

LABOUR MARKET POLICY RESPONSES AMIDST GLOBALISATION: THE CASE OF SOUTH AFRICA

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THE CASE OF SOUTH AFRICA**

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Abstract:

The South African economy is mired in a long-run, low-level growth trap which has entrenched high levels of structural unemployment. The economy has also witnessed a rapid and extensive integration into the global economy, which has exposed it to short-term shocks that adversely impact the labour market. ALMPs have been introduced to address both long-term structural problems as well as immediate crises. This paper uses a variety of empirical techniques to assess three ALMPs – a job re-training scheme, a public employment scheme and a wage subsidy scheme – implemented in the post-apartheid period. Expenditure on ALMPs and the number of beneficiaries of these schemes has risen over time. The former comprises 0.4 percent of GDP, and the latter constitutes 1.8 million beneficiaries or 8.7 percent of the labour force. In relation to OECD and LAC countries, the reach, in terms of beneficiaries as share of the labour force, and the extent, in terms of expenditure as a share of GDP, of ALMPs in South Africa is notable. The analysis indicates that poor monitoring and evaluation, government capacity, fiscal leakages, difficulty in balancing trade-offs, and an inability to convert the support offered under the scheme to long-term employment have generally hampered the success of these schemes thus far. The implementation of a rigorous monitoring and evaluation programme for each of the ALMPs is of key importance to assessing the impact of such schemes and tailoring them to ensure increased effectiveness in the future.

Keywords:

SMMEs; South Africa; inclusive growth; development; entrepreneurship; informality.

JEL codes:

E2, E26, J26, J4, J46, O1, O4, O17

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1 Introduction

As with many other middle-income economies, South Africa has struggled with the domestic consequences emanating from a variety of exogenous economic shocks. Nowhere is this more prescient than in the case of contagion effects from global financial crises and trade-induced shocks – amidst a world economy that is increasingly defined by its inter-connectedness. The real economy impact of the latter has, for South Africa, been most powerfully felt in the labour market, with current and future employment threatened through these shocks. In an economy with one of the highest structural unemployment levels in the world then, designing appropriate and effective labour market responses to these shocks is crucial.

This paper considers the three major active labour market policy interventions which the South African government has implemented in the post-apartheid period. These are: a job re-training scheme, two variants of a public employment scheme, and a firm-based wage subsidy intervention. The first of these, the job re-training scheme is designed to retrain workers who are at risk of losing their jobs through firm restructuring. The intervention was originally designed as a short-run policy response, and is the only scheme in South Africa specifically targeting individuals at risk of unemployment as a direct consequence of the 2008 financial crisis. The public employment scheme and the more recent wage subsidy intervention reflect domestic adjustment policies aimed at longer-run concerns surrounding the structural nature of unemployment in South Africa. The public employment scheme is a labour-intensive demand-side policy aiming to provide income and therefore poverty relief through temporary work placement for the unemployed, while the wage subsidy targets young unemployed individuals through offering a hiring tax incentive to firms employing these youth.

This paper utilizes both econometric analysis, where appropriate data is available, and empirical analysis to evaluate the jobs created or supported by each scheme, challenges and successes of each scheme, and a comparison of the costs associated with each of these active labour market policies (ALMPs) in South Africa. Before discussing these ALMPs, the paper provides a discussion on the South African economy's integration into the global economy in the post-1994 period. It also discusses the South African labour market's response to this re-integration and its increased exposure to global shocks, with specific focus on the effects of the recent global financial crisis.

2 South Africa in the Global Context

South Africa is in GDP terms, a small economy that, through various liberalisation efforts, has integrated into the global economy. This integration sits in stark contrast to the closed apartheid economy of the 1980s. Being a small open economy though, means of course that South Africa is continually subject to exogenous global shocks, which have impacts on the financial and real economy. In the latter case, it is the impact on the labour market in a high-unemployment economy such as South Africa's, which is of particular interest here.

This section will go on to briefly illustrate how South Africa's economy is linked to the global economy. The analysis in this section will be structured as follows: First, it provides a brief discussion on South Africa's re-integration into the global economy as it exited its apartheid period. Second, given this reintegration, it shows South Africa's post-1994 economic growth performance and analyses it in context of the country's closer alignment with the global economy. Third, it discusses the rapid internationalisation of key South African companies (e.g. Naspers, Shoprite, Investec), that are now common in the annual Fortune 500 statistics. This provides an indication of South Africa's growing presence and sectoral diversity in global markets at the firm-level.

Considered a pariah state, Apartheid South Africa was diplomatically, economically and culturally isolated from the rest of the world (DPME, 2014). As South Africa transitioned toward democracy and sanctions were lifted, it began to re-integrate into the global economy. A variety of developments confirmed South Africa's political and economic re-integration. These include:¹ joining the Organisation of African Unity in 1994 (later the African Union); chairing the African Union from June 2002 to June 2003; being integral in the adoption of the New Partnership for Africa's Development (NEPAD); strengthening SADC and regional integration; developing south-south cooperation in the form of structures such as the India-Brazil-South Africa Partnership Forum (IBSA) and the Brazil, Russia, India, China and South Africa (BRICS) Intergovernmental Forum; strengthening north-south cooperation through engaging with the G8, becoming a member of the G20, and establishing bilateral relations with the European Union.

Furthermore, South Africa's economic re-integration into the global economy involved the liberalisation of its trade. Belli, Finger and Ballivian (1993) compare South Africa's tariff regime to a range of other developing countries and find that by the end of the 1980s, it had the most tariff rates, the widest range of tariffs, and the second highest level of tariff dispersion. Edwards (2005) notes that in the early 1990s South Africa shifted to an increasingly export orientated trade regime by introducing the General Export Incentive Scheme (GEIS) and gradually removing surcharges and quantitative restrictions. South Africa's commitment to the General Agreement on Tariffs and Trade (GATT) Uruguay Round shifted policy emphasis toward import liberalisation, as well as the removal of export subsidies, which are incompatible for World Trade Organisation (WTO) rules (Edwards, 2005).

¹ See DPME (2014) for more detail on South Africa's role in the global arena.

Import liberalisation involved the binding of tariff lines, the reduction of the number of tariff rates, the rationalisation of over 12,000 tariff lines, and the replacement of quantitative restrictions with tariffs (Edwards, 2005). This process of import liberalisation is evident in Table 1, which shows the evolution of South Africa's Most Favoured Nation (MFN) tariff regime for the period 1990 to 2014 (see columns 2 to 4).² It is evident that the number of tariff lines (*ad valorem* plus non *ad valorem*) fell by 5,154 lines from 12,463 in 1990 to 7,309 in 2014. This represents a substantial rationalisation of tariff lines. The number of non-*ad valorem* lines declined substantially over the period, from 3,693 lines in 1990, 30 percent of all tariff lines, to 271 lines in 2014, 4 percent of all tariff lines. This drop in non-*ad valorem* tariff lines is further evident in Figure 1. The deterioration in South Africa's level of import protection is evident as the aggregate tariff level, including ad valorem equivalent (AVE) tariffs, falls by 3.57 percentage points, from 11.69 percent in 1990 to 8.13 percent in 2014. This shift to a more open economy then was driven by both the decline in non-*ad valorem* tariff lines and the rise in duty free tariff lines, as depicted in Figure 1.

² Most Favoured Nation is a principle that members of the World Trade Organisation (WTO) need to adhere to. In effect, it means that each member must treat all other members equally. If it gives one trade partner increased benefits, for example, by lowering tariffs, it must offer the same 'favoured' treatment to all other WTO members.

Table 1: Changing Structure of Tariffs for MFN, TDCA, SADC and EFTA

	MFN			TDCA			SADC			EFTA		
	1990	2014	Change	2000	2014	Change	2000	2014	Change	2007	2014	Change
<u>Number of tariff lines</u>												
Ad valorem	8,770	7,038	(1,732)	1,874	2,937	1,063	4,158	3,210	(948)	1,320	2,352	1,032
NAV	3,693	271	(3,422)	267	1	(266)	66	0	(66)	8	27	19
Total	12,463	7,309	(5,154)	2,141	2,938	797	4,224	3,210	(1,014)	1,328	2,379	1,051
<u>Tariff distribution by type</u>												
Ad valorem (%)	0.70	0.96	0.26	0.88	1.00	0.12	0.98	1.00	0.02	0.99	0.99	(0.01)
Non-ad valorem (%)	0.30	0.04	(0.26)	0.12	0.00	(12)	0.02	0.00	(0.02)	0.01	0.01	0.01
<u>Tariff level (incl. AVEs)</u>												
Mean (excl. AVEs) (%)	11.69	8.13	(3.57)	22.55	4.02	(18.53)	12.37	0.00	(12.37)	12.66	5.60	(7.06)
Standard deviation (%)	13.16	12.93	(0.23)	19.53	6.93	(12.61)	10.82	0.00	(10.82)	9.95	6.72	(3.23)
Max (%)	395	361	(34)	556	25	(531)	127	0	(127)	40	20	(20)
<u>Other</u>												
Duty free tariff lines (% of all lines)	0.24	0.56	0.32	0.01	0.70	0.69	0.35	1.00	0.65	0.15	0.22	0.07
Domestic tariff 'spikes' (% of all lines)	0.02	0.10	0.08	0.00	0.15	0.15	0.00	0.00	(0.00)	0.00	0.13	0.13
International tariff 'spikes' (% of all lines)	0.34	0.30	(0.04)	0.13	0.14	0.02	0.49	0.00	(0.49)	0.49	0.17	(0.33)
Nuisance' applied rates (% of all lines)	0.03	0.02	(0.01)	0.06	0.00	(0.06)	0.00	0.00	(0.00)	0.02	0.27	0.25

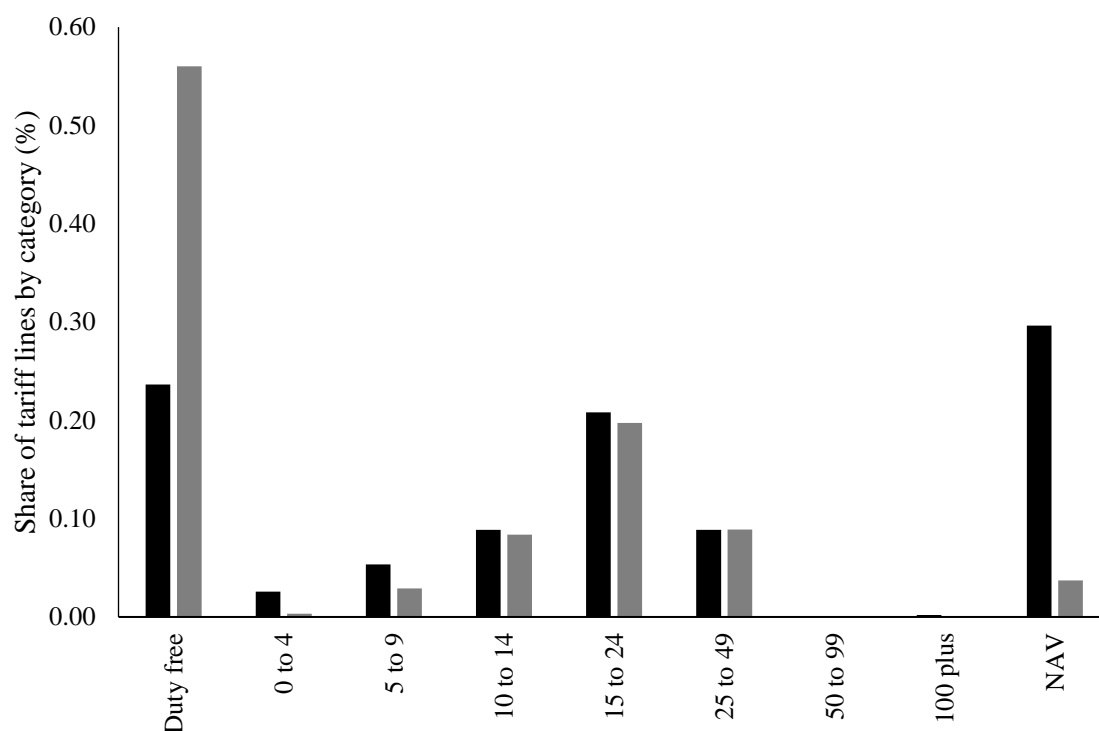
Source: Own calculations using tariff data from UNCTAD Trade Analysis Information Systems (TRAINS)

Notes: 1. MFN = Most Favoured Nation; TDCA = Trade Development and Cooperation Agreement; SADC = Southern African Development Community; EFTA = European Free Trade Area. 2. Tariff level is calculated as the simple average tariff. 3. 'Other' tariff measures calculated as a share of all tariff lines. 4. Domestic tariff spikes are defined as tariffs exceeding three times the simple average tariff level. 5. International tariff spikes are defined as tariffs exceeding 15 percent. 6. Nuisance rates defined as tariff levels greater than zero and less than or equal to two percent. 7. Minimum rates for all tariff schedules are all zero.

South Africa has further integrated itself into key global markets by entering into a number of trade agreements. In August 1996, South Africa signed the Southern African Development Community (SADC) Free Trade Protocol, which was implemented in September 2000. Table 1 shows that the SADC tariff regime was simplified through a reduction in tariff lines from 4,158 lines in 2000 to 3 210 lines in 2014, and the removal of all non-*ad valorem* tariffs.³ The mean tariff level, including AVEs, declined from 12.37 percent in 2000 to completely duty-free in 2014. These tariff data pertain to South African tariffs on imports from other SADC countries. The tariffs applied by other SADC countries on South African products have declined at a slower pace.

South Africa also entered into a preferential trade agreement with the EU by signing the Trade Development and Cooperation Agreement (TDCA), which allows both parties preferential access into each other's markets. Table 1 shows that the mean tariff applied on European imports has dropped by 18.53 percentage points, from 22.55 percent in 2000 to 4.02 percent in 2014. Furthermore, the maximum applied tariff has declined from 556 percent to 25 percent over the period of liberalisation. Duty free lines have increased from 1 percent of all tariff lines to 70 percent of all tariff lines. Apart from a number of agricultural products, South African exports enjoy duty free access into the EU market, comprising of 28 countries and accounting for approximately 16 percent of global GDP.⁴

Figure 1: Most Favoured Nation Tariff Structure, 1990-2014



Source: Own calculations using tariff data from UNCTAD Trade Analysis Information Systems (TRAINS).

Notes: 1. Share of tariff lines within each tariff category. 2. Duty free refers to a zero percent *ad valorem* tariff. 3. Remaining categories represent *ad valorem* tariff bands. 4. NAV = non ad valorem.

³ These tariff data pertain to South African tariffs on imports from other SADC countries. The tariffs applied by other SADC countries on South African products has declined at a slower pace.

⁴ See Report for [Selected Country Groups and Subjects](http://www.imf.org). www.imf.org. Retrieved 31 October 2018.

In addition to the SADC free trade agreement (FTA) and the TDCA, South Africa's continued integration into global markets is further evident by the signing of a number of other trade agreements: First, the Free Trade Agreement between the Southern African Customs Union (SACU) and the European Free Trade Association.⁵ The South African tariff structure for the EFTA free trade agreement is shown in Table 1. Liberalisation is evident in a declining mean applied tariff (7.06 percentage points), from 12.66 percent in 2007 to 5.6 percent in 2014. Second, preferential access to the US market (for some products) was granted under the African Growth and Opportunity Act (AGOA) signed in 2000. Third, in April 2016 a preferential trade agreement (PTA) between SACU and MERCOSUR came into effect.⁶ Fourth, and still under negotiation, is the African Continental Free Trade Area (AfCFTA), which aims to integrate the 55 markets that comprise the African continent. Fifth, South Africa, under SACU, is currently negotiating a PTA with India.

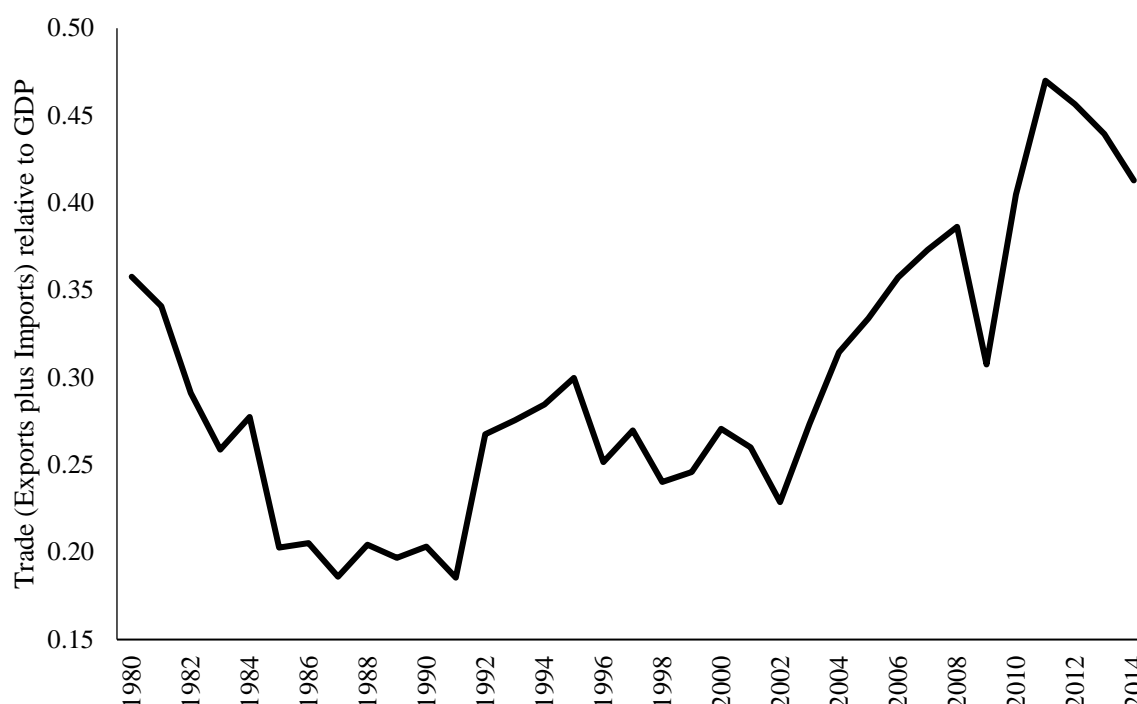
As such, South Africa has opened its market by both liberalising its tariff regime that applies to all WTO members (see MFN rates in Table 1) and offering preferential access to established trade partners, such as the EU and SADC. It has also gained access to key international markets, such as the USA, under AGOA, and the EU, under the TDCA.

