual Std. Error	0.506 (df = 150)	0.508 (df = 149)

Note: *p<0.1; **p<0.05; ***p<0.01

Source: Calculations using National Income Dynamics Study and SARS Tax Data

Figure 30. Non-Employment vs. Productivity at the District Council Level in South Africa



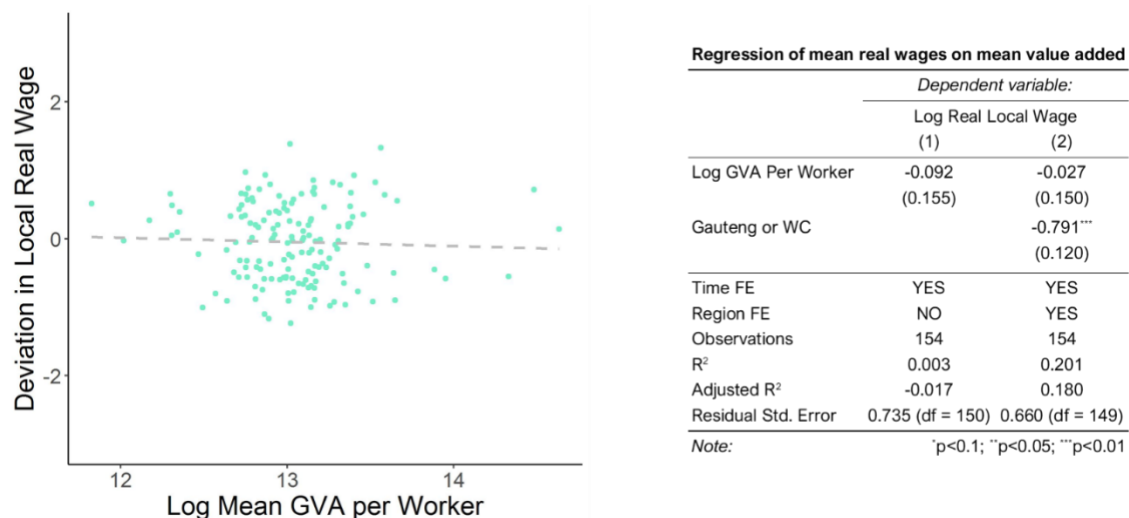
Regression of non-employment rate on mean value added

	Dependent variable:	
	Log Non-employment	
	(1)	(2)
Log GVA Per Worker	-0.055 (0.064)	-0.029 (0.054)
Gauteng or WC		-0.312*** (0.038)
Time FE	YES	YES
Region FE	NO	YES
Observations	154	154
R ²	0.041	0.391
Adjusted R ²	0.022	0.375
Residual Std. Error	0.214 (df = 150)	0.171 (df = 149)

Note: *p<0.1; **p<0.05; ***p<0.01

Source: Calculations using National Income Dynamics Study and SARS Tax Data

Figure 31. Real Wages vs. Productivity at the District Council Level in South Africa



Source: Calculations using National Income Dynamics Study and SARS Tax Data

In summary, the evidence suggests that there might be some rigidity associated with wages in South Africa, but it does not seem to be the main driver behind challenges in employment, nor informality in particular. Despite high premia and minimum wages, we do not see the types of reductions in formal employment we might expect. This could be because of compliance or because the bargaining mechanism leaves enough room for contracts to reflect local productivity differences. Therefore, we conclude that wage bargaining is likely not a significant cause of low informality in South Africa.

3.D. Non-wage Labor Regulations

Aside from wages, labor regulations can create rigidities through other policies like severance pay requirements and working hours. South Africa has generally strong labor protections in line with international standards on hours, conditions, and rules around hiring and firing. One concern would be that if these regulations are too strict then they can weigh on productivity and become a disincentive for hiring especially for new labor market entrants. The figure below shows how South Africa compares to other countries when it comes to additional pay for overtime, mandatory leave, required notice before retrenchment, and the amount of severance pay required before dismissal. In general, South Africa is in line with international norms and generally sits at the median or lower of other countries on these policies. A World Bank diagnostic of South Africa found similarly that regulations in South Africa are not excessive on the whole, though they also mention that there could be some room for improvement on issues of labor negotiation and dispute resolution.⁷³

⁷³ “South Africa - Systematic Country Diagnostic : An Incomplete Transition - Overcoming the Legacy of Exclusion in South Africa (English).” (Washington, D.C.: World Bank Group), accessed June 12, 2022, : <http://documents.worldbank.org/curated/en/815401525706928690/South-Africa-Systematic-country-diagnostic-an-incomplete-transition-overcoming-the-legacy-of-exclusion-in-South-Africa>.

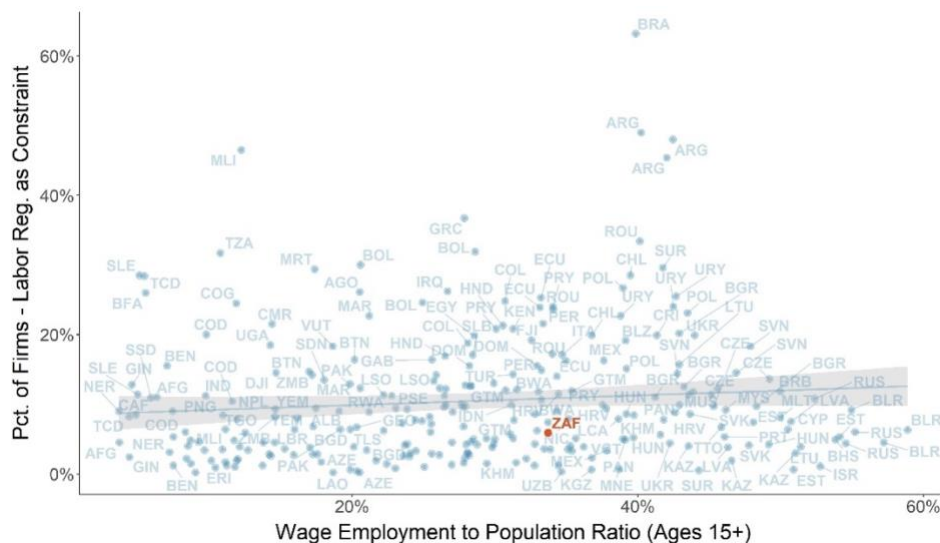
Figure 32. South Africa's Labor Laws in Comparison to Other Countries