This process of trade liberalisation and re-integration into the global economy is evident in the increased openness of the South African economy and the manner in which the economy reacts to global shocks.⁷ Figure 2 shows the openness of the South African economy, measured as the share of exports plus imports to GDP, for the period 1980 to 2014. In 1980, trade as a share of GDP stood at 35 percent and this rapidly declined over the course of the 1980s as the apartheid state faced trade sanctions.

⁵ In addition to South Africa, SACU includes, Namibia, Lesotho and Swaziland. EFTA includes Iceland, Lichtenstein, Norway and Switzerland.

⁶ MERCOSUR includes the states of Brazil, Argentina, Paraguay and Uruguay.

⁷ It is worth noting that South African macroeconomic policy in post-1994 period aligned more closely to the neo-liberal end of the macroeconomic toolkit spectrum. For example, South Africa adopted a floating exchange rate as well as inflation rate targeting. As such, the economy became increasingly liberalised and integrated into the global economy.

Figure 2: Openness of South African economy, 1980-2014

Source: Export, import and GDP data taken from Penn World Table 9.0 (Feenstra, Inklaar & Timmer, 2015)
 Notes: 1. Openness measure uses real GDP at current PPPs.

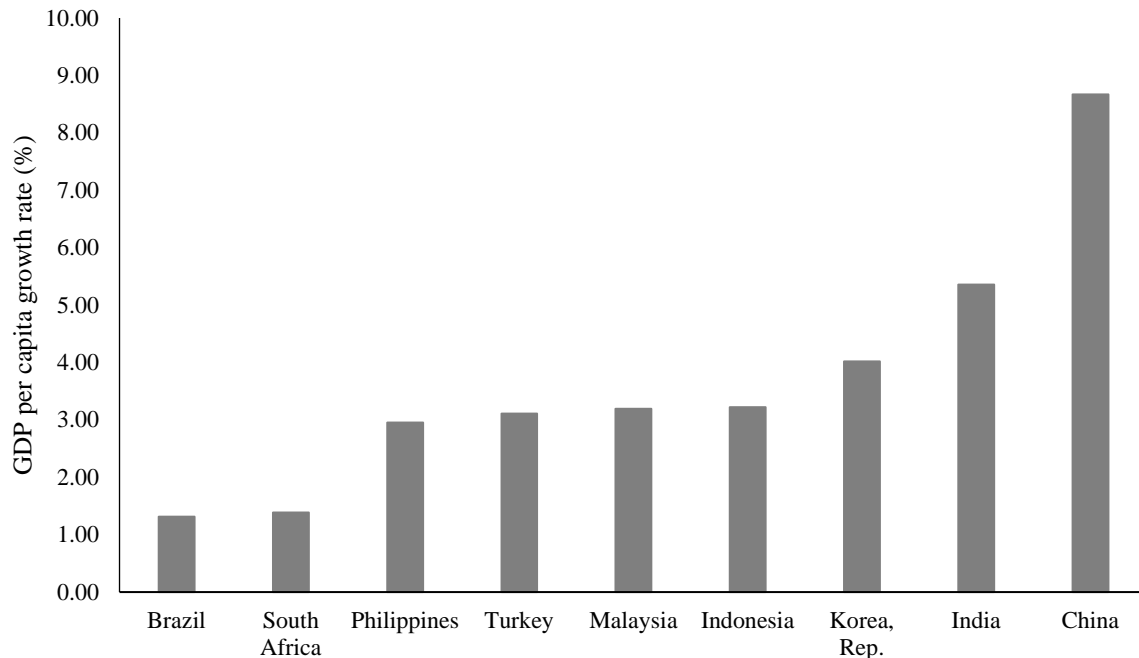
In the early 1990s, as the transition toward democracy began, openness increased from a low of 18.5 percent to 30 percent. Openness declined slightly and then stagnated as a share of GDP over the period 1995 to 2001. This may be linked to South Africa's exposure to the 1997 East Asian Financial Crisis and later the 2001 US dot com bubble recession. However, from 2001 onward, openness has trended upward to a high of 47 percent in 2011. Trades rising share of GDP over the period 2001 to 2007 can be explained by the implementation of a number of key trade agreements in the 2000s, such as the TDCA, AGOA and the SADC FTA. Furthermore, the early to mid-2000s is characterised by the global commodities super cycle and South Africa, being a natural resource abundant country, enjoyed its strongest period of economic growth over this period of increased commodity demand (see Figure 2).⁸ Openness declined to 30 percent in 2009 as a result of the global financial crisis.

When considering economic growth in the post-apartheid period, two key points emerge: First, economic growth, while positive, has been low over this period. Average annual GDP growth for the period 1994 to 2017 has averaged 2.8 percent. Comparing South Africa's economic performance over this period with a set of other middle-income countries further punctuates this lacklustre growth performance. Figure 3 shows the average annual growth of GDP per capita for a selection of middle-income countries (including Korea Republic) for the period 1994 to 2017. Apart from Brazil, South Africa underperforms relative to all these countries during its post-apartheid period. It's worth noting that this is a period where the process of globalisation has

⁸ The combination of primary product and resource-based manufacture exports account for two-thirds of total exports in 2014. Hence, South Africa export revenues are strongly influenced by global commodity demand.

accelerated, and many developing countries have enjoyed the economic benefits of being increasingly integrated into the global economy.

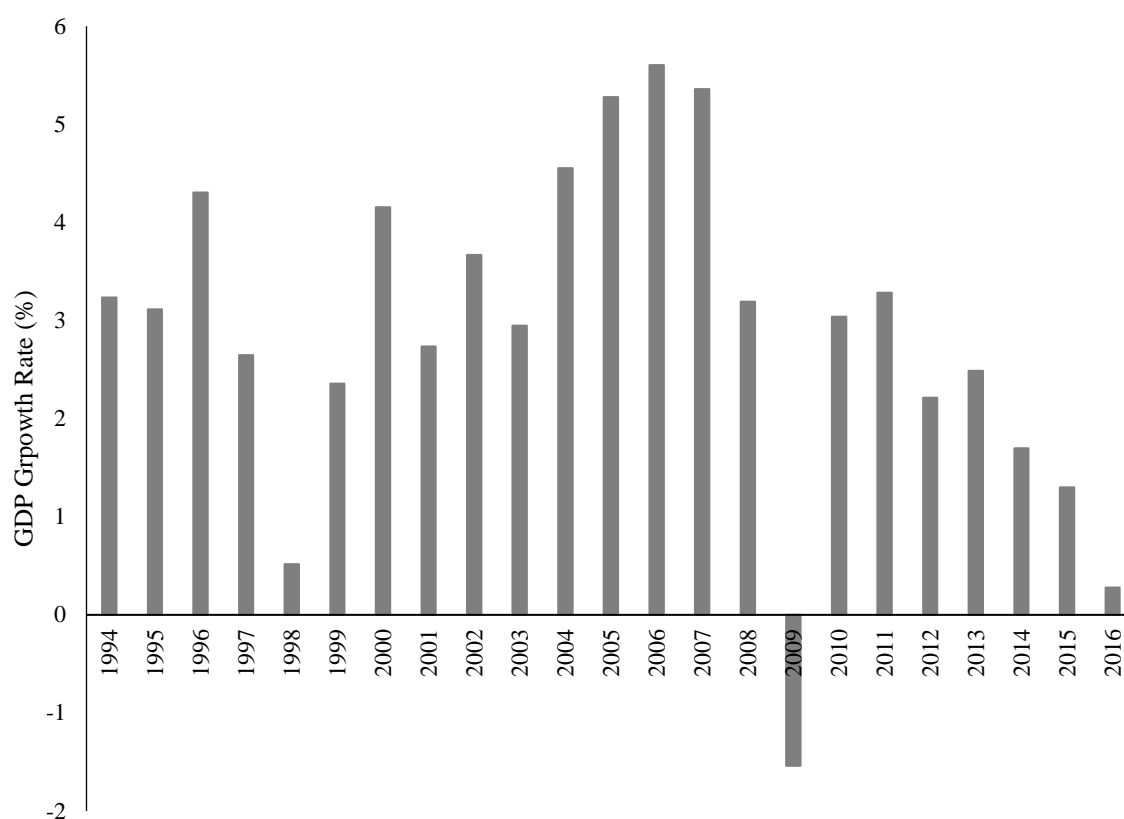
Figure 3: Average Annual Growth of GDP per capita by country, 1994-2017



Source: Own calculations using data from World Development Indicators (2017)

It has been noted that South Africa may be suffering from the effects of a long-run low-level economic growth trap (Bhorat, Cassim & Hirsch, 2014). Bhorat, Cassim and Hirsch (2014) contend that the economy's subdued growth performance is perpetuated by an export portfolio that remains concentrated in resource-based products, a schooling system that is of insufficient quality to supply the requisite skills demanded by industry, and low savings and investment levels. Further, they argue that South Africa's broader economic policy lacks coherence and that there is dire need for an industrial policy framework based on economic needs rather than interest group influence and policy path dependency.

As the post-apartheid South African economy has integrated into the global economy it has thus become increasingly subject to global shocks. This is evident in South Africa's economic growth performance in the post-1994 period. Figure 4 shows annual GDP growth rate figures for the South African economy over the period 1994 to 2016 and reveals the economy's response to a number of global shocks: Firstly, after achieving real GDP growth of 4.3 percent in 1996, growth declined to 2.6 and then 0.5 percent in 1997 and 1998, respectively. This decline in economic growth is explained by emerging market contagion effects arising from the 1997 East Asian Crisis.

Figure 4: Real Average Annual GDP Growth Rate, 1994-2016

Source: Own calculations using data from World Development Indicators (2017)

Notes: 1. Annual percentage growth rate of GDP at market prices based on constant local currency.

Secondly, the early- to mid-2000s marks South Africa's strongest period of economic growth in the post-1994 period.⁹ As mentioned earlier, the global commodities super cycle impacted strongly on South Africa's economic growth during this period. Thirdly, in the wake of the global financial crisis, South Africa experienced its first post-1994 recession in 2009.

The increased connectedness of the South African economy to the global economy is further evident in the rapid internationalisation of key South African companies, which are now common in the annual Forbes list of the world's 2000 largest public companies. Table 2 provides a list of these South African companies and companies with strong South African links that feature in the 2018 list.¹⁰ There are eleven South African companies and four companies with strong South African links that feature on the list. The majority of these companies fall within services industries, such as finance, banking, insurance, telecommunications and retail. Sasol, a manufacturer of chemicals, and Remgro, a conglomerate with investments in a variety of manufacturing industries, are the only two South African companies with a presence in industrial activities.

⁹ Real GDP growth averaged 4.3 percent over the period 2000 to 2007.

¹⁰ Typically, these companies had their origins in South Africa and at a later stage shifted their stock market listing to another country.

Table 2. South African Companies and Companies with South African Linkages in the Forbes 2000 List

Rank	Company	Industry	Employees	Market Value	Listed in
<u>Companies Listed in South Africa</u>					
376	Standard Bank Group	Regional Banks	54,558	\$28.5B	
470	FirstRand	Major Banks	44,916	\$30.3B	
509	Sasol	Diversified Chemicals	30,900	\$24.9B	
531	Naspers	Broadcasting & Cable	24,482	\$112.8B	
702	Sanlam	Life & Health Insurance	16,628	\$13.4B	
1069	MTN Group	Telecommunications	18,931	\$18.4B	South Africa
1325	Shoprite Holdings	Food retail	143,802	\$11B	
1559	MMI Holdings	Life & Health Insurance	17,230	\$2.7B	
1808	Remgro	Conglomerates	117,394	\$10.2B	
1832	RMB Holdings	Investment Services	22,100	\$8.9M	
1972	Bid Corp.	Investment Services	25,613	\$7.4B	
<u>Companies Linked to South African</u>					
487	Richemont	Specialty Stores	28,740	\$54.5B	Switzerland
775	Steinhoff International	Furniture & Fixtures	105,866	\$574M	Netherlands
108	BHP Billiton	Diversified Metals & Mining	60,644	\$133.2B	Australia
261	Anglo American	Diversified Metals & Mining	69,000	\$32B	United Kingdom

Source: Forbes (2018)

BHP Billiton and Anglo American are companies with South African links that feature in mining and metals industries. As South Africa has re-integrated into the global economy, these key South African companies have entered and expanded their global business interests.

In relation to other middle-income countries with firms on the Forbes 2000 list, South Africa features strongly, which points to the presence of globally competitive South African firms. Apart from China, and to a lesser extent India, where the number of firms and market value dwarfs that of other middle-income countries, South Africa has a relatively high number of large public companies with a correspondingly high cumulative market value.

Table 3: Number of Middle-Income Country Firms and their Cumulative Market, on Forbes 2000 List

	Number of firms	Cumulative Market value (US dollar Billion)
China	233	7,186
India	58	4,262
Russia	25	496
Brazil	19	476
South Africa	15	488
Thailand	16	248
Malaysia	13	168
Indonesia	6	139
Chile	9	95
Columbia	6	81
Turkey	10	60
Philippines	6	51
Vietnam	4	33
Argentina	3	26
Peru	2	25
Kenya	1	11

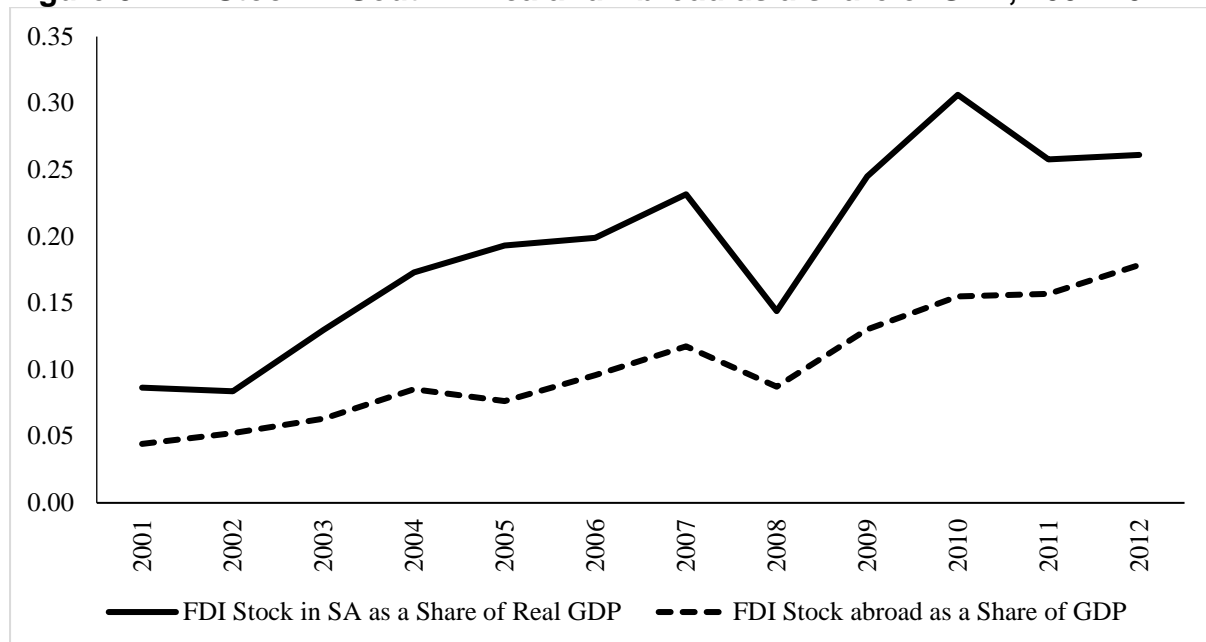
Source: Forbes (2018)

Based on the number of firms in the Forbes 2000, South Africa would be ranked 5th in relation to other middle-income countries, and based on cumulative market value, ranked 4th. Drawing on the information from Table 2, globally competitive South African firms are clustered in the services sector, particularly financial services.

South Africa's integration into the global economy is further evident in both the rising investment of foreign firms into the South African market and the investment of South African firms into foreign markets. Figure 5 provides the GDP shares for the stock of South African foreign direct investment (FDI) into foreign markets and the stock of foreign FDI in South Africa, for the period 2001 to 2012.¹¹ It is clear that both these ratios are rising over the period, with the former and latter growing at an average annualised rate of 13.8 and 16.6 percent per annum over the period.

¹¹ Bilateral FDI data from UNCTAD (2014) is only available for this period.

Figure 5: FDI Stock in South Africa and Abroad as a share of GDP, 2001-2012



Source: Own calculations using UNCTAD Bilateral FDI Statistics (2014) and GDP data taken from Penn World Table 9.0 (Feenstra, Inklaar & Timmer, 2015).

Notes: 1. GDP measured as real GDP at current PPPs (\$USm). 2. FDI stock measured in \$USm

As a share of GDP, foreign FDI stock in SA has grown from 8.6 percent in 2001 to 26.1 percent in 2012. Correspondingly, South Africa FDI stock abroad has increased from 4.4 percent of GDP to 17.9 percent over the period. As such, there is a rising incidence of foreign firms in the South African market and South African firms, as Table 2 above illustrates, in foreign markets. This all points to South Africa's continued integration into global markets.

The above makes it clear that in the post-1994 period in South Africa, the economy underwent a period of sustained liberalisation. This was marked by the liberalisation of trade policy, the negotiation and implementation of a variety of trade agreements, and rising levels of trade and openness. The upshot for the newly liberalised economy of course, is that such integration into the global economy renders it prone to external shocks. Indeed then, these shocks have occurred in an economy that has not been growing sufficiently, and arguably, is mired in a long-run, low growth trap. However, this is an economy that possesses strong outward orientated firms that are exploring foreign growth opportunities. The overarching challenge for the South African economy ultimately then, is the ability to generate higher levels of economic growth which is also more employment intensive.

3 Globalisation, Growth and the South African Labour Market

Economic growth levels have been insufficient to generate employment opportunities for a growing working-age population, and have thus resulted in South Africa's widely known long-term structural problem of exceedingly high unemployment levels. South Africa's re-integration into the global economy has impacted on the real economy, in particular, the labour market. This section examines the response of the South African labour market to an exogenous global shock in the form of the 2009 global financial crisis. Ultimately, the ensuing recession resulted in substantial job losses and given this, the section ends by examining the characteristics of the workers who lost their jobs. This in turn provides a context to the discussion on the active labour market policies in Section 4.

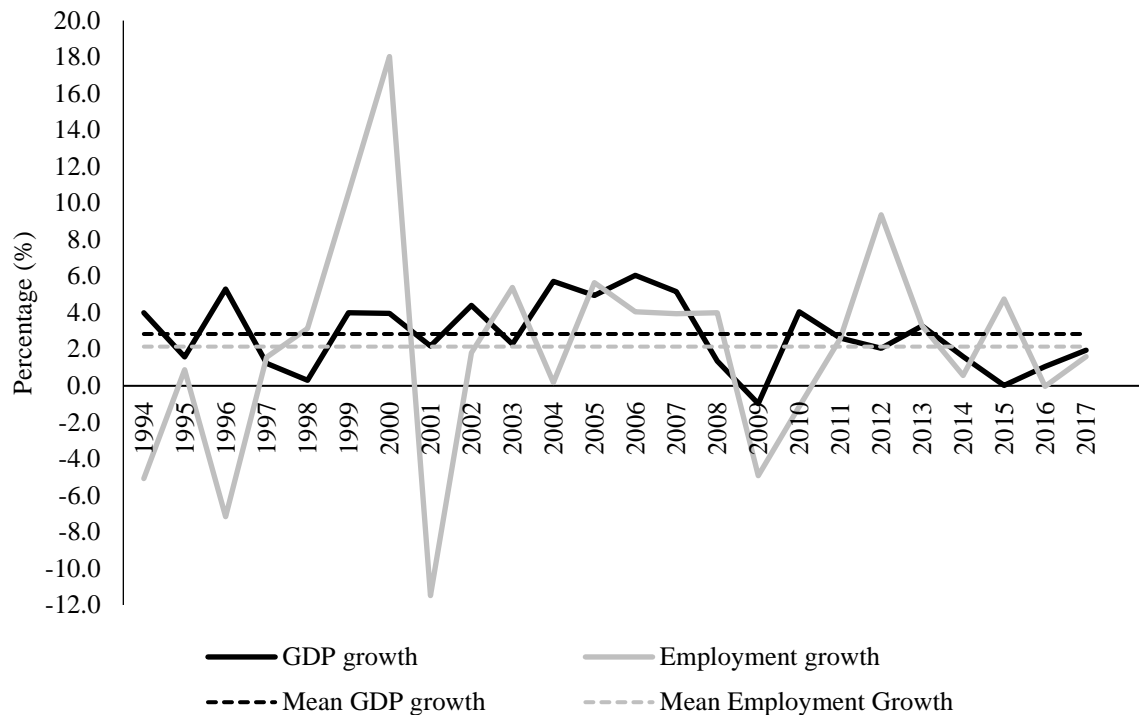
3.1 GDP and Employment Growth in the Post-1994 Period

The South African economy suffers from high levels of unemployment, and this has in essence been a function of the persistently low levels of economic growth, outlined above, experienced by the domestic economy.^{12,13} Figure 6 below shows annual GDP and employment growth rates for the post-1994 period. It is evident that real GDP growth – averaging 2.84 percent per annum (black dotted horizontal line) – has been faster than employment growth – averaging 2.15 percent per annum (grey dotted horizontal line) – over this period. Furthermore, Borat, Cassim and Hirsch (2014) note that employment growth is not very responsive to GDP growth. They find that for the period 1997 to 2012, a one percent increase in GDP results in a 0.69 percent increase in employment.

¹² The narrow unemployment rate averaged approximately 24 percent over the period 1994 to 2017 and is sitting at 27.1 percent in the second quarter of 2018.

¹³ Furthermore, as alluded to earlier, per capita economic growth has been comparatively low in relation to other middle-income economies.

Figure 6: GDP and Employment Growth, 1994 -2017



Source: Own calculations using data from StatsSA (2018b) and Kerr et al. (2017)

Notes: 1. GDP growth calculated from GDP at market prices, constant 2010 prices, seasonally adjusted.

Hence, whilst GDP growth has been too low to generate substantial employment gains, to further exacerbate the labour market challenge, employment growth has not been sufficiently responsive to economic growth.¹⁴ These two factors then: A low level of GDP growth and a tepid output-employment elasticity ultimately lie at the core of South Africa’s long-term structural unemployment problem.

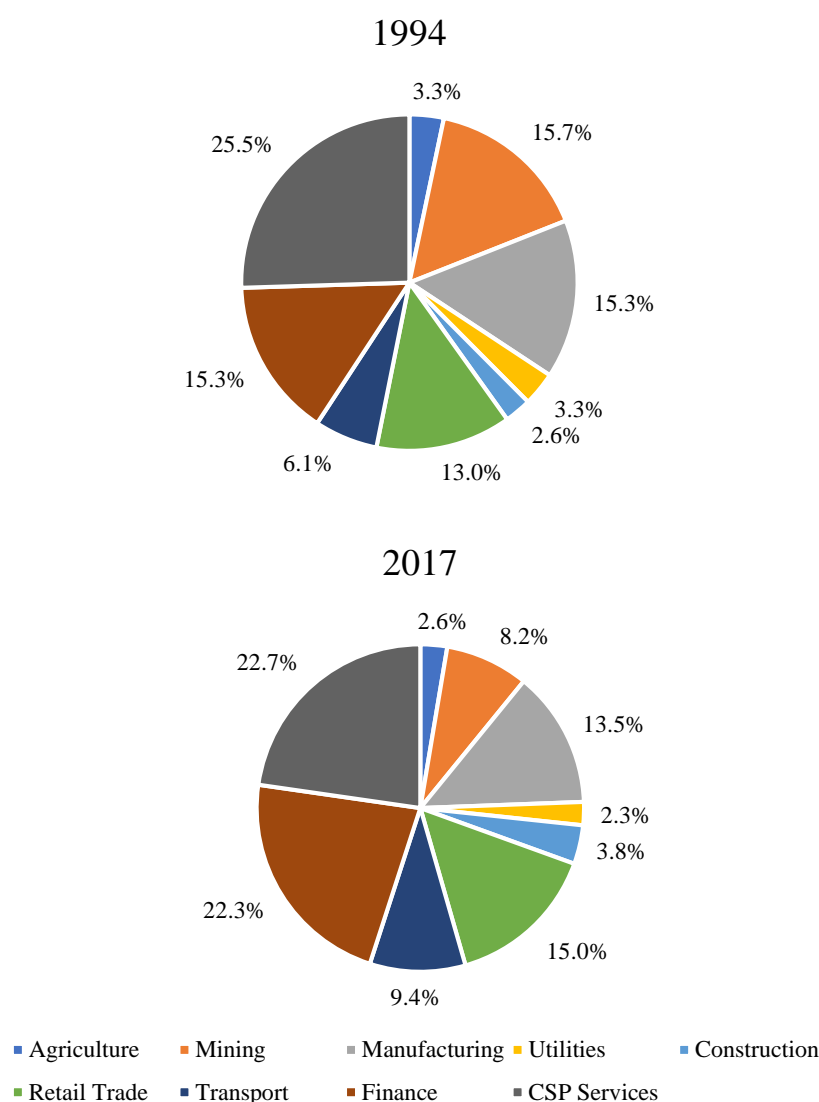
The evolving sectoral composition of the South African economy provides insight into the manner in which the economy has grown and the related employment outcomes. Figure 7 shows the industry contribution to GDP for the years 1994 and 2017. The broad sectoral theme is one of the growing importance of services and the declining importance of traditional industries, such as agriculture, mining and manufacturing.¹⁵

Although it has grown on average 1.6 percent per annum, Agriculture’s contribution to GDP has declined from 3.3 to 2.6 percent over the period. This has been accompanied by a more drastic decline in employment share for the sector – 13.1 to 5.6 percent.¹⁶ This indicates that agricultural production has become more capital-intensive, which is consistent with the commercialisation of the sector.

¹⁴ It is worth further noting that the spike in employment growth in 2000 is partly a function of a change in the survey instrument used to generate labour market measures for the South African economy. Casale, Muller and Posel (2005) contend that much of the rise in employment is a function of changes in data capture and definitions of employment over time, and thus not entirely a result of real economic changes.

¹⁵ Borhat, Rooney and Steenkamp (2018) describe the South African economy as a *de facto* services-based economy.

¹⁶ See Figure A 1 for corresponding graph for employment contribution by industry.

Figure 7: Contribution to GDP by Industry, 1994 and 2017

Source: Own calculations using data from StatsSA (2018b)

There has been a process of deindustrialisation of the South African economy, which has constrained the economy's ability to generate sustained large-scale employment growth. The mining industry has declined, on average, by 0.1 percent per annum over the period 1994 to 2017. As such, its share of GDP has declined by 7.5 percentage points, from 15.7 to 8.2 percent. In the case of manufacturing, the sector's contribution to GDP has deteriorated from 15.3 percent in 1994 to 13.5 percent in 2017. This has been matched by a declining employment contribution of 6.2 percentage points, from 16.8 to 10.6 percent over the period. This process of deindustrialisation, particularly in the case of manufacturing, has seen job growth choked off in what is typically an employment-intensive sector.

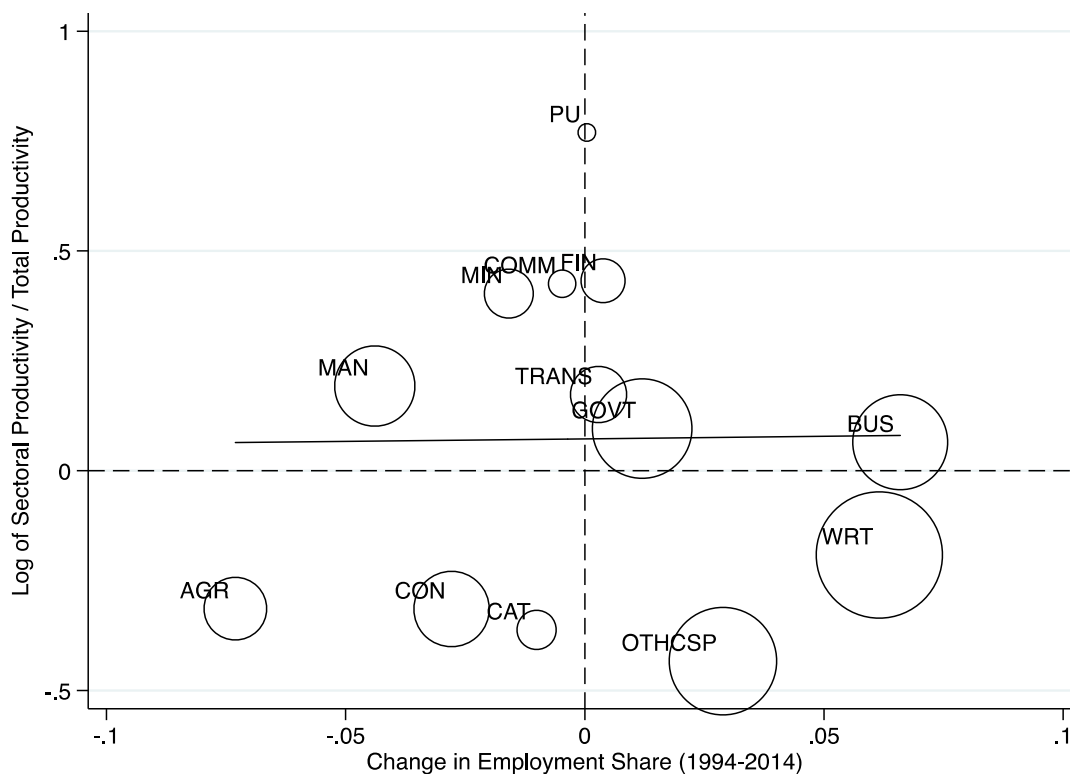
Growth in traditional sectors, such as manufacturing, has been replaced by growth in less labour-intensive services sectors, such as financial services¹⁷, and transport & communication services. Financial services experienced average annual growth of 4.2

¹⁷ Includes finance, insurance, business and real estate services.

percent, thus expanding its contribution to GDP 7 percentage points, from 15.3 to 22.3 percent. Similarly, in the case of transport and communication services, which grew by 4.5 percent per annum, on average, enlarged its contribution to GDP from 6.1 to 9.4 percent.

The changing composition of the South African economy can also be described as one where labour has shifted toward non-tradable services that are characterised by low relative productivity levels. This has had adverse economic growth implications, which in turn has adversely affected South Africa's long-term employment trajectory. This is depicted in Figure 8, which shows the correlation between the natural log of relative labour productivity and the change in total employment by industry.¹⁸ The market size for each industry represents the industry's share of total employment in 2014. The linear regression line indicates whether structural transformation has been growth inducing (positively sloped) or not (negatively sloped). Given that structural transformation is the shift of resources from low-productivity activities towards high-productivity activities, one would ideally want to see declining employment shares in low-productivity industries (bottom left quadrant) and rising employment shares in high-productivity industries (top right quadrant).¹⁹

Figure 8: Correlation between sectoral productivity and change in employment shares in South Africa (1994 to 2014)



Source: Authors' calculations based on Quantec (2016).

¹⁸ This graphic follows the methodology used by McMillan, Rodrik and Verduzco-Gallo (2014).

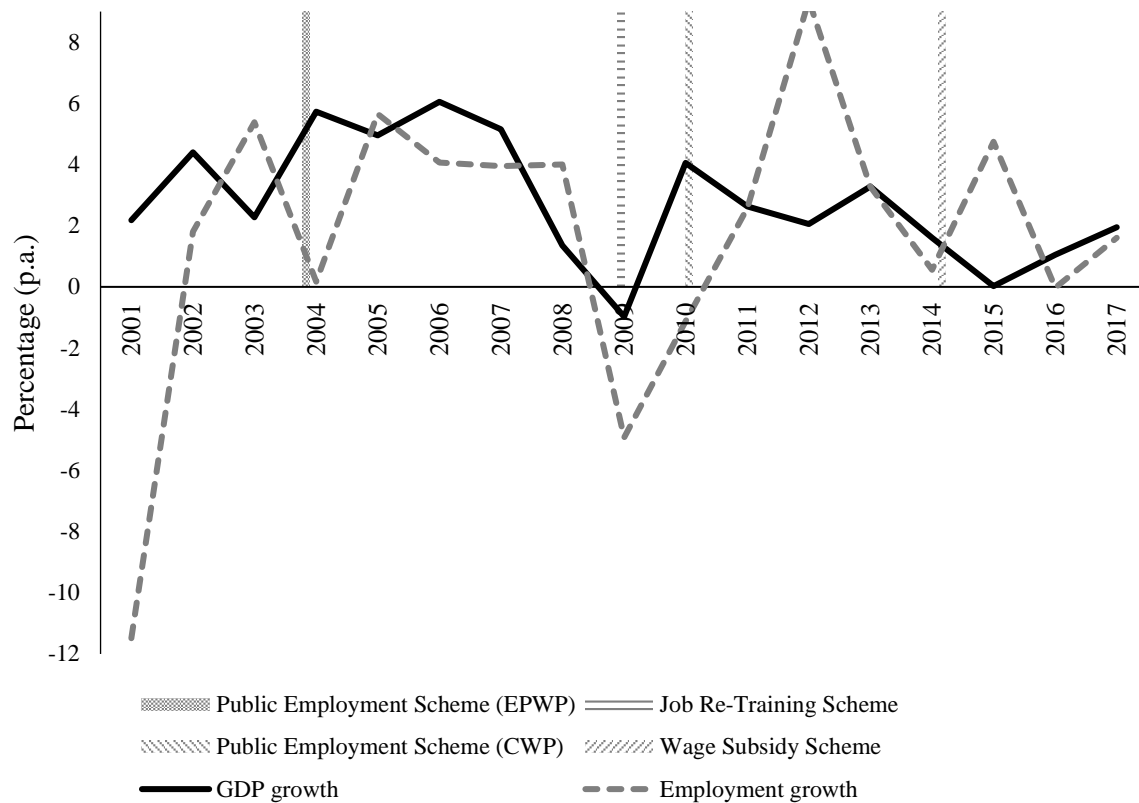
¹⁹ The 'East Asian' growth story is characterized by the shift of labour resources from low-productivity agricultural activities (bottom-left quadrant) toward high productivity manufacturing activities (top-right quadrant).

Notes: 1. Size of circles represents employment shares in 2014. 2. Coefficient of fitted is 0.11 (t-stat 0.04, p-value 0.97). 3. AGR = agriculture; MIN = mining; MAN = manufacturing; PU = utilities; CON = construction; CAT = catering and accommodation; WRT = wholesale and retail trade; TRANS = transport and storage; COMM = communication; FIN = finance and insurance; BUS = business services; OTHCSP = other community, social and personal services; GOV = government services. 4. Total productivity is defined as GDP divided by total employment (formal plus informal). Sectoral productivity is defined as sectoral contribution to GDP divided by sectoral employment.

Looking at Figure 8 a number of points emerge: First, there is no evidence of growth inducing structural transformation in the post-1994 South African economy. The linear regression line is flat and not statistically significant. This result is consistent with the notion, discussed earlier, that the South African economy seems stalled in a long-run low level growth trap. Second, labour resources have shifted away from high productivity tradable industries, such as mining and, more importantly manufacturing. Arguably, the decline of the manufacturing sector and the deindustrialisation of the South African economy is a key factor explaining the economy's subdued economic growth. This in turn has constrained long-term employment growth. Third, there is evidence of a shift of labour resources toward high productivity services industries, such as financial and business services. However, as detailed in Bhorat, Rooney and Steenkamp (2018), this is subdued by the fact that a large share of employment growth in business services arises from the growth of Temporary Employment Services (TES). Fourthly, there is a large shift of labour resources toward low productivity services industries, such as wholesale and retail trade, and community, social and personal services. Furthermore, a large share of the employment growth in the wholesale and retail trade industry is in the informal sector (Bhorat, Rooney & Steenkamp, 2018).

In context of both the long-term structural problem of subdued economic growth, and immediate crises resulting from increased exposure to global shocks, policy makers have undertaken a number of active labour market policy interventions. These are depicted in Figure 9, which shows GDP and employment growth for the period 2001 to 2017, and the year in which these policies were introduced. In order to address the underlying long-run constraints to growth and employment of the South African economy, three ALMPs have been implemented:

Figure 9: Labour Market Adjustments in South Africa - A Timeline



Source: Own calculations using data from StatsSA (2018b) and Kerr et al. (2017)

Notes: 1. GDP index based on GDP at market prices, constant 2010 prices, seasonally adjusted. 2. EPWP = Expanded Public Works Programme; CWP = Community Works Programme.