Source: World Bank Doing Business Indicators

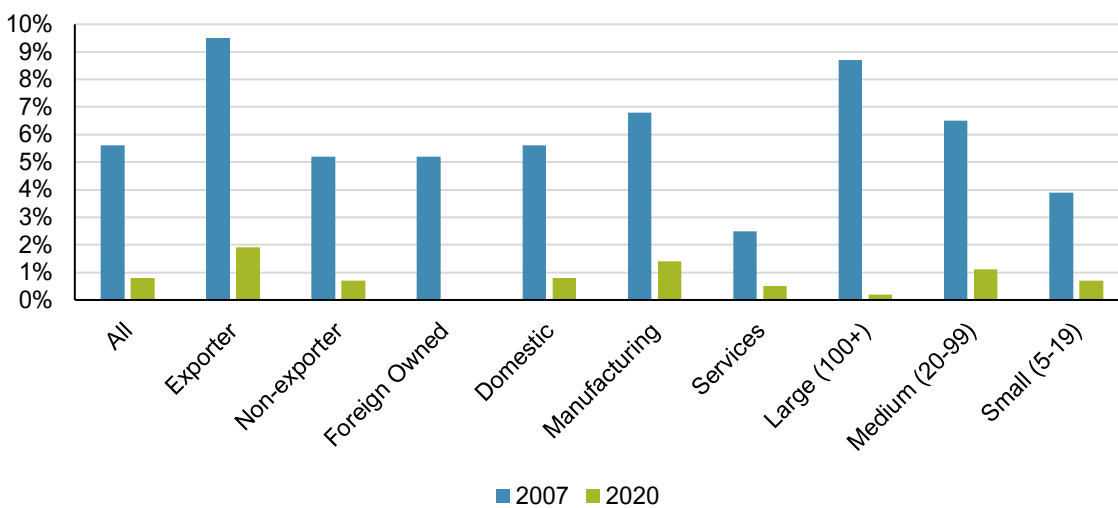
As a result, relatively few firms report that labor regulations are the biggest constraint they face, and the proportion that do has declined over time. In 2007, approximately 5.6% of firms in the World Enterprise Survey of South Africa listed labor regulations as one their biggest constraints. By 2020, that number had fallen to 0.8%. Comparing South Africa to all other countries, it is also the case that this rate is relatively low. Recall from Section 2, that South Africa has healthy (if stagnating) level of wage employment for its level of income. And so, we do not seem to be seeing an economy where firms are overly constrained from hiring by labor regulations overall.

Figure 33. Percent of firms that list labor regulations as their biggest challenge vs employment rates



Source: World Bank Doing Business Indicators; World Bank Enterprise Survey

Figure 34. Change in the percent of firm that list labor regulation as their biggest challenge by firm type



Source: World Bank Enterprise Survey

Labor regulations and unions are unlikely to be driving South Africa’s lack of informal work and self-employment. Usually, labor regulations are one reason that firms will choose to stay small or informal rather than formalize. If unionization were driving informality, it would have to be through some enforcement channel. As we saw earlier, enforcement of minimum wages is not perfect. Still, there might be a disincentive for a small firm to operate formally if it must comply with all wage and labor regulations.

Wage and labor regulations could nonetheless affect the composition of what economic sectors South Africa has. It was out of the scope of this paper to test whether minimum and bargained wages mean that South Africa is unable to attract investment from certain industries. For example, Natrass and Seeking (2014) argue that much of the literature on minimum wages and employment in South Africa have tended to focus on non-tradeable sectors. Tradable, labor-intensive sectors like garments for example might be deeply affected by minimum wages with South Africa becoming uncompetitive from a global point of view as result.⁷⁴

3.E. Education

Education and skills are sometimes cited as a constraint within the South African labor market. There could be two ways that education and skills might be relevant for why there is so little informal and own account work. First, it could be that those that would be informal entrepreneurs do not have the skills or education to be successful. Second, a high education premium combined with a more educated population could mean that the more educated individuals are more likely to want to remain unemployed rather than take on informal work as they search for higher wage job openings commensurate with their education.

Education or skills as a constraint preventing informal entrepreneurs seems implausible. Figure 35 clearly shows that it is precisely the less educated that are currently more likely to take on informal work. Furthermore, Figure 36 shows that the owners of non-registered have

⁷⁴ Nicoli Natrass and Jeremy Seekings, “What Is at Issue in the Minimum Wage Debate? | Econ3x3,” *Econ 3x3* (blog), 2014, <http://www.econ3x3.org/article/what-issue-minimum-wage-debate>.

been becoming more educated over time, yet this has not translated to more informal entrepreneurship. The figure also shows that aside from education, non-registered firms are becoming more skilled in other ways, for instance by adopting better accounting and bookkeeping standards.

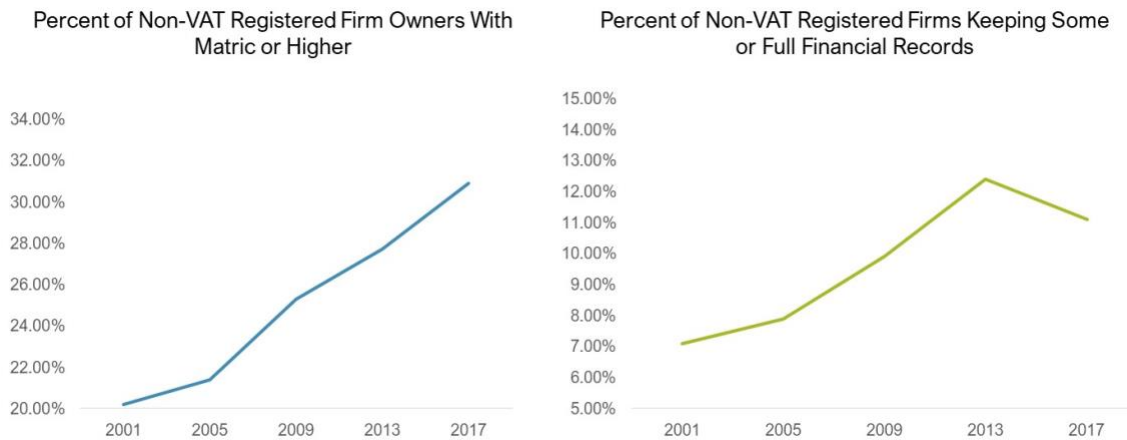
There are mixed signs of a skills shortage in the rest of the economy. Figure 35 also shows that unemployment rates tend to be much lower for those that are more educated, and Figure 37 suggests that the returns to tertiary education or higher are relatively high. However, unemployment for even educated individuals in South Africa has been rising in recent years and the education premium has been declining, which perhaps there is not as much of a shortage today as there once was. In addition, firms do not identify an educated workforce as a major constraint. Figure 38 shows the percentage of firms that say an educated workforce is a constraint for them. Unlike in a place like Brazil, where the majority of firms identify education of their workers as a constraint, very few firms in South Africa in 2007 or 2020 identify it as one.

Figure 35. Labor Market Outcomes by Education (2019)



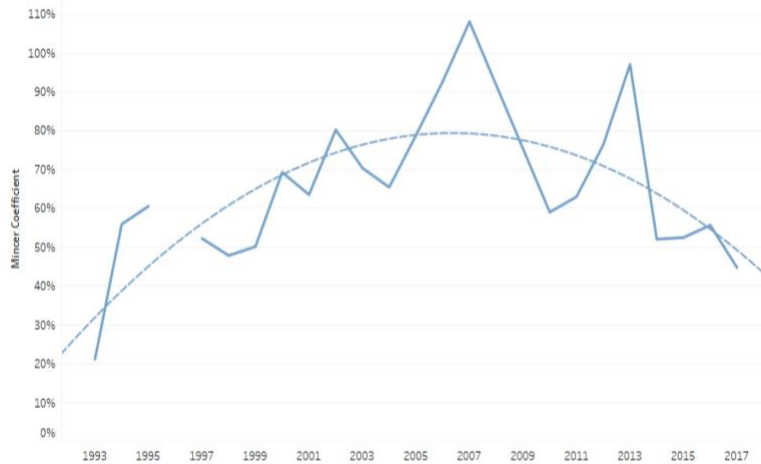
Source: Calculations using Post-Apartheid Labor Market Series

Figure 36. Education Level of Non-VAT registered Firms (LHS) and Share of Non-VAT Firms that Keep Some or Full Financial Records (RHS)



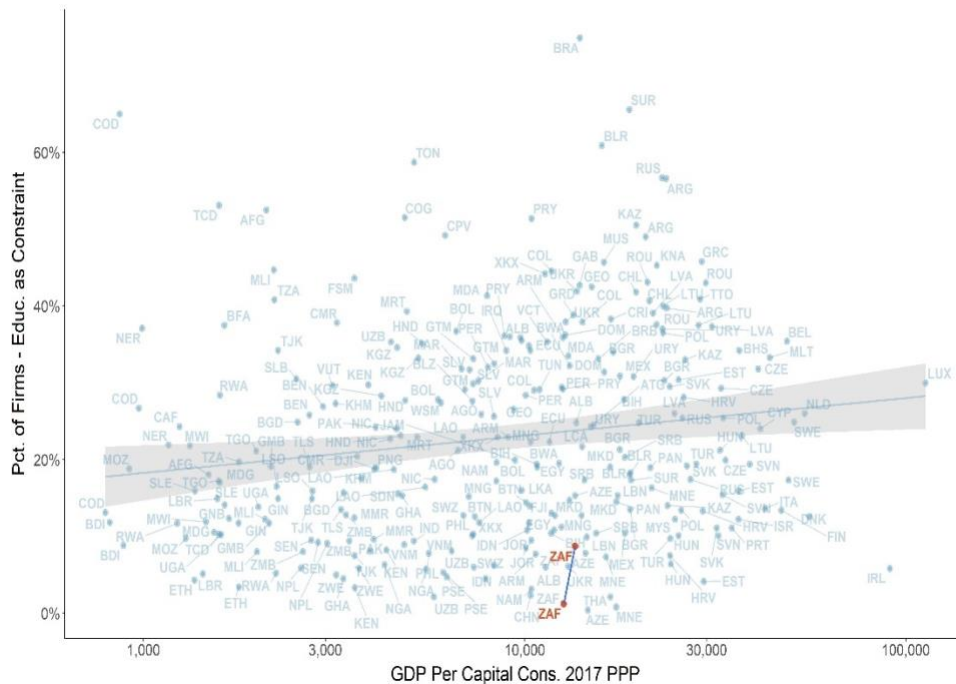
Source: Calculations using Survey of Employers and Self-Employed (SESE)

Figure 37. Mincer Returns to Tertiary Education or Higher



Source: Calculations using Post-Apartheid Labor Market Series. Mincer coefficient computed controlling for gender, experience, experience squared, industry, occupation, and population group.

Figure 38. Percent of Firms Who Identify an Educated Workforce as a Constraint (2007 ad 2020 for South Africa)

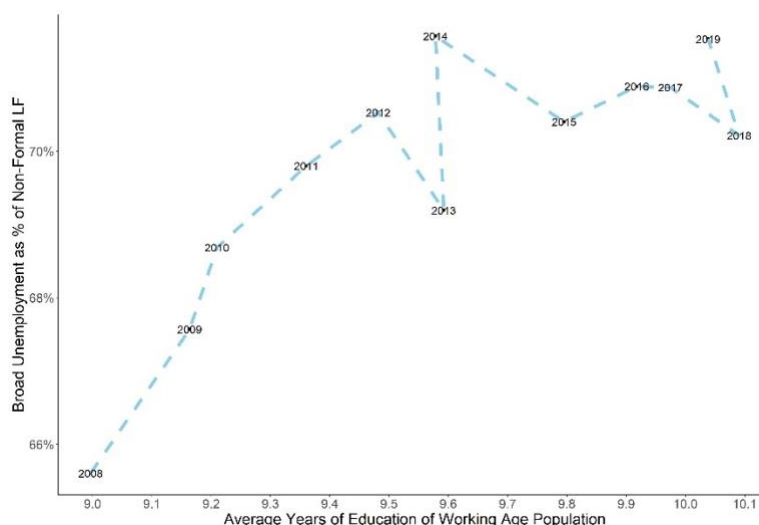


Source: Calculations using World Enterprise Surveys

Education has been steadily increasing in South Africa, while employment outcomes particularly unemployment and informal work have moved in non-linear ways. Figure 39 shows the ratio of the broadly unemployed over the non-formal labor force versus average years of education of the working age population. The ratio on the vertical axis captures what percentage of the labor force that is not working in formal jobs is unemployed rather than working in an informal one. This is the measure on which South Africa is an extreme outlier.

Between 2008 and 2014, this ratio and years of schooling two moved together. This could have suggested that a mechanism where more educated people have higher reservation wages and so stay unemployed was plausible. But from 2014 to 2019, education continued to increase but the ratio of unemployed to the non-formal labor force stayed relatively flat. Education and skills may be an issue for some parts of the economy, especially within the formal sector, but there is no evidence to suggest that either the lack of education or its high returns is what drives low informal and own account work and high unemployment.

Figure 39. Unemployment to Non-Formal Employment vs Avg. Education of Working Age Population



Source: Calculations using Post-Apartheid Labor Market Series

3.F. Crime

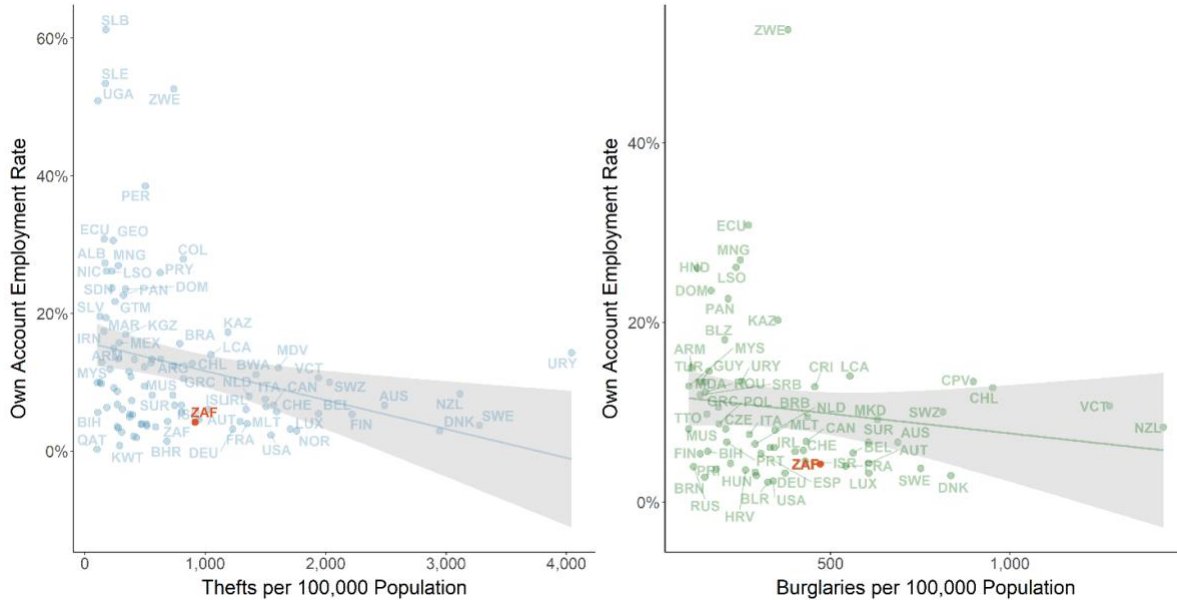
In surveys, one of the most listed barriers by informal workers themselves is crime. Several surveys of the self-employed in South Africa find that crime is one of if not the biggest perceived challenge for informal business.⁷⁵ Crime rates, especially violent crime rates in South Africa are relatively high.