In 2004, a public employment scheme, known as the Expanded Public Works Programme, was introduced. This is a labour-intensive demand side policy aimed at providing income, and therefore poverty relief, through temporary work placement for the unemployed. In 2010, another public employment Scheme, the Community Works Programme, was introduced with the aim of creating an employment safety net for the poor in order to improve their standard of living, while simultaneously improving the quality of life of people living in the community.

In 2014, the wage subsidy scheme, launched formally as the Employment Tax Incentive, was introduced as a demand-side labour market policy in order to address the social and economic problem of youth unemployment. The incentive aims to stimulate the employment of 18- to 29-year olds in the formal sector by reducing the perceived risks and costs associated with hiring younger workers, who tend to be inexperienced. The policy takes the form of a tax incentive, with the tax burden owed to the national revenue authority decreasing for every new qualifying employee hired by the firm.

While the aforementioned ALMPs were designed to address long-term structural features of the South African economy, the job re-training Scheme (known as the Training Layoff Scheme), was introduced in 2009 to address the adverse employment impacts resulting from the 2009 global financial crisis. The purpose of the scheme was to reduce job losses arising out of the financial crisis. The scheme also aimed to retrain

workers as an investment in human capital, to be utilised once the economy had recovered.

Two key points emerge from this section: Firstly, the process of deindustrialisation, and the inability of the South African economy to experience growth-inducing structural transformation, has constrained economic and, thus employment growth. This is consistent with the notion that the South African economy is suffering from a long-run low level growth trap. In order to address this long-term structural constraint, policy makers have in part responded with domestic labour adjustment policies in the form of ALMPs. Secondly, the South African economy rapidly re-integrated into the global economy following the demise of apartheid, and has thus readily exposed itself to global exogenous shocks, such as the 2009 financial crisis. The immediate crisis emerging from this global shock led policy makers to introduce the job re-training scheme. As such, ALMPs have been introduced to address both long-term structural problems as well as immediate crises. The next section, focuses on the latter, and consider the South African labour market response to the 2009 financial crisis.

3.2 South African Labour Market Response to 2009 Financial Crisis

This section examines trends in employment and unemployment in the wake of the recession that emerged from the 2009 global financial crisis. The section starts by providing an empirical profile of key labour market indicators pre- and post-recession. This is summarised in Table 4. The first period – quarter four of 2008 – represents ‘peak’ employment before the effect of the recession on employment began. The second period – quarter three of 2010 – represents the lowest level of employment – the ‘trough’ – arising from the recession. The ‘peak’ and ‘trough’ is evident in Figure 11 (solid grey line). Comparing the various labour market indicators between the two points in time provides an indication of the impact of the recession on the labour market.

Table 4: Labour Market Aggregates During the Financial Crisis, 2008Q4 to 2010Q3

	2008:4	2010:3	Absolute change	Percentage change
GDP growth rate (quarter on quarter)	-2.3	4.5	6.8	-295.7
<u>Labour market aggregates</u>				
Working age population	32,170,346	33,271,805	1,101,459	3.4
Total Employment	14,797,266	13,678,856	(1,118,410)	-7.6
Formal	10,920,245	10,089,137	(831,108)	-7.6
Informal	2,499,364	2,372,395	(126,968)	-5.1
Private households	1,377,658	1,217,323	(160,334)	-11.6
Narrow unemployment	4,049,409	4,655,285	605,877	15.0
Narrow labour force	18,846,675	18,334,142	(512,533)	-2.7
Expanded unemployment	5,239,538	6,734,976	1,495,438	28.5
Expanded labour force	20,036,804	20,413,832	377,028	1.9
Discouraged work seekers	1,190,129	2,079,691	889,562	74.7
<u>Labour force participation rate</u>				
Narrow LFPR	0.59	0.55	(0.035)	-5.9
Expanded LFPR	0.62	0.61	(0.009)	-1.5
<u>Unemployment rate</u>				
Narrow unemployment rate	0.21	0.25	0.039	18.2
Expanded unemployment rate	0.26	0.33	0.068	26.2
<u>Employment rate</u>				
Employment rate	0.46	0.41	(0.049)	-10.6
<u>Hours worked</u>				
Mean hours worked per week	45.06	44.41	(0.650)	-1.4

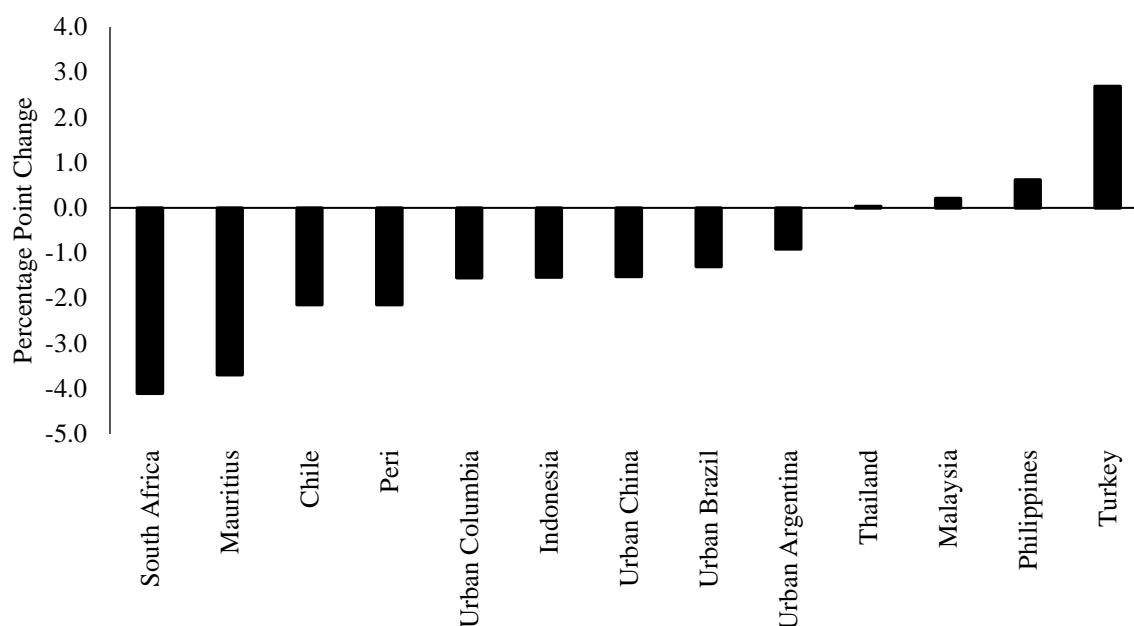
Source: Own calculations using data from Statistics South Africa. Quarterly Labour Force Survey 2008 Quarter 4, and Quarterly Labour Force Survey 2010 Quarter 3.

Notes: 1. Formal/informal sector defined using 'enterprise definition' from Statistics South Africa. 2. Narrow unemployment defined as those willing and able to work and actively searching for a job in the last 7 days (i.e. searching unemployed). 3. Expanded unemployment includes searching unemployed and discouraged work seekers (i.e. non-searching unemployed).

It is evident in Table 4 that just over 1 million jobs were lost in the South African economy as a consequence of the global financial crisis. This represents approximately 6 percent of South Africa's narrow labour force in 2008. Absolute job losses were greatest in the formal sector (831,108 jobs), followed by losses in private households or domestic workers (160,334 jobs), and the informal sector (126,968 jobs). Relative jobs losses were greatest in private households, declining at 11.6 percent per annum. This declining employment translates into an employment rate that declined five percentage points during the recession.

Drawing on work by Khanna, Newhouse and Paci (2014) it appears that South Africa was one of the countries hardest hit, in terms of employment, by the crisis. Figure 10 shows the impact on employment for a selection of middle-income countries. The graph shows the average employment growth rate in post-crisis period relative to pre-crisis period in percentage points by country.

Figure 10: Impact of Financial Crisis on Employment in Selected Middle-Income Countries



Source: Adapted from data from Khanna, Newhouse & Paci (2014).

Notes: 1. Y-axis is measuring the change in average growth rate in post-crisis period relative to pre-crisis period in percentage points.

It is evident that South Africa experienced the largest employment growth decline across the sample of selected countries.²⁰ It is worth considering ex-post then, whether South Africa's sole response to the crisis, in the form of the job re-training scheme, was adequate in light of these massive employment losses.

The manner in which employment has evolved during the recession varies across the formal and informal sectors (Verick, 2012), and this is depicted in Figure 11. Figure 11 depicts the trends in total, formal and informal employment during the period of the recession by indexing the employment levels. The start of the recession – defined as the first quarter recording negative GDP growth – is identified by the vertical line at quarter 4 of 2008. It is evident that informal sector employment responded earlier to the recession – declining strongly in the second quarter of 2008 – relative to formal sector employment, which started to decline in the first quarter of 2009. Although smaller in level, the decline in informal employment was also more rapid than the corresponding decline in formal employment.

²⁰ It is worth noting that when consulting Table 2A.1 of Khanna, Newhouse and Paci (2014), only five of forty-four other developing countries experienced larger declines in employment growth rates.

Figure 11: Response of Employment to Financial Crisis – 2008Q1 to 2011Q4



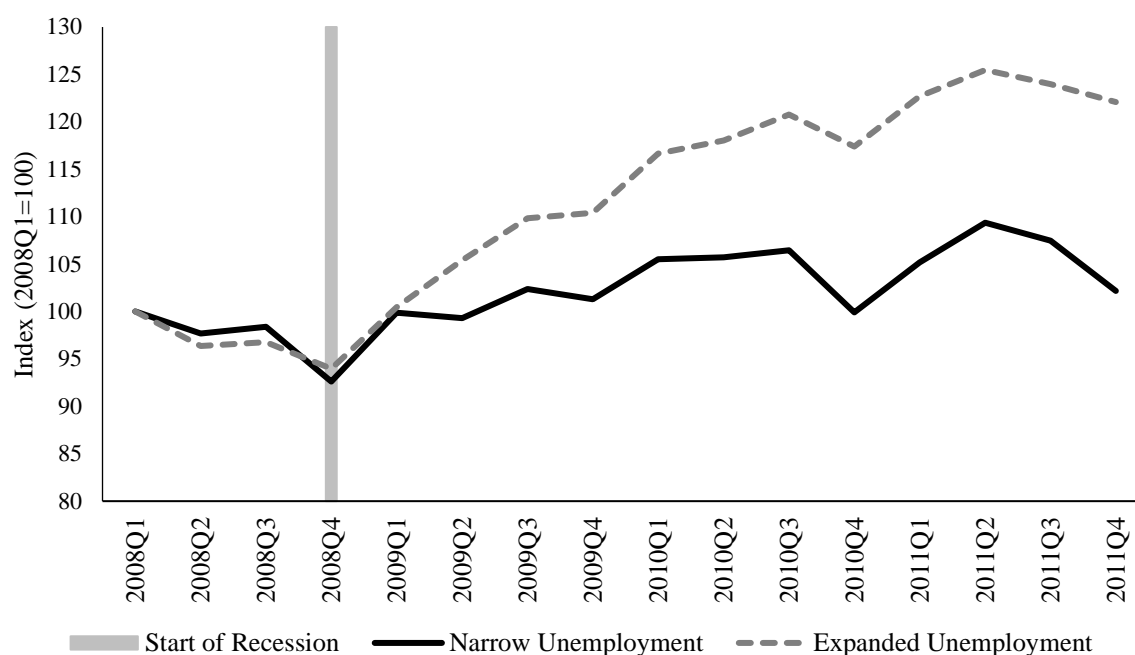
Source: Own calculations using data from Statistics South Africa. Quarterly Labour Force Survey 2008 Quarter 1 to Quarterly Labour Force Survey 2011 Quarter 4.

Notes: 1. Formal/informal sector defined using 'enterprise definition' from Statistics South Africa. 2. Index calculated from employment levels.

Informal employment appeared to recover earlier and more rapidly than employment in the formal sector, when informal employment began to rise from the third quarter of 2009. However, informal employment started to decline again from the second quarter of 2011. Verick (2012) notes that the response of employment across the formal and informal sectors during the recession is contrary to that expected in developing countries, where formal sector job losses are normally accompanied by the rise in informal sector employment.

These jobs losses translated into a sharp rise in the national unemployment levels, with the narrow unemployment rate rising four percentage points from 21 to 25 percent. The searching unemployed grew by 605,877 individuals. When looking at the expanded definition for unemployment and considering the non-searching unemployed or discouraged work seekers, the impact of the recession on unemployment is magnified. The expanded unemployment rate rose seven percentage points from 26 to 33 percent.

Figure 12: Response of Unemployment (Narrow and Expanded) to the Financial Crisis – 2008Q1 to 2011Q4



Source: Own calculations using data from Statistics South Africa. Quarterly Labour Force Survey 2008 Quarter 1 to Quarterly Labour Force Survey 2011 Quarter 4.

Notes: 1. Narrow unemployment defined as those willing and able to work and actively searching for a job in the last 7 days (i.e. searching unemployed). 2. Expanded unemployment includes searching unemployed and discouraged work seekers (i.e. non-searching unemployed).

The level of unemployment grew by approximately 1.5 million individuals when using the expanded definition of unemployment (approx. 7.5 percent of the expanded labour force), and this was driven by the rise in the level of discouraged work seekers (889,562 individuals). This increase in discouraged work seekers is further evident in Figure 12, where the gap between the index for narrow unemployment and that for expanded unemployment grows over time. This rise in discouraged work-seekers reflects the second and third round effects of a decline in labour demand affecting workers search patterns and behaviour.²¹

From the above, it is evident that over a million jobs were lost during the recession resulting from the 2009 financial crisis. Drawing on work from Khanna, Newhouse and Paci (2014), South Africa suffered amongst the highest relative employment losses for the sample of middle-income countries. Employment losses were highest in the formal sector of the South African economy. In terms of unemployment, the impact of the recession was magnified when considering the rise in number of discouraged work-seekers – approx. 890,000 individuals or 4.4 percent of the expanded labour force. The nature of job losses though should also feature in the targeting of ALMPs aimed at minimising the adverse impacts of the recession. Therefore, the next section considers the characteristics of those who lost their jobs during the recession.

²¹ Arguably, this is exacerbated in the South African context where the informal sector does not provide an alternative source of employment for individuals who have either lost their job or just entered the labour force.

3.3 Characteristics of Jobs Lost During 2009 Financial Crisis

This section examines the characteristics of the individuals who lost their jobs during the recession. A sample of the unemployed assumed to have lost their jobs during the recession is generated.²² The characteristics of these individuals are then compared to the characteristics of individuals who retained their jobs during the recession.²³ A ratio of the share of individuals who lost their job during the recession relative to those who retained their job for each characteristic is included. This section provides empirical evidence on which cohorts of the labour market were worst hit and this should provide a basis for the discussion on the labour market responses by policy-makers. For example, South Africa's extraordinarily high youth unemployment rates were further exacerbated during the financial crisis – leading to specific labour market policy interventions designed and focused on young South Africans.

Table 5 provides a comparison of the characteristics of individuals who lost their job during the recession relative to those who retained their jobs. Individuals who are black or coloured are more likely to have lost their jobs during the recession in relation to white and Indian individuals. With respect to gender, neither women nor men were more or less likely to have lost their job during the recession.

²² Using QLFS data from the third quarter of 2010 – the 'trough' – data from question 3.13 of the QLFS is employed, which asks how long it has been since an individual last worked. If this period was less than a year, it is assumed that they had lost their job during the recession.

²³ It must be noted that within the sample of employed one has no means of determining whether they retained their job during the recessionary period or entered into employment during this period.

Table 5: Characteristics of individuals who lost their job during the recession

	Lost job during recession	Remained Employed	Ratio
Black	0.836 (0.008)	0.698 (0.003)	1.20
Coloured	0.125 (0.007)	0.112 (0.002)	1.12
Indian	0.011 (0.003)	0.038 (0.002)	0.29
White	0.028 (0.005)	0.151 (0.003)	0.18
Male	0.578 (0.012)	0.571 (0.004)	1.01
Female	0.422 (0.012)	0.429 (0.004)	0.98
Youth	0.459 (0.012)	0.243 (0.004)	1.88
Non-youth	0.541 (0.012)	0.757 (0.004)	0.72
No schooling	0.030 (0.003)	0.028 (0.001)	1.05
Primary education	0.202 (0.010)	0.136 (0.003)	1.49
Secondary Education (Incomplete)	0.453 (0.012)	0.325 (0.004)	1.39
Secondary Education (Complete)	0.242 (0.011)	0.302 (0.004)	0.80
Tertiary Education (Diploma/Certificate)	0.054 (0.006)	0.122 (0.003)	0.45
Tertiary Education (Degree)	0.011 (0.002)	0.073 (0.002)	0.15

Source: Own calculations using data from Statistics South Africa – Quarterly Labour Force Survey 2010 Quarter 3.

Notes: 1. Youth defined as those aged 15 to 29. This is consistent with the definition applied for the Employment Tax Incentive. 2. Standard-errors in parentheses. 3. The ratio measures that share of individuals with a certain characteristic that lost their job during the recession relation to individuals with the same characteristic who kept their job.

With respect to education, individuals with higher levels of education were relatively more likely to retain their jobs during the recession, whereas individuals with low levels of education were relatively more likely to lose their jobs during the recession. The youth have a greater propensity to lose their job rather than retain their job during the recession. This is consistent with the youth being hardest hit during the recession, with the youth unemployment rate rising drastically over the period.²⁴ In summary, the

²⁴ The youth unemployment rate increased from 31 percent in the 4th quarter of 2008 to 64 percent in the 3rd quarter of 2010. Youth are defined as those aged 15-34.

typical individual most likely to have lost their in the recession was an African male, aged between 15 and 34, with an incomplete secondary education.

Table 6 provides a comparison of the characteristics of the jobs that were lost during the recession relative to those retained during the recession. Individuals employed in agriculture, manufacturing, construction, and private households (i.e. domestic work) were most likely to lose their jobs during the recession. These four industries shed approximately 124,000, 231,000, 115,000 and 179,000 jobs, respectively.

Table 6: Characteristics of jobs that were lost their job during the recession

	Lost job during recession	Remained Employed	Ratio
Agriculture	0.088 (0.006)	0.049 (0.002)	1.78
Mining	0.010 (0.002)	0.024 (0.001)	0.40
Manufacturing	0.116 (0.008)	0.133 (0.003)	0.87
Utilities	0.005 (0.002)	0.007 (0.001)	0.67
Construction	0.213 (0.010)	0.082 (0.003)	2.61
Trade	0.195 (0.010)	0.226 (0.004)	0.86
Transport	0.040 (0.005)	0.059 (0.002)	0.68
Financial Services	0.109 (0.009)	0.124 (0.003)	0.88
Community Services	0.093 (0.007)	0.206 (0.003)	0.45
Private	0.132 (0.008)	0.089 (0.002)	1.49
Tradable	0.213 (0.010)	0.207 (0.003)	1.03
Non-Tradable	0.787 (0.010)	0.793 (0.003)	0.99
Skilled	0.068 (0.007)	0.242 (0.003)	0.28
Semi-Skilled	0.489 (0.012)	0.473 (0.004)	1.03
Unskilled	0.443 (0.012)	0.286 (0.004)	1.55

Source: Own calculations using data from Statistics South Africa – Quarterly Labour Force Survey 2010 Quarter 3.

Notes: 1. Standard-errors in parentheses. 2. The ratio measures that share of individuals with a certain characteristic that lost their job during the recession relation to individuals with the same characteristic who kept their job. 3. Industry for employed defined as industry currently working in, whereas industry for those who lost their jobs is defined as the previous industry that they worked in. 4. SIC industry categories are also grouped into tradable and non-tradable industries. Tradable include mining, manufacturing and agriculture. Non-tradable include utilities, construction and services. 5. Occupations grouped into skilled, semi-skilled and unskilled groupings.

Individuals employed in utilities, mining and community services were least likely to lose their jobs during the recession. The estimates also indicate that one is neither

more nor less likely to have lost one's job during the recession if one worked in a tradable or non-tradable sector. With respect to skills, individuals in skilled occupations were least likely to have lost their jobs during the recession, whereas individuals in unskilled occupations were more likely to have lost theirs. This may be driven by the large number of jobs lost in the agriculture and private household industries (i.e. domestic work), which are typically unskilled jobs.

It is evident in this section that individuals most at risk of unemployment and job loss are those considered vulnerable in the South African labour market. These individuals are young, they are without a complete secondary education and tend to work in unskilled or semi-skilled occupations. South Africa's extraordinarily high youth unemployment rates were further exacerbated during the financial crisis (increased to 64 percent in the 3rd quarter of 2010). Therefore, the shocks, that South Africa is increasingly exposed to, have an impact on and interact with the long-run structural challenges of growth, in this case rising youth unemployment. As such, active labour market policies – particularly in the form of the wage subsidy scheme – have targeted the youth. This is discussed in greater detail in the section to follow.

4 Labour Market Responses

This section provides an overview of South Africa's demand-side labour market responses to high structural unemployment, exacerbated by the financial crises of 2008/09. We evaluate three prominent active labour market policies: A job re-training scheme, a public employment scheme, and within this an employment guarantee scheme, and finally a wage subsidy scheme. The job re-training scheme was designed as a short-run policy response specifically to counteract unemployment driven by the 2008/09 financial crises. The public employment and wage subsidy programmes are long-term policy responses to unemployment as a structural constraint in an economy unable to generate sufficient levels of sustainable employment. All three programmes actively aim to expand (or retain) employment for marginalised groups, including low-paid and low-skilled individuals, youth, women and those with disabilities.

Due to lack of data, we provide a descriptive overview of expenditure and workers affected under the public employment scheme, the employment guarantee scheme and the job retraining scheme based on the available reports. We also provide a descriptive overview of the wage subsidy scheme, and extend the analysis by utilising a newly available matched employer-employee panel dataset. We conduct an econometric analysis of the extent to which the wage subsidy scheme has created jobs since its inception in 2014. We also evaluate whether the incentive has resulted in job displacement of comparable but ineligible individuals.

4.1 The Job Re-training Scheme

In September of 2009 a jobs re-training scheme, officially termed the Training Layoff Scheme, was launched as a direct, short-run, demand-side policy response to the financial crises of 2008/09. While the primary objective of the scheme was to reduce job losses arising out of the financial crises, the programme also aimed to retrain workers as an investment in human capital, to be utilised once the economy had recovered. An initial \$170 million²⁵ was earmarked for this programme. The job re-training scheme aims to alleviate the wage bill of the firm by removing workers for a period of training, while keeping the worker's employment contract in place. For the training layoff period – up to three months with a possible three-month extension – employees forgo their wages and are instead given a training allowance. The scheme is coordinated by a number of government agencies, responsible for programme oversight as well as facilitating and finding the training component of the scheme.

The Jobs Re-Training Scheme was initially aimed at employers in distress as a direct result of the financial downturn, and who were considering retrenchments due to that financial distress. A key requirement of the fund was that workers who participated in the scheme retained their employment contracts, with the employer required to carry the cost of a basic package of social benefits. The scheme is specifically aimed at both vulnerable workers and employers, and is strictly voluntary on the part of both parties. In order to target those workers most vulnerable to retrenchment, only those earning

²⁵ An exchange rate of 0.071 US Dollars to 1 South African Rand was used throughout this paper, accurate as of 05 November 2018.

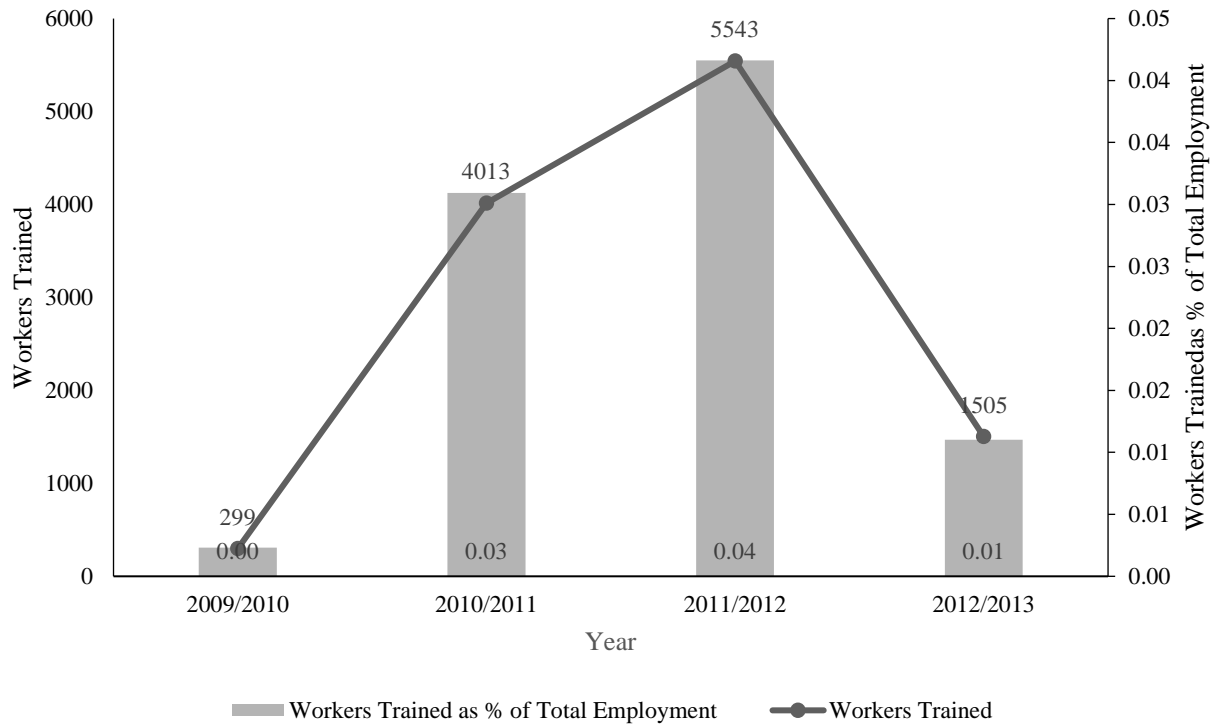
less than \$12,780 per year are eligible to participate. The training allowance is set at 50 percent of the employee's basic salary, capped at a threshold of \$443 per month. As far as possible, the jobs re-training scheme aimed to train workers in skills which are linked to their employer's needs in order to enhance the performance of the business under improved economic conditions.

There is very little data available on this scheme, and certainly no recent verifiable data.²⁶ One data source from September 2009 to November 2010 indicated that 65 cases entered the scheme for review during this time, affecting a total of 9,344 workers (Roskam & Howard, 2010). Of these, 16 cases were not recommended by the implementing agency and 21 cases were withdrawn. Overall, then, 28 cases were taken up by the job re-training scheme, affecting a total of 7,142 workers. While the cases came from a number of sectors, most were in the manufacturing sector. One-quarter of all requests came from the motor components industry, and 14 percent were from the clothing and textile industry (Roskam & Howard, 2010). It should be noted that while case studies indicate that at least some of the 7,142 workers had their jobs saved, there is no real indication on the overall number of jobs saved (as opposed to workers trained) under the scheme.

Figure 13 and Figure 14 give an overview of workers trained and expenditure under the job re-training scheme, using an alternative data source for the years 2009 to 2013. To date, based on the available data, only 11,360 workers were trained through the scheme, and there is no data available on whether these workers successfully retained their jobs after training. As of 2012/13, only \$8.5 million of the initial \$170 million fund allocated to the training allowances had been spent. Including the cost of training, the total expenditure of the scheme was \$11.1 million. This translates into effectively zero percent of government expenditure and GDP in every year.

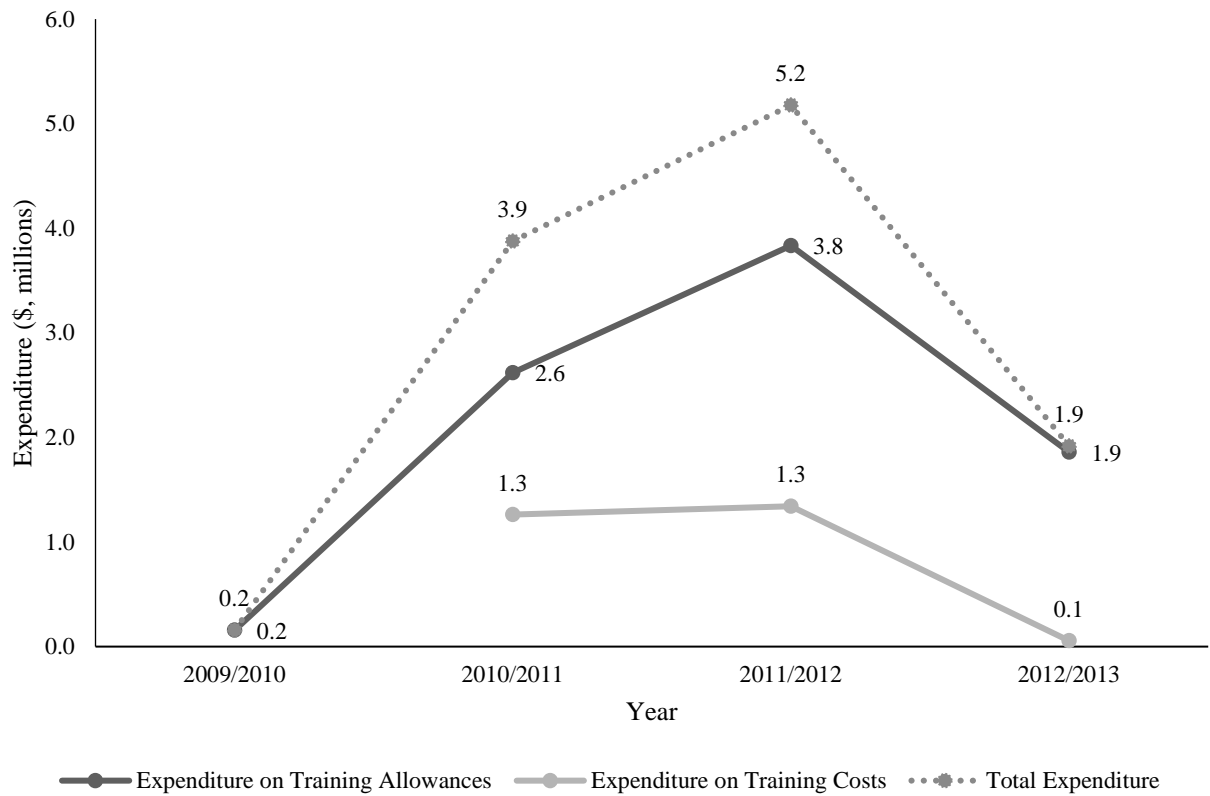
²⁶ Verbal communication from former staff of the implementing agency indicates that there has been almost no activity through the scheme in recent years.

Figure 13: Workers Trained under the Job Retraining Scheme



Source: NSF (2013).

Figure 14: Expenditure under the Job Retraining Scheme



Source: NSF (2013).

The efficiency and sustainability of the re-training scheme in combatting retrenchment must be assessed in comparison to both the overall goals of the scheme and the other demand-side policy options for job retention. The key challenges of the job re-training scheme include the following:

Low Numbers of Workers Benefiting from the Scheme

A key criticism of the scheme was that the number of workers trained was minor when compared with the number of job losses arising out of the financial crises. Only 11,360 workers were re-trained as a result of this scheme. This figure is negligible in comparison with the one million jobs lost under the financial crises, as discussed in Section 3.2. In addition, there is no indication of whether re-trained workers retained their employment after retraining

The Complex Multi-party Design of the Scheme

This resulted in significant delays and bureaucratic hurdles for the employers wishing to utilise the scheme. Given that the scheme was envisioned as a short- to medium-run job saving solution aimed at firms already in distress, a job re-training scheme should be easy to access and fast to implement in order to be maximally effective. Even a six-month delay in implementing the training scheme could be too late to be effective. In particular, the implementing agency emphasised that a key challenge was that there was no overall authority accountable for the scheme with the power to put the necessary interventions in place in a timely manner. Relatedly, poor communication between the implementing partners led to inconsistent information being disseminated to those wishing to take up the scheme and an overall lack of effective monitoring and evaluation.

Inadequate Capacity of the Training Agency to Effectively Implement the Scheme

Once an application is approved by the implementing agency, the training agency is required to coordinate the training requirements of the employer. There have been substantial delays in this process, as well as in reporting on the implementation and outcomes of the training. This has also fed into the experience of the job re-training scheme by the worker, as difficulties in administering payments has in some cases caused delays in payment of the training allowance.

Lack of Understanding of the Scheme by Potential Users

Low uptake of the scheme has been linked to lack of understanding in how the scheme operates, despite an active policy campaign. This is particularly true for small businesses that displayed very low uptake rates of the scheme. While this is linked to inadequate engagement with social partners, it could also be due to the unprecedented nature of the scheme. On the former, it is possible that organised labour did not make a concerted effort to drive the scheme due to the low value of the training allowance.

Risk to the Worker

Workers participating in the job re-training scheme are asked to sacrifice 50 percent of their earnings, a substantial portion considering that these workers already tend to be in low-skilled and positioned in low-paid jobs. In addition, participating in the scheme does not guarantee severance pay. Therefore workers may prefer to take retrenchment along with the associated severance pay, rather than risk participating

in the job re-training scheme, which does not provide any real assurance that their job will be retained.

Overall, Roskam and Howard (2010) find that the job re-training scheme suffered from serious problems in terms of both design and implementation. However, they stress that as the first scheme of its type to exist in South Africa, important lessons can be drawn from both its successes and failures. The fact that the job re-training scheme is designed to keep the employment contract in place is highly innovative. This should in theory allow firms facing relatively short-term downturns to retain workers while substantially decreasing their wage bill.

Given that there was no precedent for this type of scheme in South Africa, even the fact that it was able to come into existence in a relatively short time frame is impressive. In addition, and despite the various delays and backlogs, multiple partners collaborated successfully such that the scheme was operational, even with the lack of any legislation governing it.

Looking ahead, any future scheme of this nature should lean heavily on the lessons learnt from the implementation of the job re-training scheme. There is, overall, a lack of systematic demand-side strategies in place to deal with employment insecurity arising out of economic shocks. This calls for a system of policy tools aimed at job-saving and income replacement in order to stimulate the economy, ward against job losses, and protect those workers most vulnerable to displacement during economic downturns.

4.2 Public Employment Scheme

Launched in 2004, the Expanded Public Works Programme (EPWP) is a labour-intensive public employment scheme originating at a national summit through a theme calling for “More jobs, better jobs, decent work for all”. At the outset, \$7 billion of government expenditure was allocated to the scheme. The overall aim of the public employment scheme was to provide income and therefore poverty relief through temporary work placement for the unemployed. Still in operation today, the EPWP is a nationwide programme which utilises public expenditure on goods and services to create work opportunities in the infrastructure, environment and culture, social, and non-state sectors.

The programme aimed to create one million jobs in the first five years of implementation. A specific goal was for the public employment scheme to target marginalised individuals, including the unskilled, the poor, women, youth and those living with disabilities. Specifically, targets were created for at least 40 percent of jobs created to go to women, 30 percent to youth, and 2 percent to disabled individuals. Certainly, this aligns with the discussion in Section 3.3, where those most vulnerable to job loss during the recession, and arguably outside of recessionary periods, were unskilled workers, and the youth.