However, crime as a reason for why own-account and informal work is so low in South Africa compared to other countries does not seem plausible. First, South Africa is not alone in having high crime rates. Many other countries, especially in Latin America, have comparable rates of crime, including violent, crime and are at similar levels of income per capita as South Africa. Yet, these countries in Latin America do not lack informal work. In fact, they have more informal work. This is clear in Figure 40 below that shows thefts and burglary rates against own account employment across countries. Second, crime rates, especially violent crime rates, have fallen dramatically in South Africa since the 1990s before starting to increase again post 2011. Despite these changes, there has been little if any change in the rate of own account work in South Africa, as shown in Figure 41. If anything, the own account employment rate has

⁷⁵ See Haroon Borat and Karmen Naidoo, "Exploring the Relationship between Crime- Related Business Insurance and Informal Firms' Performance: A South African Case Study," *REDI3x3 Working Paper*, February 2017, 26; Paul L. Cichello et al., "Perceived Barriers to Entry into Self-Employment in Khayelitsha, South Africa: Crime, Risk, and Start-up Capital Dominate Profit Concerns," Working Paper (University of Cape Town, 2011),

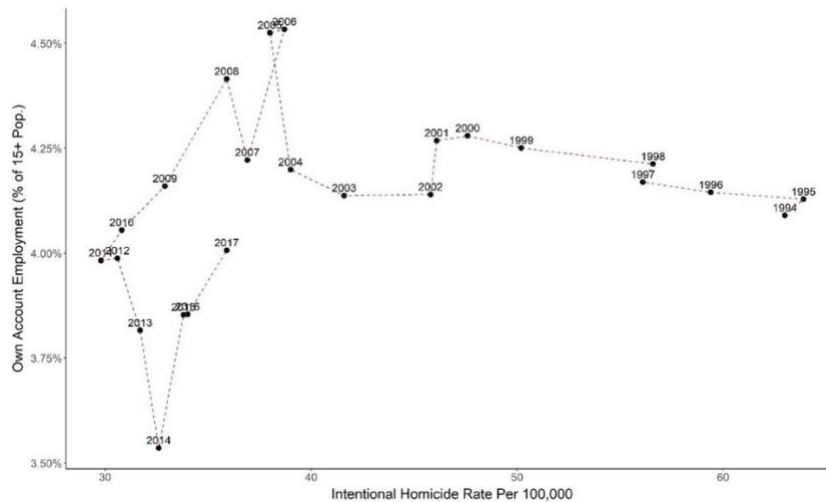
increased when violent crime has increased and decreased when violent crime has fallen since 2005, which is the opposite of what we would expect if this were a key driver of low informal work.

Figure 40. Thefts and Burglaries Per 100,000 versus Own Account Employment (latest year available)



Source: Calculations using UNODC Stats and South Africa Police Service annual statistics

Figure 41. Intentional Homicide Rate Per 100,000 versus Own Account Employment (latest year available) for South Africa Over time



Source: Calculations using World Bank World Development Indicators

In addition to these overall trends, causal studies of the impact of property crimes and thefts suggest that crime has only a marginal impact on self-employment. Grabrucker and Grimm (2018) use a difference-in-difference and instrumental variable approach to see what the causal impact of different rates of crime (specific robbery and burglary) are on self-employment

and business activity across municipalities within South Africa.⁷⁶ Though they do find a negative effect that is statistically significant, the effect is small. A 1% increase in robbery and burglary rates would decrease self-employment in a municipality by less than .015 percentage points. High crime rates are no doubt a serious issue in South Africa, but they fail to help us explain the reason for why individuals choose not to work as informal, self-employed workers.

3.G. Regulation of Informal Work

One of the other legacies of Apartheid were harsh regulations that prevented Africans from starting businesses and conducting most types of economic activities in cities and where they lived. Apartheid policies like the Group Areas act prevented Africans from engaging in many different forms of economic activities, especially in urban areas. These included requirements for business licenses and bans on activities like street hawking. Areas of cities were heavily regulated, and these regulations were strongly enforced.⁷⁷ In an account of the relationship of the informal sector with city planning in Durban, Skinner (2004) recounts how the tolerance for informal activity in Durban has not been stable over the years.⁷⁸ There have been periods of tolerance and other periods where city authorities have sought to completely remove informal markets. Post-Apartheid until the mid-2000s, Skinner documents a time of deregulation and innovation in incorporating informal workers into city planning. This included an innovative project in Warwick Junction that provided dedicated space for informal traders in a heavy traffic area as well as resources like access to storage.⁷⁹ Not surprisingly, examples like this where informal markets like this are allowed or even embraced allows for greater informal activity.

Even with the official end of many Apartheid era policies, informal activity is not always welcomed and is often actively fought by city governments. After the end of apartheid, national level prohibitions on economic activity were removed. However, in one account, cities were still given much independence to enforce rules around zoning and informal activity. To control congestion and inward migration of workers, regulations on informal activity like street hawking remained in force through restrictive zoning and heavy-handed enforcement on the use of space even in township areas themselves.⁸⁰ The book *Township Economy: People, Spaces, and Practices* highlights many of the struggles that informal businesses and microenterprises in their relationship to city governments and laws. For example, restrictive zoning on high streets reserves some of the busiest areas of the city as purely residential even where they are close to or intersect Township areas.⁸¹ This prevents microenterprises from operating in these places where they are more likely to be successful. The figure below shows the most common difficulty of non-VAT registered businesses in South Africa. In the most recent period of 2017, the top two answers of marketing and provision of an alternative site. These reflect some of the difficulties in finding customers and being able to operate where success is most likely.

⁷⁶ Katharina Grabrucker and Michael Grimm, "Does Crime Deter South Africans from Self-Employment?," *Journal of Comparative Economics* 46, no. 2 (2018): 413–35.

⁷⁷ Geeta Kingdon and John Knight, "Why High Open Unemployment and Small Informal Sector in South Africa?," November 1, 2001.

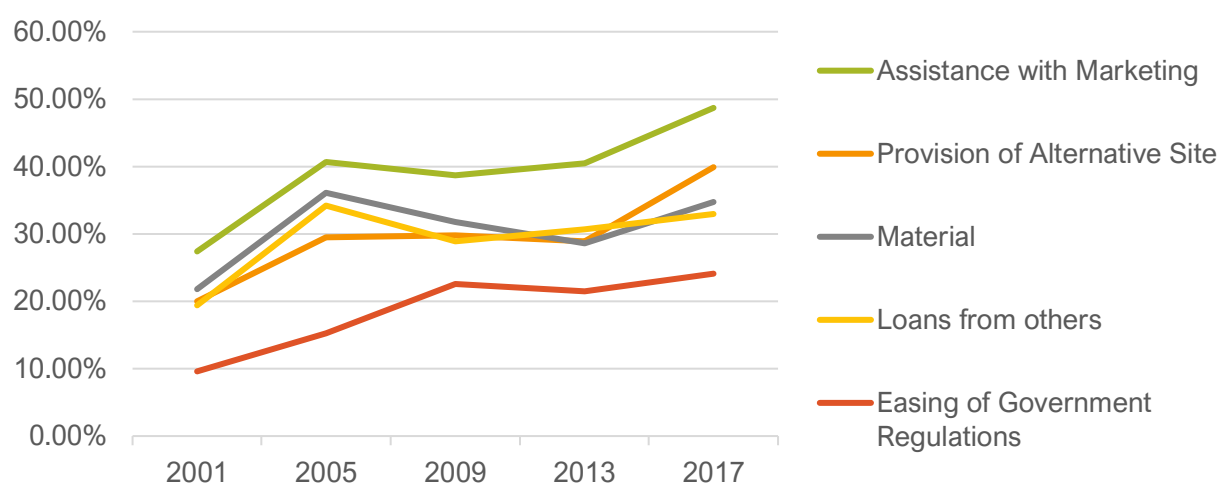
⁷⁸ Caroline Skinner, "The Struggle for the Streets: Processes of Exclusion and Inclusion of Street Traders in Durban, South Africa," *Development Southern Africa* 25, no. 2 (2008): 227–42.

⁷⁹ Richard Dobson and Caroline Skinner, *Working in Warwick: Including Street Traders in Urban Plans* (School of Development Studies, University of KwaZulu-Natal, 2009).

⁸⁰ Andrew Charman, Leif Petersen, and Thireshen Govender, *Township Economy: People, Spaces, and Practices* (Cape Town, South Africa: HSRC Press, 2020).

⁸¹ *Ibid.*

Figure 42. Percent of non-VAT Firms Who List as A Constraint



Source: Calculations from Survey of Employers and Self-Employed 2017

Additionally, there are still deliberate efforts to systematically limit informal activity in cities. In 2013, Johannesburg implemented *Operation Clean Sweep* which aimed to crack down on what officials felt was illegal street trading in busy city areas. This led to the forced eviction of over 6,000 street traders in the city until legal organizing and activism by civil society and the traders themselves was able to convince the courts to reverse the city's actions.⁸² Even though, the traders and their supporters were able to get the city to backdown, the experience is indicative of broader, more hostile attitude towards informal work. In fact, Johannesburg announced another such sweep in April of 2022. This surely must enter the risk, reward trade-off that individuals go through when deciding whether to try informal entrepreneurship in urban spaces.

There is more research needed to understand the effects of urban regulation and how much of low informality this can explain. While the case studies and examples above do show active restriction of informal activities across cities in South Africa, this can only explain a limited part of the low informality phenomena and certainly not the lack of informality well outside of urban areas. One approach for further study would be to more systematically examine examples of relaxing zoning or permit laws to see if this allows greater informal activity that has higher returns.

3.H. Transport Costs

One of the legacies of the Apartheid regime has been high transportation costs and long commuting times because of lasting special consequences of where non-whites were forced to live and where jobs were concentrated. South Africa has generally high transport costs and commuting times compared to other countries. This is a direct result of policies (like the Group Areas Act) during Apartheid that separated the non-white population in townships and homelands that would be physically very far from urban centers and places where jobs exist. Even after the removal of these policies, the structure of both urban and rural areas has not necessarily changed dramatically. Kerr (2017) finds that not only were commuting times and

⁸² Social Law Project. 2014. Johannesburg Street Traders Halt Operation Clean Sweep. WIEGO Law and Informality Resources. Cambridge, MA, USA: WIEGO

travel costs substantial on the eve of democracy, since then they have risen potentially due to greater congestion (as people were able to move to city areas) while the supply of housing and transport infrastructure to access the city center did not increase adequately.⁸³

Both direct and indirect transport costs are high, representing a large tax on incomes that would disincentivize work. Overall direct commuting costs are about 17% of net wage income in 2010 using NIDS.⁸⁴ In addition, if we include the opportunity cost of time commuting then commuting costs are on average 57% of net wage income in that same year. To calculate this, we add to direct commuting costs the individual's opportunity cost of commuting, which we define as the individual's hourly rate times the time taken to commute both ways each day. This is higher than the 2003 numbers calculated in Kerr (2017) but in line with the observation that commuting costs have increased over time in South Africa. This is also higher than the 45% effective tax rate estimated by Hausmann (2013) for other developing countries.⁸⁵ What is more is that these costs are regressive. Transport costs are relatively fixed and so they will tend to be more impactful for those at the bottom of the income distribution. Figure 43 shows average transport costs (direct costs only, and total which include monetary and time costs) as a percentage of net wage income across household per capita income quintiles. Costs represent a higher share of wage income for poorer households. For the bottom quintile, direct costs are more than 35% of net pay and total costs including time to travel is more than 80% of net pay.⁸⁶

As a result, mode of transport varies greatly by geography and by the ability of individuals to afford alternative modes of transport like cars. Figure 44 shows that for the poorest both in terms of lowest salary quintile and in terms of geography (i.e., rural areas), walking is the most common mode of transport. This is also the most time consuming especially in places like rural areas and townships where there is low density. Therefore, it is important to also capture indirect costs. Direct costs for the poorest might be so high that their cost to commute comes mostly from time rather than direct payment for transport.

Transport costs have a strong relationship with aggregate employment outcomes at the district level. Figure 45 has two graphs. The graph on the left shows the relationship between the share of net pay going to transport (i.e., the total transport "tax" including time costs) and aggregate wage employment. There is a strong negative relationship. On average, a 10% increase in share of earnings going to transport is associated with a 1.5 p.p. drop in wage employment. In other words, a doubling of the share would be associated with a drop in wage employment of about 15 p.p. The graph on the right shows the relationship between the transport "tax" the ratio of unemployed to own account. In general, both unemployment and own account employment rise with transport costs because wage employment falls. However, own account employment rises faster. Therefore, as transport costs get higher, fewer people shut out of wage work choose to search and will instead choose own account work. It could also be the case that transportation constraints affect informal work by reducing local demand, since consumers are also less mobile.

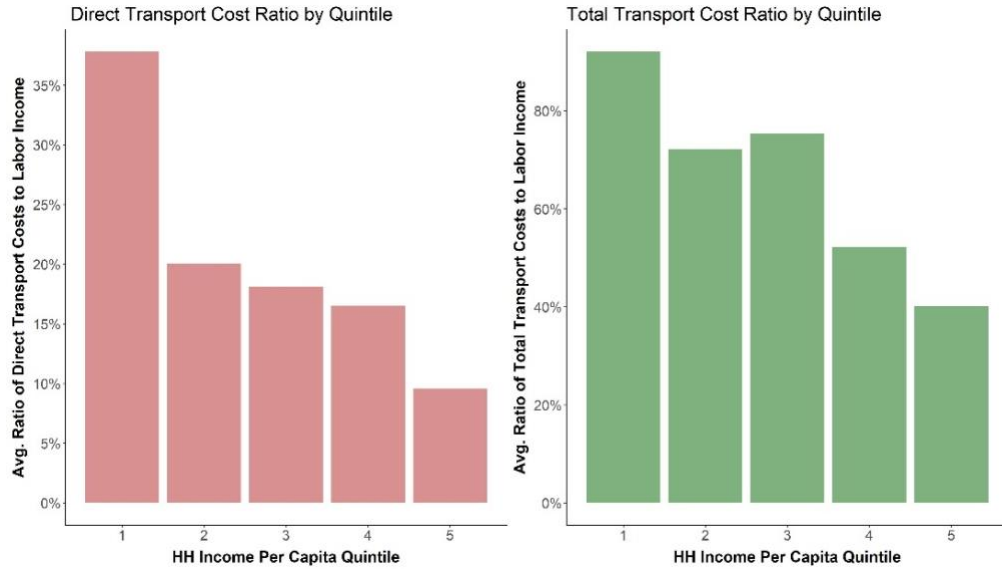
⁸³ Andrew Kerr, "Tax(i)ng the Poor? Commuting Costs in South African Cities," *South African Journal of Economics* 85, no. 3 (September 2017)

⁸⁴ This is similar to estimates in Kerr (2017)

⁸⁵ Ricardo Hausmann, "The Logic of the Informal Economy | by Ricardo Hausmann," Project Syndicate, June 19, 2013.