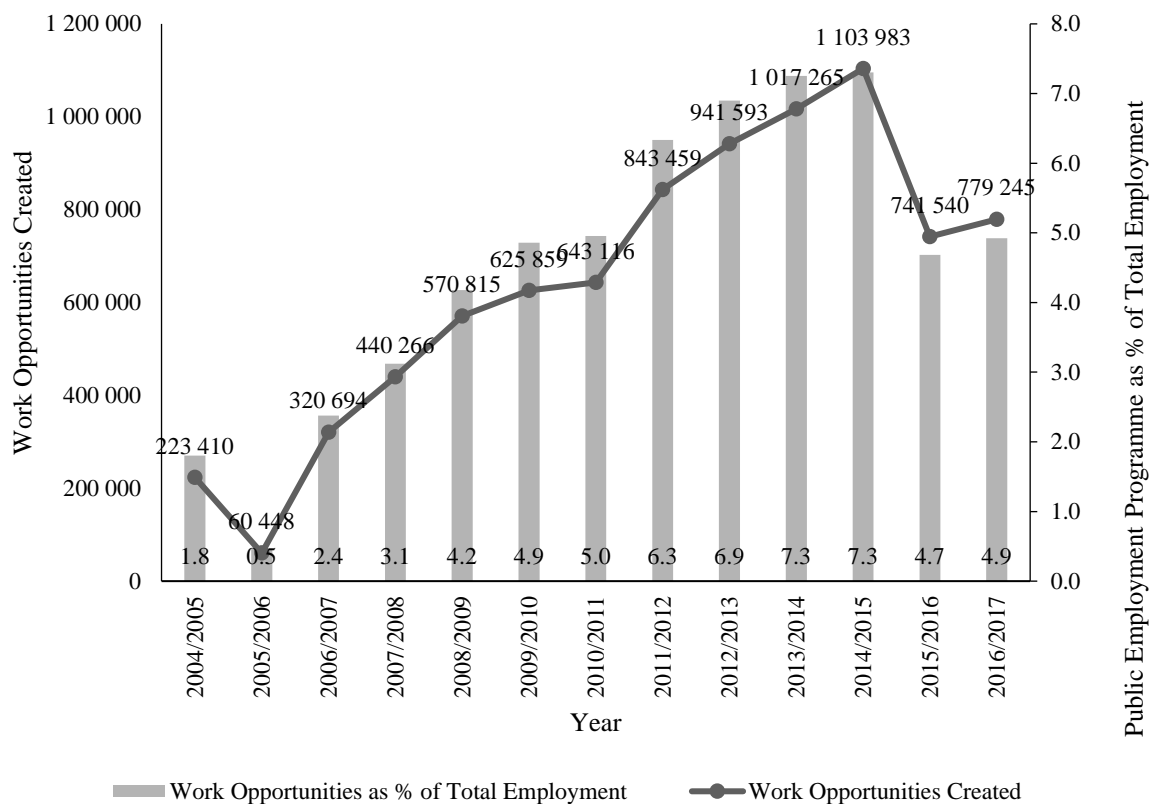
While the primary aim is to provide temporary employment, a secondary aim is to provide work experience and training which may facilitate future absorption into employment. This training aims to be targeted in areas which would facilitate

marketable skills growth, for example in project management, entrepreneurship, vocational skills and health and safety. For example, a new venture programme was established to provide accredited entrepreneurial training in the form of classroom and practical training. In the classroom component, learners are taught business and management skills, while the practical component assigns learners to government projects and provides a mentor to assist in the execution. This programme feeds into a contractor learnership programme, which provides individuals with the skills and finance to set up and manage contractor companies, aimed at building infrastructure using labour-intensive methods.

Under the Environment and Culture sector, a number of training schemes are implemented, including short courses, learnerships and skills programmes. These cover environmental matters, ranging from fire programmes to training on how to remove alien vegetation. Under the social sector, an early childhood development plan provides on-the-job experience, accredited training, and an allowance for primary caregivers, parents and practitioners with the aim of establishing a basic package of care and education for children under the age of five.

The public employment scheme has been implemented through three phases: Phase I (2004/5 to 2008/9); Phase II (2009/10 to 2013/14), and Phase III (2014/15 to 2018/19). The work opportunities generated under this scheme have been substantial, as indicated in Figure 15.

Figure 15: Work Opportunities Created Under the Public Employment Scheme



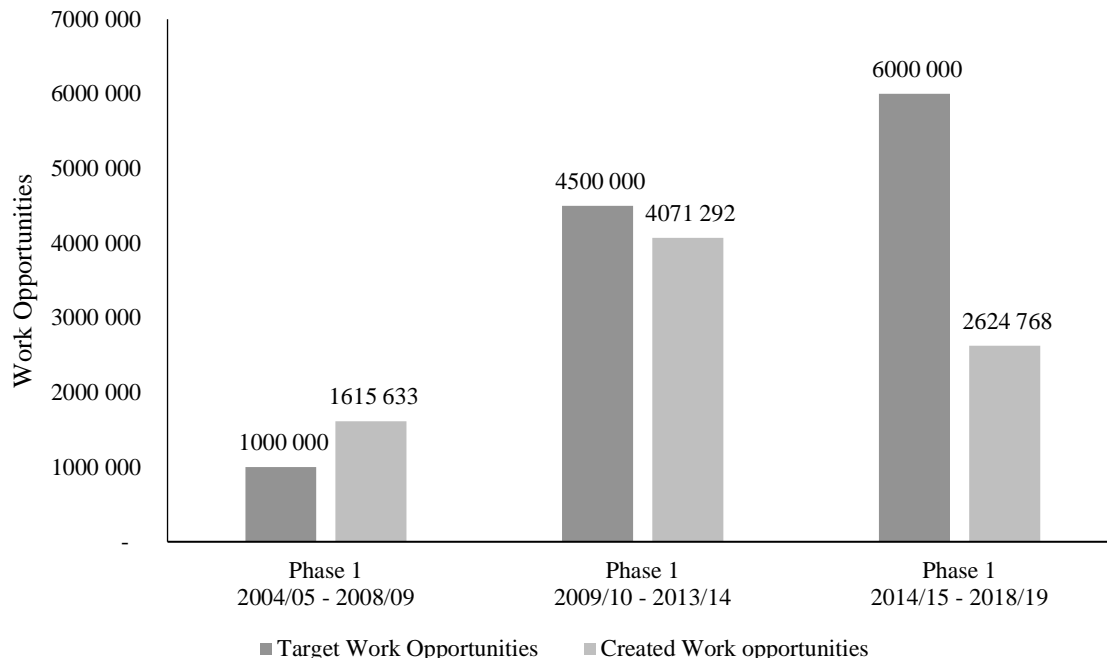
Source: Quarterly Labour Force Survey and PALMS. Data for the third quarter was used – for example, data for the third quarter of 2016 was used for the 2016/17 financial year.

In 2004/05, around 220,000 work opportunities were created, equivalent to 1.8 percent of total employment in that year. The number of work opportunities created dipped in 2005/06, but then rose steadily until 2014/14, peaking at just over a million jobs in that year, or 7.3 of total employment. In 2015/16 and 2016/17, these numbers have dropped to around 750,000, or about 5 percent of total employment. Despite the recent decrease in numbers, it is evident that the public employment scheme has been successful in creating a substantial number of work opportunities since its inception, a noteworthy accomplishment in a country which faces such pervasive levels of high unemployment.

This being said, there is a lack of data that would allow for an impact evaluation of the programme. In order to provide some measure of the efficacy of the programme, Figure 16 indicates the target work opportunities and actual work opportunities created for the three phases of the public employment scheme.

During Phase I, 1.6 million work opportunities were created – exceeding the goal of one million jobs by more than 50 percent. During the subsequent five-year period, the public employment scheme targeted job creation of 4.5 million jobs. While this goal was not achieved, the programme created 4.1 million jobs during the period. The goal for Phase III is to create six million jobs by 2019, of which only 2.6 million had been created in in 2017.

Figure 16: Targeted and Created Work Opportunities under the Public Employment Scheme



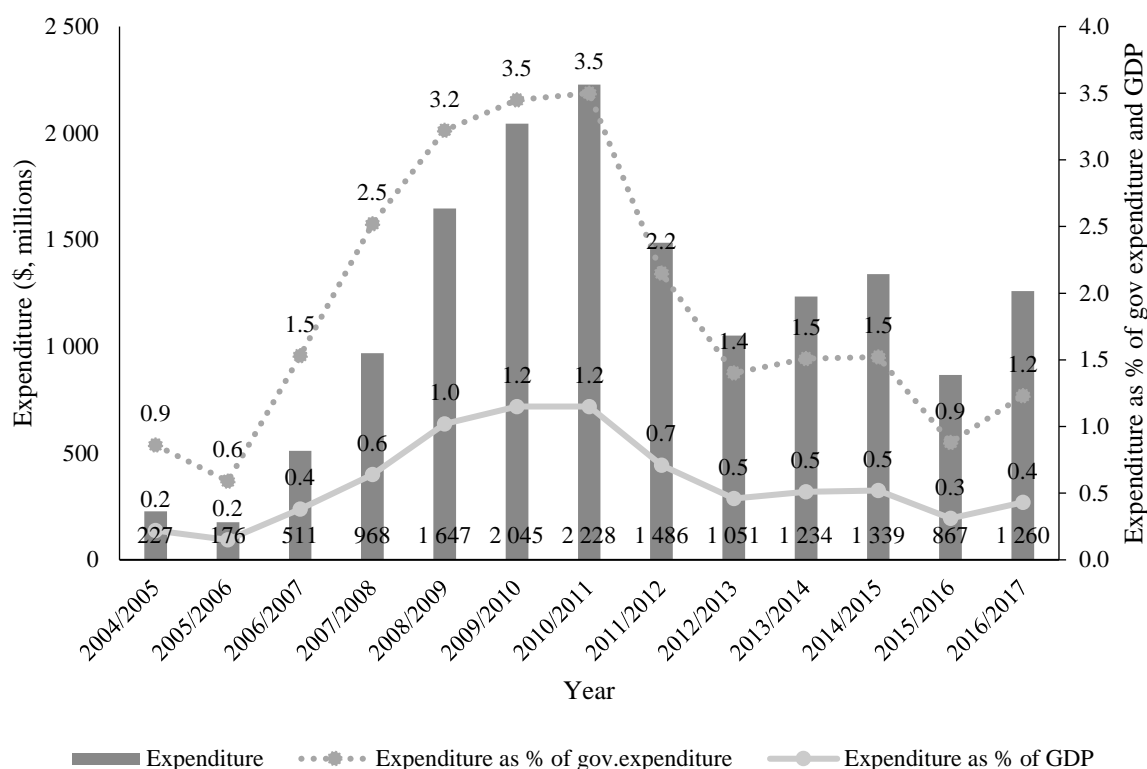
Source: SACN (2017).

In terms of targeted job creation for marginalised groups, in Phase I 40.2 percent of work opportunities were created for youth (exceeded target by 10 percentage points), 44.2 percent were created for women (exceeded target by 4 percentage points) and 1.0 percent were created for people with disabilities (or half of the target). By 2016/17,

these figures were improved, with 45.4 percent of work opportunities going to youth, 66.4 percent going to women and 1.7 percent going to people with disabilities (Department of Public Works, 2017b).

Figure 17 provides an overview of expenditure and work opportunities created by the public employment scheme for the years 2004/05 to 2016/17. Total expenditure over the period was \$15 billion, with the initial \$7 billion allocated, spent by 2010/11. This translates into an average of 1.8 percent of government expenditure over the period.

Figure 17: Expenditure under the Public Employment Scheme



Source: SACN (2017) and Department of Public Works (2009).

Expenditure increased steadily between 2004/04 and 2010/11, peaking at \$2 billion in the recession and post-recession years (2008/09 to 2010/11). This is equivalent to 1 percent of GDP and 3.5 percent of government spending in 2010/11.

4.2.1 The Employment Guarantee Scheme

While the public employment scheme is made up of numerous programmes, the employment guarantee scheme²⁷ is of particular interest. After piloting in 2007, the employment guarantee scheme was implemented in 2009 with the aim of marrying the dual goals of job creation and community upliftment. The aim of the employment guarantee scheme is to create an employment safety net for the poor in order to improve their standard of living, while simultaneously improving the quality of life of people living in the community. A job created under the employment guarantee scheme should provide a minimum level of predictable work for the poor, unemployed

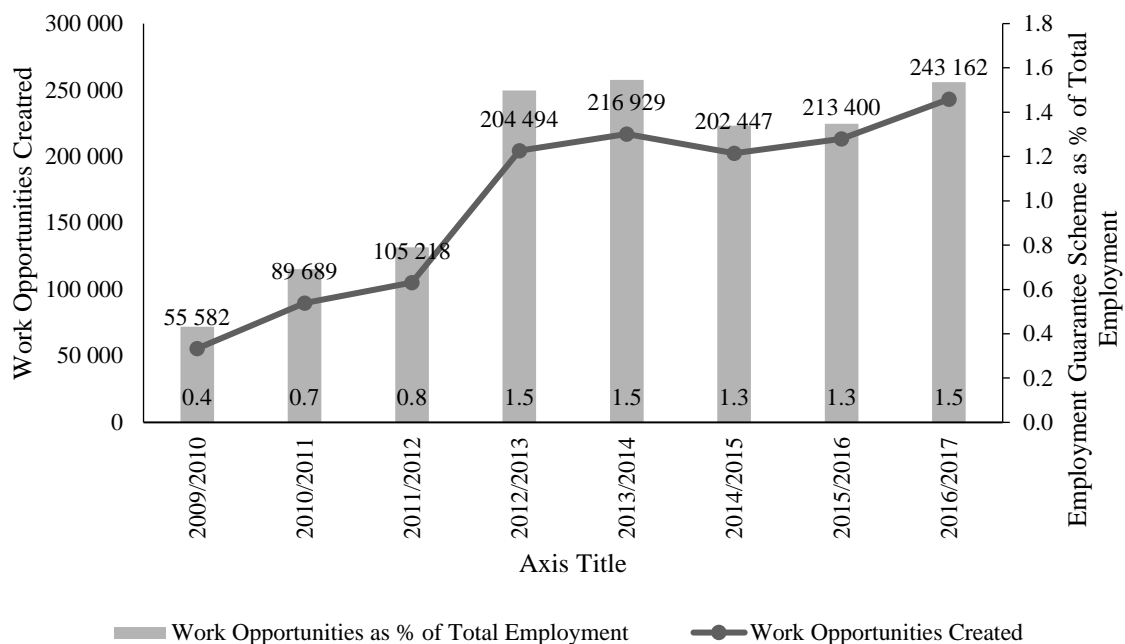
²⁷ Officially termed the Community Works Programme.

and underemployed. Work under the employment guarantee scheme is part-time – either two days per week or eight days per month – and is guaranteed for 100 days per annum per person. Through the programme, the worker receives a small income and work experience, which promotes the social inclusion of marginalised individuals.

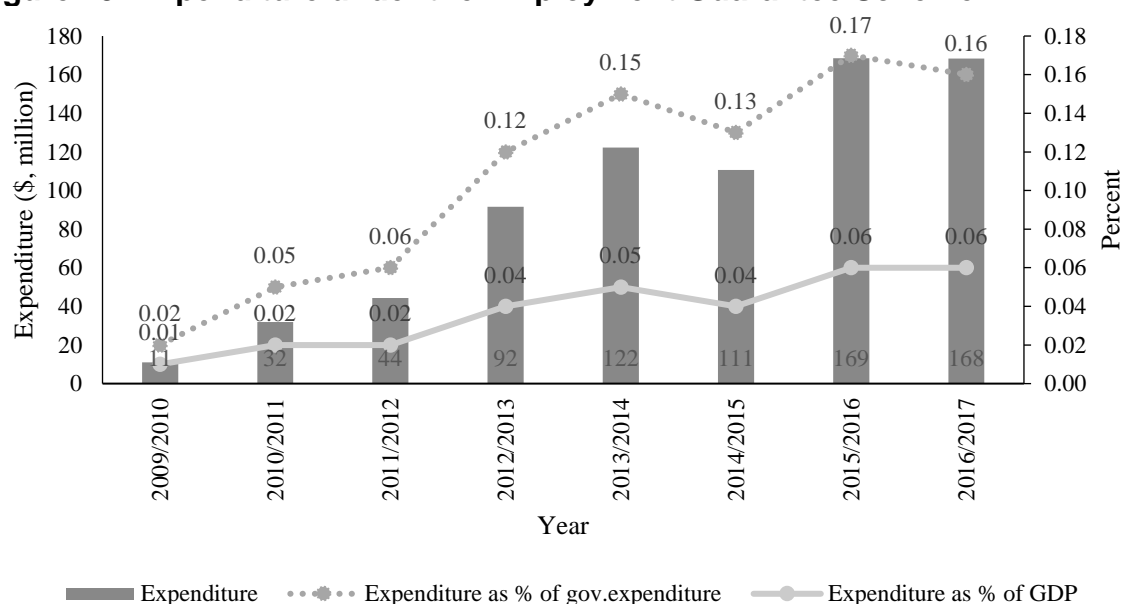
The employment guarantee scheme targets labour-intensive activities and limits non-wage costs to 35 percent of total costs. The intention is also to create scale within a community, with the goal of maintaining 1,000 or more participants per work site. These work sites are managed by Non Profit Organisations (NPOs), in partnership with local and provincial government structures. The opportunities created under the employment guarantee scheme have to be useful and uplifting to the community, who themselves decide what form the work should take. For example, jobs created under this programme may include fixing schools, planting community gardens or providing child care for the employed.

Figure 18 and Figure 19 provide an overview work opportunities created and expenditure for the employment guarantee scheme for the years 2009/10 to 2016/17, respectively. Note that these figures are accounted for in the total work opportunities and expenditure generated by the public employment scheme, given above.

Figure 18: Work Opportunities Created Under the Employment Guarantee Scheme



Source: Department of Public Works (2009).

Figure 19: Expenditure under the Employment Guarantee Scheme

Source: Department of Public Works (2009).

In its first year, the employment guarantee scheme created 56,000 work opportunities, or half a percent of total employment in that year. This increased to 243,000 work opportunities in 2016/17, or 1.5 percent of total employment in that year. To date, the scheme has created 1.3 million work opportunities, of which half went to youth (53 percent) and 71 percent went to women. Figure 19 indicates that total expenditure for the scheme has increased from \$11 million to \$168 million since its inception, equivalent to 0.06 and 0.16 percent of GDP and public expenditure over the period, respectively. Total expenditure for the scheme over the period is \$0.75 billion and has averaged more than 1 percent of government expenditure over the past five years.

Both the employment guarantee scheme and the public employment scheme, while successful in creating a meaningful number of job opportunities for the marginalised and unemployed, have faced a number of challenges:

Balancing Trade-offs Between Outcomes

Due to the size of the programme, there has been some confusion surrounding the overall objectives of the scheme. While the public employment scheme aims to create job opportunities, it also aims to promote skills-enhancement and to improve the livelihoods of both the individuals participating and their broader community. The importance of each of these goals will differ depending on the nature of the sub-programme in question. Inevitably, trade-offs must be made between these various outcomes in order to maximise the development impact of the programme. For example, there is a trade-off between widening the coverage of the scheme and deepening the quality of the work opportunity for fewer participants (Department of Public Works, 2017a).

Inability to Convert Work Opportunities into Employment

The public employment scheme offers once-off, short term employment opportunities which are not in line with the country's primary challenge of structural unemployment.

Concerns about Corruption

There has been some irregular expenditure in the public employment scheme, leading to concerns around corruption and the misuse of funds. In some communities, there were accusations that politicians had appropriated the process of employment and were using the programme for their own benefit. This activity undermines the validity of the public employment scheme and has the potential to create conflict in the communities it is wishing to serve.