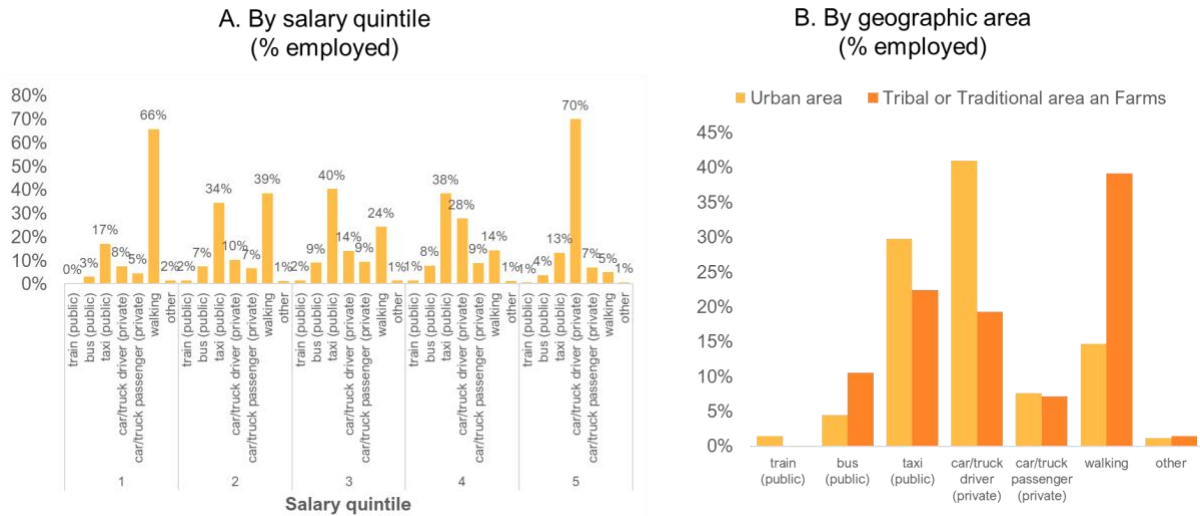
⁸⁶ Poorer households are usually forced to walk and therefore spend much more time in commute

Figure 43. Direct and Total Transport Costs as a Share of Net Pay by Quintile (2010)



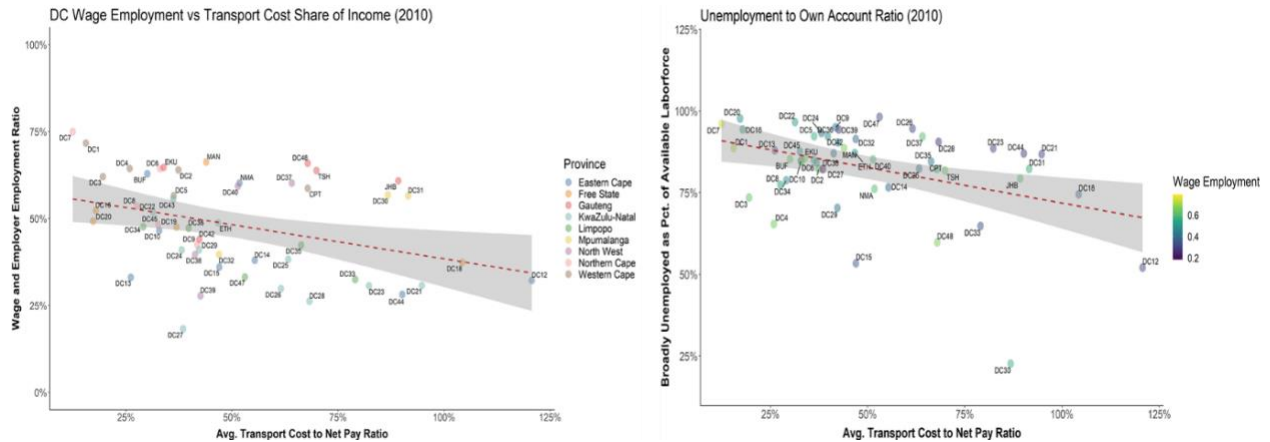
Source: Calculations using NIDS

Figure 44. Mode of transport by Salary Quintile and Geographic Area (2020)



Source: National Household Travel Survey 2020

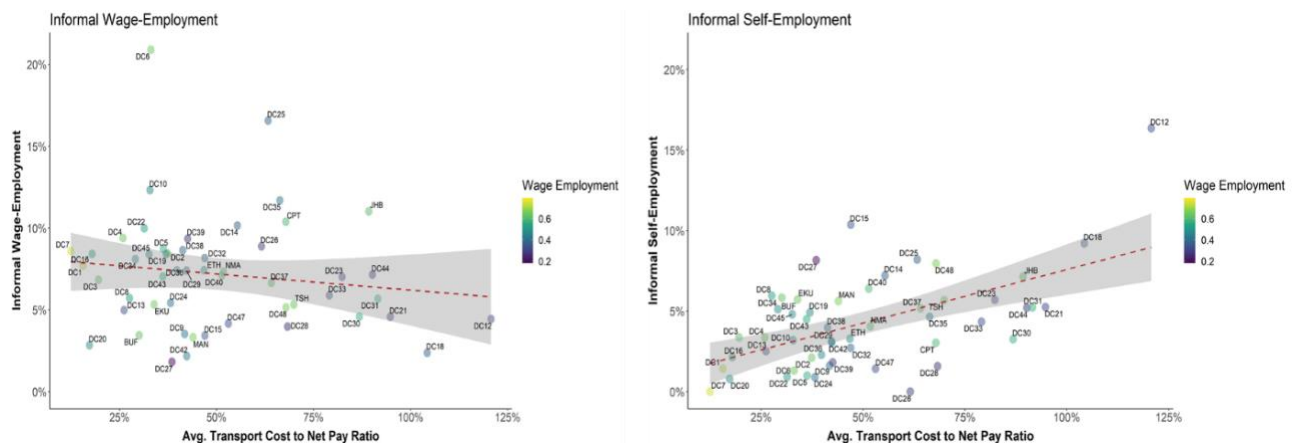
Figure 45. Wage Employment and Unemployed to Available Ration vs Transport Costs



Source: Calculations using NIDS

Informal work is heterogenous, and so the mechanism in South Africa could be that transport costs are so high and density so low that it affects different types of informal work. Figure 46 shows the relationship between transport costs and informal wage employment on the left side and informal self-employment on the right side. The association between transport costs and informal self-employment is what we would expect, with informal self-employment increasing as transport costs increase and people are forced to find livelihoods closer to where they are. However, the relationship is weaker and potentially in the opposite direction for informal wage employment. Recall that Kwenda and Bargain (2010) found that South Africa was different from countries like Brazil and Mexico in that the “upper tier” of informal work with higher earnings are entirely absent.⁸⁷ While not conclusive, transport costs and issues of density might differentially affect this upper tier of informality.

Figure 46. Informal Wage Employment & Informal Self- Employment vs Transport Costs



Source: Calculations using NIDS

These high costs of transport and the observed employment effects suggest that these costs are a significant barrier to participation in the labor market. In many developing countries, high transport costs force people especially in cities to take on informal, own account work in and near their homes, selling to their neighbors since they cannot access formal, wage

⁸⁷ Bargain and Kwenda, “Is Informality Bad?”

jobs that are usually far away from where they live. We see this dynamic. However, the difference is that South Africa's base level of own account work is low across the board.

3.1. Conclusion: Direction and Unanswered Questions

Overall, the evidence suggests that commonly cited factors influencing the South African labor market cannot explain South Africa's unusual labor market outcomes, particularly its very low informality. Several pull factors that make search for formal work more attractive are not major drivers of low informality, though social grants may affect outcomes in a small way at the margin. Social grants do appear to reduce informality among mothers and the elderly to small degree, but the size of these effects is not large enough to explain the large unemployment and low rates of informality that we see. Other pull factors including wage and non-wage labor regulations and education provide patterns and signals that are directionally inconsistent with the phenomenon of very low informality. Among push factors that could push informality down, crime is not a significant driver. Crime is high in South Africa and no doubt is an important issue for society. However, we do not see it as a major driver for the labor market outcomes we see.