Poor Monitoring and Evaluation

The overall monitoring and evaluation (M&E) of the public employment scheme has been poor. An early report by the HSRC (2007) cites understaffing as a key issue limiting the capacity for monitoring and evaluation of the public employment scheme. In addition, the quality of data collected has been poor. A review of the data from the public employment scheme cited informal and inconsistent validity checks, poor clarity surrounding definitions and irregular site visits as key issues impairing the viability of the data for M&E (HSRC, 2007).

Despite this, the public employment scheme has been largely successful both in terms of scale and the level of innovative achievements. Over the 14-year lifespan of the public employment scheme, 8.3 million work opportunities have been created, equivalent to half of total employment in 2018 (Stats SA, 2018a). The scheme has also been successful in its goals of targeting youth and women for work opportunities. These achievements have led to considerable international interest in this labour market policy. Therefore, strengthening the monitoring and evaluation component of the programme will allow other countries to benefit more fully from the lessons learned from the public employment scheme.

4.3 Wage Subsidy Scheme

4.3.1 Background

As discussed above, unemployment remains one of South Africa's key policy challenges. Of particular concern is unemployment amongst the youth. In 2018, the unemployment rate for those aged between 15 and 34 was 39 percent (Stats SA, 2018a), 11 percentage points higher than the national average. Therefore, youth are disproportionately disadvantaged in their labour market outcomes.

Section 3.3 highlights the particular vulnerability of youth to displacement during economic downturn. Indeed, not only are youth more likely to lose their jobs during an economic downturn, they are also less likely to find employment. From the firm's perspective, there is additional risk associated with hiring youth, who are relatively (or, completely) untested in the workplace. Youth also have less ability to find and apply for work, and have less well-developed social networks, which have been shown to be an important channel for finding work in South Africa (Burns et al., 2010; Dinkelman, 2004; Dinkelman & Pirouz, 2002).

The wage subsidy scheme, launched formally as the Employment Tax Incentive, was introduced as a demand-side labour market policy to address the social and economic problem of youth unemployment. The incentive aims to stimulate the employment of

18 to 29 year olds in the formal sector by reducing the perceived risks and costs associated with hiring younger workers. The policy takes the form of a tax incentive, with the tax burden owed to the South African Revenue Service (SARS) decreasing for every new qualifying employee hired by the firm. The programme has been in existence since 2014, and it has recently been proposed that the wage subsidy scheme be extended by an additional ten years, to 2029.

Implemented on 1 January 2014, the wage subsidy can only be claimed for youth hired on or after 1 October 2013 in order to encourage the creation of new jobs. The wage subsidy can be claimed for two-years, after which it is hoped that the youth would have required the necessary skills and experience to find non-subsidised employment. To discourage the creation of low paid jobs, or the subsidising of high-paid jobs, the subsidy can be claimed for youth earning between \$142 and \$426 per month²⁸, with the parameter that the job created must be associated with a wage equal to or higher than the prevailing minimum wage in the sector. While the amount of the incentive is on a sliding scale depending on the youth's monthly wage, the maximum that can be claimed is \$71 per month in the first year and \$36 per month in the second year. Figure 20 illustrates the value of the subsidy in year one and two against the monthly remuneration of eligible youth. In both years, the subsidy peaks for those earning between \$142 and \$284 per month. One of the major criticisms of the scheme, then, is that the way in which the subsidy is designed, encourages employers to pay youth hired under the wage subsidy scheme no more than \$142 per month. This allows employers to benefit from the maximum possible decrease in the wage bill.²⁹

Figure 20. Design of the Wage Subsidy Scheme



Source: Own calculations.

²⁸ For those youth working less than 160 hours per month, remuneration is grossed up to the full-time equivalent, the value of the wage subsidy is calculated, and this value is then grossed down in the same ratio.

²⁹ It should be noted that full-time employees are ineligible for the incentive if they earn less than \$142 per month. The value of the subsidy reflected in the figure is for those youth working less than 160 hours per month.

4.3.2 Data

This section uses anonymised individual and company level administrative tax data from the South African Revenue Services (SARS). This data includes Employee Tax Certificate (IRP5) data – currently available for the 2008 to 2017 tax years – and Company Income Tax (CIT) data – currently available for the 2008 to 2014 tax years. Each tax year runs from 1 March to 28/29 February. Therefore the 2014 tax year – 1 March 2013 to 28 Feb 2014 – includes only two months in which firms were able to claim the wage subsidy. Because the individual data includes a firm identifier, we are able to construct a matched employer-employee panel spanning the 2008 to 2017 tax years. This panel includes all available individual data for 2008 to 2017, but includes firm characteristics only for the years 2008 to 2014.

The SARS tax data are administrative, therefore in theory it contains data for every job where the firm is registered for Pay As You Earn (PAYE) tax, and the wage earned is above R2,000 per month (the threshold for compulsory tax filing). The data excludes public sector workers.

4.3.3 Methodology

In evaluating the impact of the wage subsidy scheme, the key outcome of interest is change in youth employment in firms taking up the incentive. Other outcomes that will be investigated are the non-wage benefits offered by firms utilising the wage subsidy and the extent to which these firms are displacing ineligible workers with workers eligible for the wage subsidy.

Difference-in-difference (DID) methods are a common strategy used for evaluating the effects of policies or programs that are instituted at a particular point in time, such as the implementation of a new law. The DID approach measures the change in an outcome over time by comparing changes in the outcome before and after the intervention came into effect. To do this, the DID method compares changes over time in a group unaffected by the policy intervention, to the changes over time in a group affected by the policy intervention, and attributes the “difference-in-differences” to the effect of the policy.

Difference-in-difference methods provide unbiased effect estimates if the trend over time would have been the same between the intervention and comparison groups in the absence of the intervention. However, a concern with DID models is that the program and intervention groups may differ in ways that would affect their trends over time, or their compositions may change over time. In this case, if the firms using the wage subsidy differ from the firms that do not use the wage subsidy in ways which would affect their employment outcomes over time, the DID estimator will be biased. Propensity score methods are commonly used to handle this type of confounding effect and are given by the conditional probability of treatment:

$$p(z) \stackrel{\text{def}}{=} \Pr(T = 1) | X_i \quad (1)$$

Where $p(z)$ is the propensity score equal to the probability of treatment T for a given set of characteristics X_i .

In evaluating the impact of the wage subsidy scheme, a propensity score is defined as the probability of being in the treated group of firms taking up the wage subsidy (Group 1) versus the control group of firms that did not take up the wage subsidy (Group 2). To estimate the propensity scores, we fit a multinomial logistic regression predicting whether a firm took up the wage subsidy as a function of a set of observed firm characteristics. The obtained propensity scores can be used as weights to obtain a balanced sample of treated and untreated individuals (Imbens, 2004). Firms in Group 2 that look very similar to those in Group 1, and very different from the individuals in their own group, will receive higher weights; those that look dissimilar from those in Group 1, and more similar to individuals in their own group, will receive lower weights. These weights are used to match firms taking up the wage subsidy with firms that did not take up the wage subsidy. Those treated firms who are not matched with a firm in the control group with a similar propensity score are dropped from the sample.

Once the sample of matched treated and control firms is obtained, the DID term is estimated in order to ascertain the effect on job creation of the wage subsidy scheme. In econometric terms, the DID estimator is defined as follows:

$$Y_{it} = \alpha + \beta(T_t * d_i) + \theta_1 d_i + \theta_2 T_t + X_{it} + \mu_{it} \quad (2)$$

Where Y_{it} represents the outcome of interest; T_t represents the pre- and post-treatment period (represented here by the pre-wage subsidy scheme and post-wage subsidy scheme periods); d_i represents the treatment (firms taking up the wage subsidy) and control group (firms not taking up the wage subsidy) cohorts; X_{it} represents a vector of firm characteristics; and μ_{it} is the non-stochastic error term. The coefficient β , on the interaction term ($T_t * d_i$), represents the DID term and the significance and magnitude of this determines whether the wage subsidy scheme can be said to have had an effect on the outcome of interest, and if so, to what extent.

4.3.4 Descriptive Results

Table 7 describes the size of the panel as well as the number of individuals and firms taking up the wage subsidy by year. Take up of the wage subsidy is lowest in 2013/14, which is intuitive given that it was only available for two months of the tax year. In 2013/14, there are 25,517 firms claiming the wage subsidy, equivalent to 10.8 percent of all firms in the sample. This increases to 35,105 firms in 2014/15 (14.6 percent of firms) before dropping to 31,141 firms in 2015/16 (13.7 percent of firms). However, the 2015/16 data may reveal increased numbers of wage subsidy claims as the data is updated due to late filing of tax returns and resubmissions. In terms of the number of jobs that the wage subsidy scheme supports, this increased from 1.4 percent in 2013/14 to 10.6 percent in 2015/16. In 2014/15, the wage subsidy scheme supported 15 percent of all youth jobs (Chatterjee & MacCleod, 2016). Note here that the number of jobs is not equivalent to the number of individuals, as individuals may work multiple

jobs per year³⁰. The total amount that firms claimed under the wage subsidy scheme increased exponentially between 2014 and 2016 – from \$3.4 million in 2013/14 to \$284 million in 2015/16. This translated to R323 claimed per job supported in 2013/14, R2,575 per job supported in 2014/15 and R3,639 per job supported in 2015/16.

Table 7: Wage Subsidy Uptake by Year

	2013/14	2014/15	2015/16	% Change: 2014-2016
Number of Firms in Sample	236,211	241,255	226,598	-4.1
Number of Firms Claiming Subsidy	25,517	35,105	31,141	22.0
Number of Subsidised Jobs	147,200	878,020	1,100,659	647.7
Subsidised Jobs as % of Total Jobs	1.4	8.2	10.6	657.1
Proportion of Claimant Firms	10.8	14.6	13.7	26.9
Total Claims (\$, millions)	3.4	160.5	284.4	8,322.7

Source: Chatterjee and MacLeod (2016) and own calculations using SARS TAX Data 2014-2016.

Table 8 summarises the extent of wage subsidy scheme uptake by industry in 2015/16. It should be noted that the industry in which a firm resides is calculated as the mode industry depicted on the individual IRP5 tax form for that firm. Therefore, industry totals are likely to differ when compared with those from South African survey data. Agriculture, wholesale and retail, manufacturing and mining firms are overrepresented in the sample of firms taking up the wage subsidy scheme.

Table 8: Wage Subsidy Uptake by Industry

Industry	2015/16		Ratio:
	Subsidy Firms	All Firms	Subsidy Firms to All Firms
Agriculture	10.1	7.6	1.3
Mining	1.1	1.0	1.1
Manufacturing	23.8	21.3	1.1
Utilities	1.1	1.3	0.8
Construction	5.8	6.4	0.9
Wholesale & Retail	17.5	14.4	1.2
Transport	2.9	3.1	0.9
Finance	28.9	32.0	0.9
CSP	6.1	9.4	0.6
Other	2.7	3.6	0.8
Total	100	100	-

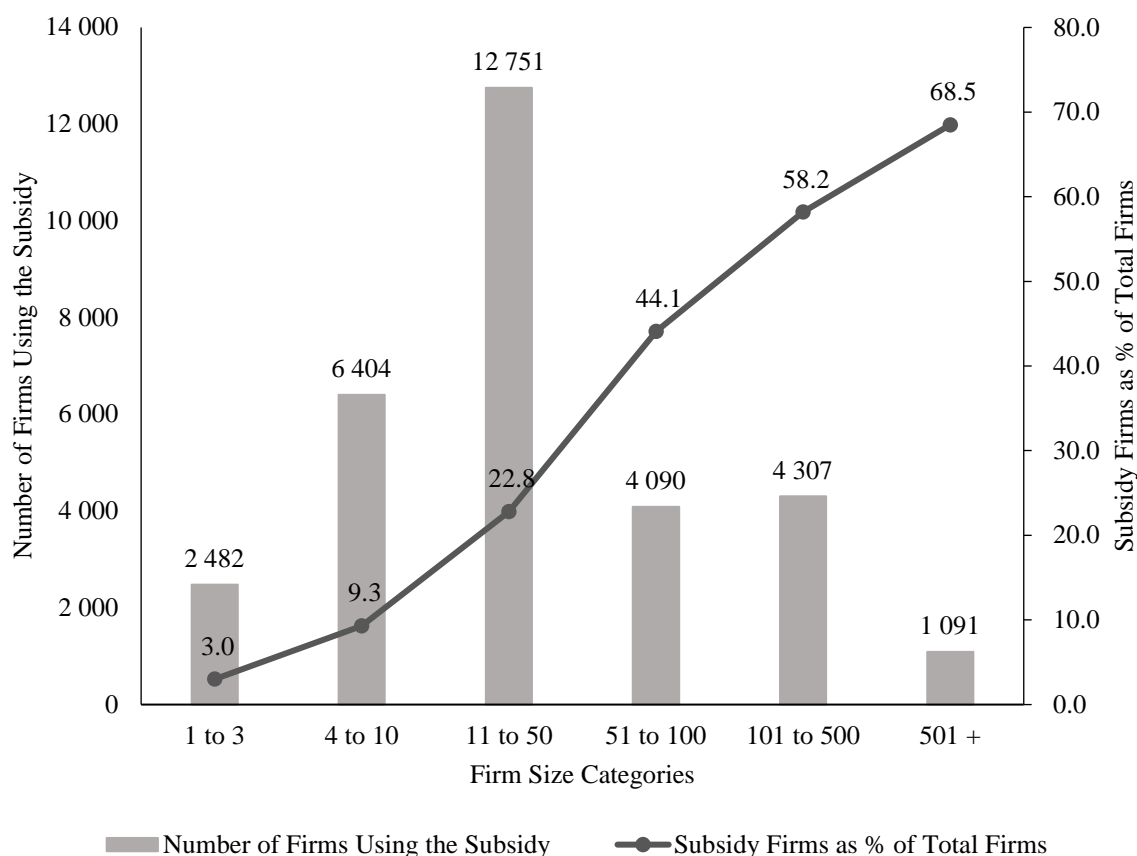
Source: Own calculations using SARS TAX Data 2014-2016.

In terms of the distribution of firms utilising the wage subsidy scheme by industry, firms taking up the wage subsidy scheme in 2015/16 are most likely to be in finance (28.0 percent), manufacturing (23.8 percent), or wholesale and retail (17.7 percent).

³⁰ A “job” is calculated as the number of unique individual-firm combinations per year. In other words, an individual working twice for the same firm in the same year is calculated to have one job in that year. On the other hand, an individual working for two different firms in the same year is calculated to have worked two jobs in that year.

While the overall figures show moderate firm uptake of the subsidy by 2016, disaggregating by firm size reveals substantial differences in uptake for small and large firms. Figure 21 gives both the number of firms taking up the wage subsidy scheme within each firm size category (bar graph) and the percentage of firms using wage subsidy as a proportion of all firms in that size category (line graph). For example, for firm size category 1 to 3, the data indicate that there are 2,482 firms of this size claiming the wage subsidy, which equates to 3.0 percent of all of the firms with 1 to 3 employees. Looking at the proportion of firms claiming the wage subsidy (line graph), it is clear that there is a strong monotonic relationship between claiming the wage subsidy and firm size. In 2015/16, less than ten percent of firms with 10 or fewer employees claimed the wage subsidy, compared with 68.5 percent for those firms with more than 500 employees. This may be because of lower average costs associated with applying for the incentive for larger firms (Chatterjee & MacLeod, 2016) or because of greater visibility of the incentive for larger firms. It should be noted that the tax data contains only those firms paying tax. This figure therefore provides an unbiased estimate of the proportion of all formal firms taking up the wage subsidy scheme. However, because small firms are less likely than large firms to be paying tax, the figures in this table overestimates the proportion of firms – especially small firms – claiming the wage subsidy.

Figure 21: Uptake of the Wage Subsidy Scheme by Firm Size



Source: Own calculations using SARS TAX Data 2014-2016.

However, when taking into account the distribution of small and large firms in the economy, it is clear that overall there are more small and medium sized firms claiming the subsidy than large firms, notwithstanding the relatively low take up rate amongst

small firms. The bar graph in Figure 21 gives the total number of firms claiming the subsidy by firm size. Despite the fact that only 22.8 percent of firms sized 11 to 50 claimed the subsidy in 2016, there are almost 13,000 of these firms claiming the subsidy, and this group makes up the largest number of subsidy claiming firms due to the large number of firms of this size overall. Conversely, while 68.5 percent of the largest firms claimed the subsidy in 2016, these firms make up the smallest number of firms claiming the subsidy, at just over 1,000 firms in total.

4.3.5 Econometric Results

The following section provides the conditional difference-in-difference estimators (DID) for the following outcomes: 1) Job creation (and conversely, job displacement); 2) Job creation by firm size; 3) Job churn; and 4) Proportion of youth with non-wage benefits.

First, job creation without disaggregating by firm size is evaluated. two measures of job creation are used – number of youth employed and the change in the employment growth rate. The former measure gives the numeric difference in employment between 2013 and the relevant post-incentive year, either 2015 or 2016. By definition, this measure is not scaled to account for firm size. The change in the employment growth rate, on the other hand, measures the growth in the workforce relative to the size of the workforce in the previous period. In order to evaluate the potential negative effects of the subsidy, employment growth for the group of workers most likely to be displaced by the incentive – those workers aged 30 to 35 earning less than R6,500 per month – is estimated.³¹

Table 9 displays the results from the DID estimation for three outcome groups in 2015 and 2016: youth eligible for the subsidy, employees at risk of displacement, and all employees. Evaluating first the number of jobs in firms claiming the wage subsidy versus those firms that did not claim the subsidy, the coefficients indicate no significant difference for overall employment, youth employment, or the employment of individuals aged 30 to 35. However, the change in employment growth rates is positive and significant across all three outcomes. This indicates that firms claiming the subsidy saw an increase in the year-on-year change in employment growth rates for youth, all employees, and “at-risk” employees aged 30 to 35, when compared with firms that did not claim the subsidy.

³¹ We choose to look at those earning less than R6,500, rather than the R6,000 cut off for the wage subsidy, due to the potential of measurement error in the way monthly wages are calculated in the data. Monthly wages are not given and must be calculated based on the wage an individual earns for a specified period of time worked. There is no data on the number of days an individual worked in that period. Therefore monthly wages may be underestimated if individuals were not working every day within the specified period worked.