While the diagnostic evidence is not definitive, it does point to there being structural barriers to informal and own account work in the regulation of space, density, and transport. Here we have found evidence or examples that these costs are large in South Africa, that that they have negative employment effects. They might be a reason not just why formal wage work is low, but also why some types of more remunerative informal work are low. Transport costs are a regressive tax and so to the extent that the informal sector must also shoulder those costs, the transport tax will be higher on them. Additionally, we do not know the size of their impact, but regulations of informal activity through zoning and permits might be a hurdle for profitable informal work. These two issues, along with other potential issues not explored in this section — such as housing and land use policies — also affect the density of spaces, which impacts the type of economic activity that is viable. One mechanism is that a lack of density makes not just transport expensive for workers but also customers, making the effective market for informal and own account workers too small to be profitable. Further research and policy experimentation could help in teasing out these effects.

One additional explanation has not been fully explored here is that of an especially competitive formal sector. When comparing South Africa and Mexico, the major difference in informal employment had to do with sectors like informal hospitality and retail. Some work suggests that through mechanisms like franchising these sectors might be especially competitive in South Africa and so there is less room for informal firms to profitably operate.⁸⁸ Qualitatively, ongoing interviews with firms in the agriculture sector also suggest that high competitiveness of the commercial agriculture sector and a developed retail sector significantly limit entry of smaller and more informal entrants. Evidence explored in this section does suggest that competitiveness of the formal sector as expressed terms of individual wages is not a key mechanism, but other mechanisms may be at play.

⁸⁸ See Klinger, Bailey, Growth Lab. Franchising Report. 2022 (forthcoming) for a full discussion.

4. Policy Implications

South Africa's challenge is one of including more people in the economy and this is also fundamental for sustainable poverty alleviation and counteracting very high inequality.

There is likely room to improve the quality of government spending to channel it towards more inclusion of people and places rather than only redistribution. Redistribution to date has been progressive and relatively well targeted but it is not clear that it addresses the root causes of why people are excluded from making their livelihoods in the labor market in the first place. However, this raises the question of how to target spending better toward inclusion. As a first step, it is important to understand the nature of South Africa's labor market problems.

South Africa has two overarching labor market problems: increasing job creation in the formal sector and reducing barriers to informal work. Given the role that labor market exclusion plays in South African poverty and inequality and overall wellbeing, the country does not have the luxury of focusing on only one of these dimensions of exclusion. Like other developing countries, South Africa faces the challenge of growing its formal, wage sector to include more people and provide good, high-paying jobs. This requires re-igniting inclusive growth after the past decade of stagnation. At present, key constraints causing this stagnation — including poor performance of network industries, including electricity, and very high perceived policy uncertainty — prevent the immediate recovery of growth. But South Africa's levels of formal work are not out of step for its income level. Instead, unlike other countries, South Africa's population that is not able to find formal work tends to end up unemployed rather than working in informal or own-account work. This makes South Africa unique, and the sky-high unemployment rates in South Africa compared to other countries traces more to the lack of informality and own account work than to its weak formal job growth.

Growth through inclusion should include addressing both problems of low formal and low informal work. In the long run, it is desirable for all South Africans to have access to good quality jobs in the formal sector. This is a key goal of development and should be a focus within a larger strategy on growth. But the lack of informal work also has implications for unemployment, poverty, and welfare. Thus, policies and initiatives to reduce the barriers that cause the lack of informality can help reduce some of the structural challenges preventing people from participating in the broader economy. Once one accepts this as a relevant policy goal — which would itself be an important change in South African policy — policymakers then need to know what underlying issues to address to produce a response in new informal work activities. This, in turn, should be complemented by efforts to enforce public and workplace safety even in informal circumstances, and the continuation of certain broad policies of social protection such that informal workers have some physical and social protection.

The diagnostic evidence of the informality puzzle emphasizes the need for policy attention, as well as targeted research, on issues of space, transport, density, and urban regulation. The evidence points against crime and several “pull factors” as explanations of South Africa's low informality. Among push factors that make informal and own account work less attractive, barriers of space, urban land regulation, density, and transportation seem to create large frictions for individuals' participation in the labor market. While we are not able to size the impact of each factor on low informal work, evidence suggests they would good places to explore further and put more policy attention.

Further research and some policy experimentation itself could help in determining both the magnitude of these constraints and what needs to be done to address them. Specific

areas for policy design and innovation that emerge include: (1) regulations of informality and urban space; (2) housing and density; and (3) transportation. It is both a challenge and opportunity that policy affecting these areas often sits at very local levels. There is good reason for urban regulation, housing, and transport policy to have local involvement to meet local needs, but this also can fragment planning and demand policymaking capabilities that local governments are poorly positioned to deliver. There is also need for national coordination to support local policymaking and make sure that such policies at the local level align with national priorities of making South Africa a more inclusive economy.

4.A. Inclusive urban management and regulation

A more inclusive urbanism and urban planning is needed to balance the legitimate needs of cities to regulate public space in the public interest with the real need for people to engage in livelihoods when alternatives do not exist. Cities in South Africa have much independence in regulating economic activity, especially of informal workers and traders. Two rules might be especially important. There is specific zoning that allows or disallows certain types of activities only in certain parts of the city. Such zoning can prevent informal activity in the places that are most profitable. In addition, even for “designated areas” where trading is allowed, informal workers and entrepreneurs must have permits to operate.⁸⁹ On the one hand, cities have a strong and legitimate interest in trying to keep streets from being congested and regulating urban space in the name of safety, health, and other priorities. On the other hand, these jobs are an important source of livelihood for people, especially the poor. Given South Africa’s struggles with generating work in the formal sector and its high unemployment rate, it is understandable that informal workers would be frustrated with efforts to regulate their livelihoods when there are no other alternatives available.

As mentioned in Section 3, there are examples of solutions in South Africa that may point to a way forward. The renovation of Warwick Junction where the city government actively included informal traders in the planning process to create areas near high-traffic areas for trade, storage, etc. is held up as an international best practice.⁹⁰ The challenge is in creating more of these types of arrangements and thinking through ways in which informal livelihoods and other urban concerns can coexist together. The national government has a potential role to play in convening city governments together to make joint progress and set guidelines, policy, and frameworks as well as sharing best practices that others in the country can adopt.

4.B. Housing for density

Housing policy could be used to better promote density in addition to affirming all people’s right to adequate shelter as protected in the South African constitution. Equity in housing has been a key goal and focus of policy in South Africa since the transition to democracy. Adequate housing is a human right enshrined in the South African constitution and is recognized as an important part of dealing with the legacies of apartheid. This legacy has created spatial structures that kept people living in bad quality housing away from any economic opportunity. Housing policy in South Africa through subsidies, government housing, financing support, and other measures has sought to create affordable housing with high quality that can also help create density and reduce sprawl.⁹¹ But as has been shown in housing policy around

⁸⁹ “South Africa Street Vendor Manual 2014” (Social Law Project and WIEGO, 2014), <https://www.wiego.org/sites/default/files/resources/files/SLP-Street-Vendors-South-Africa-Manual.pdf>.

⁹⁰ Dobson and Skinner, *Working in Warwick*.

⁹¹ “Housing Delivery in South Africa” (Fuller Housing Centre, 2014).

the world, there is often a need to rethink what we consider is optimal when it comes to affordable housing.⁹² Especially in urban areas, where available land is scarce and expensive there may be a trade-off in amenities versus location and density. Housing with lots of space and many amenities may only be possible for a government to build in places that are far away from economic activity.

The challenge is that this is a trade-off that individuals should determine for themselves and if determined solely by government can entrench sprawl and spatial disconnection.

And for many individuals in South Africa, especially given large transportation costs, proximity to economic opportunity may be more important than certain amenities. The challenge requires a shift in affordable housing policy that focuses not just on quality and price of housing but also on building where people want to live. One World Bank Report discussed this shift needed and highlighted the example of a government housing project in Gauteng that built subsidized housing with many amenities, lots of space, and access to services, but to save on cost built on land far away from the city center. This resulted in high commute times and cost and high unemployment.⁹³

Housing policy should consider how regulation and subsidies affect connection and density more explicitly. Similar to regulations on urban space, municipalities have a lot of leeway in regulating housing and building. These regulations have a direct impact on density and housing affordability and ultimately affect the effectiveness of demand-side subsidies for housing by limiting the supply response. For example, one commonly used regulation are restrictions on Floor Area Ratios (FAR). FAR is the ratio of total floor space of a building to the land area. High FARs mean greater building density on the same land area. Restrictions on maximum FAR are often used by cities to regulate congestion, building height, density, etc. But uniform FAR restrictions can have the impact of creating sprawl, low density, and making it impossible to develop dense, affordable housing options. FAR restrictions differ greatly by city and region in South Africa. One study found that the average FAR in Stellenbosch was 0.33 and that changes in FAR had impacts on housing costs and density.⁹⁴ While this is only one tool for regulating density, it is important that building restrictions are aligned with stated national policy goals on reducing sprawl and increasing density.

4.C. Integrated transport policy

There is an important difference between approaches that actually reduce transport costs through investments in infrastructure versus policies that subsidizes those costs. Kerr (2017) explored the targeting of transportation investment and subsidies. Some of the findings included that there is a fair amount of policy attention paid to subsidies, for instance to bus and train operators.⁹⁵ The author argues that this approach is premised on an idea that there are externalities to transport that subsidies can help with. However, if transport costs are high because of sprawl or poor infrastructure then subsidies simply move the burden of the cost to the government rather than the individual. This may be desirable as a progressive policy for the poor. But it is not as well-targeted to the problem as policies and investments that actually bring those costs down. Furthermore, the same research finds that many of the investments and

⁹² Alain Bertaud, "Converting Land into Affordable Housing Floor Space," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, May 1, 2014), <https://papers.ssrn.com/abstract=2439693>.

⁹³ Ibid.

⁹⁴ Samkeliso Siphephelo Makhubu, "The Effect of Building Density on Housing Prices and the Supply of Housing in Stellenbosch: The Application of a Hedonic Price Model." (Thesis, Stellenbosch : Stellenbosch University, 2018), <https://scholar.sun.ac.za:443/handle/10019.1/105704>.

⁹⁵ Kerr, "Tax(i)ng the Poor?"

subsidies (in bus and rail) are the not modes of transport used by the poor who tend to walk or use minibuses. This disconnect means that subsidies are at best ineffective and at worst wasteful. Reducing transport costs means investments in roads, transport infrastructure like metros in cities, and in rural areas building infrastructure that is not just for cars but other cheaper modes of transport (e.g., bicycles and motorcycles).

Transport policy will need to be integrated with housing policy to be effective. Transport costs are not just a function of transport infrastructure, but critically depends on where people live. Housing policy that encourages housing far away from jobs will make effective transport policy and investments more expensive. Transport policy that does not also consider housing may end up leading to wasted efforts if people are not near where transport is developed. Policy that integrates the two together is more likely to be effective. For example, best practice on transit-oriented development would suggest that regulations on building density should be more relaxed near public transport options. An example of such efforts in South Africa are “Corridors of Freedom” in Johannesburg that set up projects around the Rea Vaya bus transit systems that could connect suburbs to the central business district.⁹⁶ However, the “Corridors of Freedom” initiative faced issues of political support and change, though there are some promising signs of private developers being brought on board to continue the building and housing parts of the projects.⁹⁷ Still, the housing component of the initiative has been much less successful despite having the right objective. This underscores that transportation systems by themselves are not enough to encourage density. Understanding barriers for housing supply and how they interplay with transportation are crucial for success of transportation policy. This will be crucial, for instance, to realize the aspirations for polycentric and transit-oriented development envisioned in the ambitious national local spatial development frameworks.⁹⁸

Besides large investments in transportation infrastructure, there is likely opportunity to integrate existing formal and informal transportation systems. Aside from walking, the system of privately operated minibuses is the most common mode of transport for those that do not have cars (i.e., poorer workers). The minibus system is a natural response to the challenges of public transport in a place where there is high spatial sprawl. Even as cities in South Africa have made investments in bus rapid transit (BRT) and metro systems, minibuses have continued to remain dominant. Cities around the country have found that it is important that they integrate and use the networks that minibuses have already created rather than replacing them outright.⁹⁹ Integration and collaboration has two benefits. First, it allows the different transport modes to play to their individual strengths with minibuses acting as feeders to more formal public transport modes. This allows for better planning of the informal and formal transport network. Second, integrating minibus operators helps to keep transport reform politically sustainable. Recently, Johannesburg reached an agreement with 300 minibus operators that would have been affected by the expansion of the Rea Vaya bus route. In return for their cooperation and shutting down some 940 redundant routes, minibus operators were given compensation,

⁹⁶ Jillian Du and Valeria Lvovna Gelman, “Johannesburg Fights Inequality with Transit-Oriented Development,” December 18, 2018, <https://www.wri.org/insights/johannesburg-fights-inequality-transit-oriented-development>.

⁹⁷ Astrid Wood, “Problematising Concepts of Transit-Oriented Development in South African Cities,” *Urban Studies*, August 31, 2021, 00420980211033725, <https://doi.org/10.1177/00420980211033725>.

⁹⁸ “Draft Spatial Development Framework 2040 (2021/22 Update),” n.d., 170.

⁹⁹ H. Schalekamp and J. M. Klopp, “Beyond BRT: Innovation in Minibus-Taxi Reform in South African Cities,” 2018, <https://repository.up.ac.za/handle/2263/69575>.

ownership shares in the new project, as well as jobs to many of the existing operators in the new transport initiatives.¹⁰⁰

4.D. Conclusion: Local implementation and national needs

Reform in space regulations, housing, and transportation is difficult because it cuts across the authorities and competencies of different departments and levels of government. In all of the areas discussed, policy action and regulatory changes often sit with local and provincial governments. These policy areas have both national and local policymaking components. National standards and nationally generated resources for spending and investment are relevant, but experimentation and innovation by local governments can also be powerful. In the best case, national and local public capabilities can work in tandem to enable new approaches to enable more flexible uses of space, improve the performance of transportation systems and lower costs, and ultimately increase economic density. Addressing spatial issues is the way to truly reverse the legacies of apartheid and allow people to participate fully in the South African economy. Labor force inclusion critically depends on space working for people. And it is by increasing inclusion in the labor force that South Africa can address some of the deep challenges of poverty and inequality it faces.

¹⁰⁰ Schalk Burger, "Rea Vaya Phase 1C Agreements Signed," *Cramer Media*, March 14, 2022, <https://www.engineeringnews.co.za/article/rea-vaya-phase-1c-agreements-signed-2022-03-14>.

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