Table 9: The Impact of the Wage Subsidy Scheme on Job Creation: Difference in Difference Estimates

	Number of Employees		Employment Growth Rate	
	2015	2016	2015	2016
Subsidy Eligible Youth	2.717 (1.899)	3.584 (4.068)	1.055*** (0.0590)	0.757*** (0.0617)
Employees aged 30-35 Earning <6500	0.310 (0.206)	0.368 (0.615)	0.314*** (0.0507)	0.213*** (0.0537)
All Employees	13.76 (16.04)	23.52 (17.97)	0.151*** (0.0124)	0.114*** (0.0136)

Source: Own calculations using SARS TAX Data 2014-2016.

Notes: Standard errors in parentheses. ***p<0.01, **p<0.05, *p<0.1

Given the difference in uptake between small and large firms, Table 10 estimates the effect of the subsidy on youth employment by firm size sub-groups. This is done by matching firms within these sub-groups before running the DID estimator, which is possible due to the large sample size. It is clear that the effect of the subsidy differs substantially for firms in different size categories.

Table 10: The Impact of the Wage Subsidy Scheme on Job Creation by Firm Size: Difference in Difference Estimates

Subsidy Eligible Youth	Number of Employees		Employment Growth Rate	
	2015	2016	2015	2016
1 to 3 Employees	0.439*** (0.0437)	0.464*** (0.0445)	3.206*** (0.318)	2.937*** (0.330)
4 to 10 Employees	0.479*** (0.0596)	0.547*** (0.0632)	1.912*** (0.168)	1.414*** (0.175)
11 to 50 Employees	0.511*** (0.141)	0.644*** (0.151)	0.858*** (0.0821)	0.470*** (0.0887)
51 to 100 Employees	1.209* (0.630)	1.056 (0.686)	0.517*** (0.114)	0.238* (0.130)
101 to 500 Employees	1.675 (2.015)	3.479 (2.234)	0.518*** (0.122)	0.412*** (0.120)
500+ Employees	-46.89 (199.2)	-26.16 (143.7)	1.807*** (0.640)	0.627* (0.365)

Source: Own calculations using SARS TAX Data 2014-2016.

Notes: Standard errors in parentheses. ***p<0.01, **p<0.05, *p<0.1

Firms with between 1 and 50 employees show positive and significant increases in the number of youth employed. While the change in the youth employment growth rate is positive and significant for firms in all size categories, the coefficient is largest in the smallest firms. These results indicate that there are positive youth employment effects of the subsidy, but that these are largest in the smallest firms, which are also the least likely to take up the subsidy.

In order to evaluate if there is heterogeneity in displacement effects across firm size, Table 11 estimates the effect of the subsidy on job creation for low-wage individuals aged 30 to 35 by firm size sub-groups. The results are positive and generally not statistically significant, indicating no negative effects of the subsidy on job growth for these individuals.

Table 11: The Impact of the Wage Subsidy Scheme on Job Displacement by Firm Size: Difference in Difference Estimates

Age 30-35 Earning ≤ 6500/month	Number of Employees		Employment Growth Rate	
	2015	2016	2015	2016
1 to 3 Employees	0.0304* (0.0176)	0.0432** (0.0193)	1.135*** (0.265)	1.067*** (0.282)
4 to 10 Employees	0.000304 (0.0167)	-0.0259 (0.0173)	0.356** (0.147)	0.0934 (0.156)
11 to 50 Employees	-0.0230 (0.0276)	0.0278 (0.0298)	0.231*** (0.0721)	0.174** (0.0780)
51 to 100 Employees	0.111 (0.104)	0.170 (0.112)	0.180* (0.0991)	0.265** (0.112)
101 to 500 Employees	-0.00604 (0.346)	0.376 (0.348)	0.193* (0.0988)	0.0619 (0.102)
500+ Employees	3.663 (21.46)	-6.292 (21.79)	0.621 (0.489)	0.300 (0.286)

Source: Own calculations using SARS TAX Data 2014-2016.
Notes: Standard errors in parentheses. ***p<0.01, **p<0.05, *p<0.1

Finally, Table 12 evaluates the non-wage benefits of jobs held by youth employed in firms using the wage subsidy versus youth employed by firms that do not use the subsidy. In 2015, firms using the subsidy were less likely to provide both pensions and medical aid to youth earning below R6,500 a month, compared with firms not using the subsidy. In 2016, this result is significant only for medical aid benefits. This indicates that while subsidy-claiming firms appear to hire more youth than firms that did not claim the subsidy, these firms are less likely to provide pension and medical aid to youth earning below the R6,500 threshold.

Table 12: The Impact of the Wage Subsidy Scheme on Non-Wage Benefits: Difference in Difference Estimates

	Subsidy Eligible Youth	
	2015	2016
Pension	-0.0138*** (0.00376)	-0.00260 (0.00395)
Medical Aid	-0.00313** (0.00131)	-0.00291** (0.00137)

Source: Own calculations using SARS TAX Data 2014-2016.

Notes: Standard errors in parentheses. ***p<0.01, **p<0.05, *p<0.1

Overall, then, the number of jobs supported by the wage subsidy scheme has been substantial, reaching over a million in 2016. While it is not clear what proportion of these jobs were *created* through the subsidy, econometric results show that firms using the subsidy have experienced higher employment growth in low-wage youth than firms that did not use the subsidy. This is particularly true for smaller firms. Furthermore, these firms do not exhibit negative effects on employment growth of those individuals most likely to be displaced by the wage subsidy – low-wage workers aged 30 to 35. As with the jobs re-training scheme, uptake amongst small firms is low. Given that it is small firms which appear most likely to be creating jobs through the wage subsidy scheme (as opposed to only supporting jobs), this suggests the need for a systematic programme aimed at disseminating information about the wage subsidy, with the specific goal to target small firms.

Recently, the wage subsidy scheme has been extended for a 10-year period, until 2029. Given the short lifespan of the scheme thus far, there is little clarity on what the long-run effects will be. As subsequent years of data become available, it will be possible to analyse the trajectory of youth into the labour market after they have exited firms claiming the wage subsidy. As one of the goals of the wage subsidy is to expose youth to the workplace in order to enhance their future employability, this will be a key marker of the scheme's success.

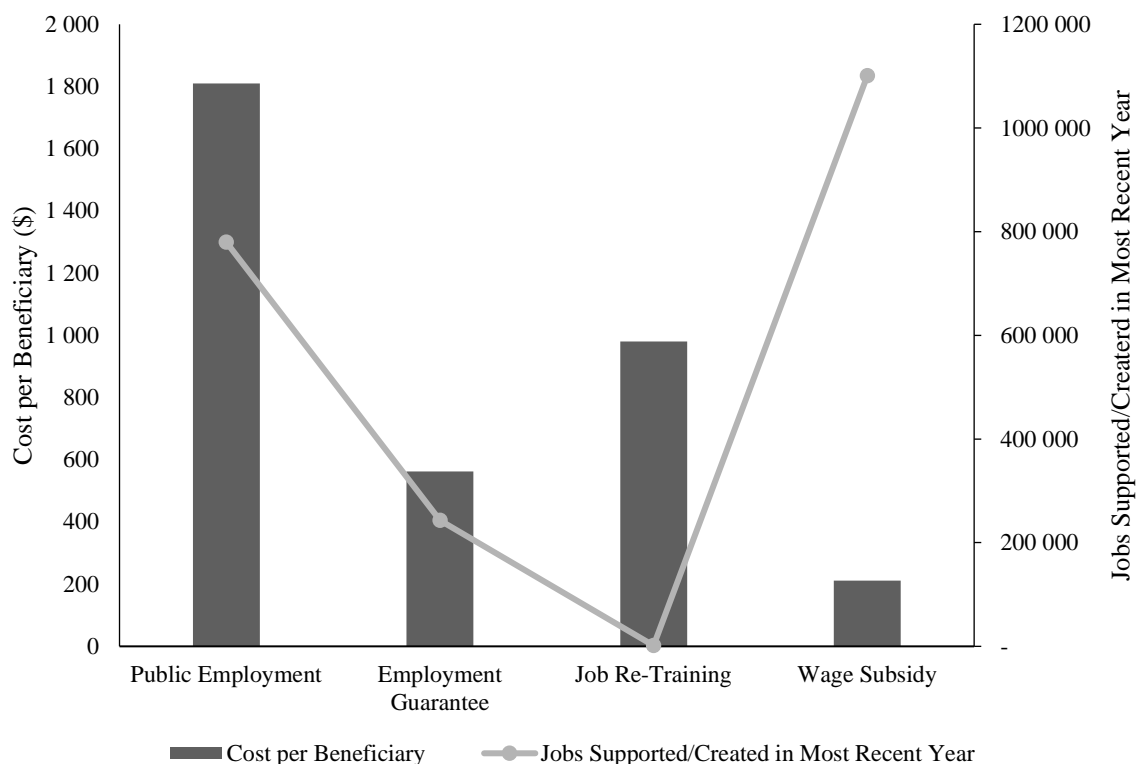
4.4 The Cost of Active Labour Market Policies in South Africa: A Brief Comparison

To gain insight into the comparative efficiency and effectiveness of each of the schemes reviewed, Figure 22 provides the cost per beneficiary across the four schemes. It should be noted, however, that the impact per beneficiary differs according to the scheme in question. The public employment scheme and employment guarantee scheme are measured in work opportunities. Therefore, while the cost per beneficiary is a measure of the cost per work opportunity created, there is no indication at this time of the number of long-term jobs created out of this scheme. The job re-training scheme provides a measure of workers benefiting from the re-training programme, with no indication of the number of jobs saved through this process. There is good quality data allowing for evaluation of the Wage Subsidy programme, which allows for confident assertion that jobs have been created under this scheme. However, while there is accurate data on the number of jobs *supported* under this scheme, it is not yet clear what the number of jobs *created* is. Therefore the data from

this figure should be read with an understanding of the ways in which each individual has benefited from the scheme in question.

Figure 22 indicates that the public employment scheme has by far the highest cost per beneficiary, at an average of \$1,810 per work opportunity created. The public employment scheme also creates a large number of work opportunities, around 780,000 in 2016/17. The employee guarantee scheme, which is a sub-programme under the public employment scheme, costs less than a third of the cost of the public employment scheme as a whole, at \$562 per work opportunity. This is likely due to the lower administrative burden of administering one programme, as opposed to the suite of programmes available under the public employment scheme.

Figure 22: Cost per Beneficiary of APLs



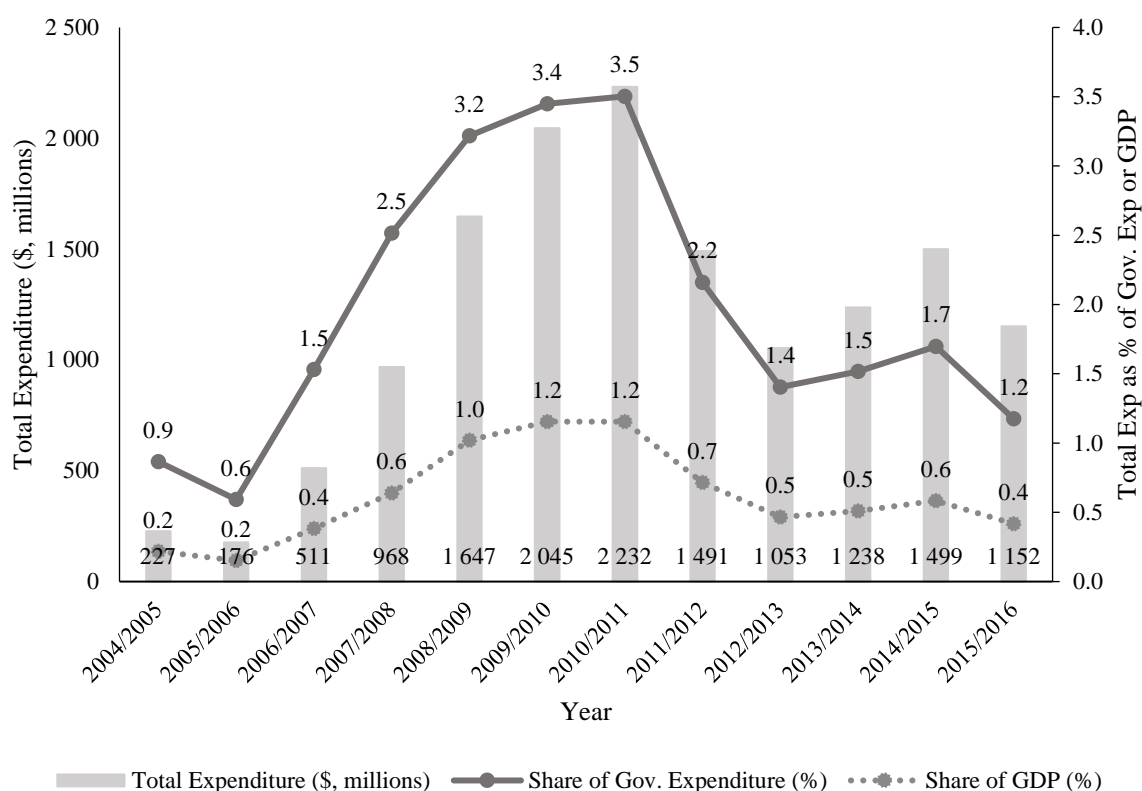
Source: SACN (2017) and Department of Public Works (2009); NSF (2013); Chatterjee and MacLeod (2016)

The job re-training scheme appears to be the least successful of the ALMPs evaluated, at a relatively high cost per beneficiary (\$980) and very few workers retrained under the scheme. This is likely due to the short time span in which the scheme was implemented. The most successful of the schemes appears to be the wage subsidy scheme, which has thus far benefitted the highest number of beneficiaries at the lowest cost per beneficiary. This scheme supported over one million workers in 2015/16, at a cost per beneficiary of \$211, which was far lower than under the public employment scheme. The relatively high cost of the public employment scheme is unsurprising given the breadth of the scheme, which includes a multitude of sub-programmes each with their own agendas and administrative processes. Creating the government capacity to run such a scheme is time consuming and costly, as is evident from Figure 22. It is also far more costly to create work opportunities than to subsidise workers hired by firms. Therefore, while the wage subsidy scheme covered the highest

number of beneficiaries and had the lowest cost per beneficiary, it is important to build the monitoring and evaluation processes needed to establish the number of jobs created under this scheme, in order to more accurately compare the outcomes of South Africa’s prominent ALMPs.

Figure 23 provides the total fiscal cost of these ALMPs as well as the cost as a share of government expenditure and GDP. In the 12 years between 2004/05 and 2015/16, South Africa spent a total of \$14.2 billion on the three ALMPs covered in this study. This constitutes an average annualised spend of \$1.2 billion per year. It is clear that expenditure on ALMPs peaked in the recession and post-recession periods, despite the fact that the wage subsidy scheme had not yet been implemented. This was driven entirely by increases in expenditure on the public employment scheme in this period. At the inception of the public employment scheme in 2014, total expenditure was 0.9 percent of government expenditure and 0.2 percent of GDP. This increased to 3.5 and 1.2 percent respectively in 2010/11, driven primarily by an increase in expenditure on the public employment scheme. Spending on the public employment scheme was greatly reduced from 2011/12, driving overall spending on ALMPs below two percent of government expenditure for the remainder of the period, despite the implementation of the wage subsidy scheme.

Figure 23: Total Fiscal Cost of APLs



Source: SACN (2017) and Department of Public Works (2009); NSF (2013); Chatterjee and MacLeod (2016); Own Calculations using SARS tax data.

The contribution of each of the schemes evaluated to overall expenditure on ALMPs is given in Figure 24. The public employment scheme was effectively the sole contributor to government expenditure on ALMPs between 2004/05 and 2013/14. While the job re-training scheme was implemented in this period, the overall

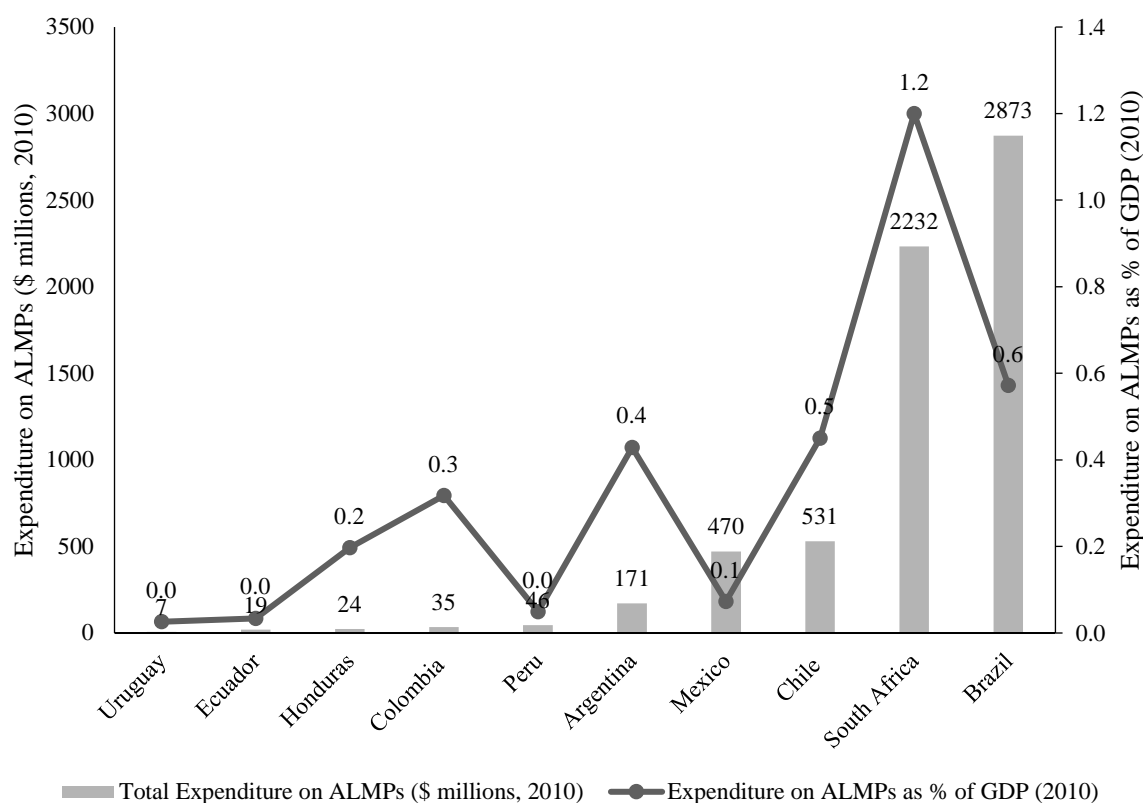
expenditure on the scheme was negligible in comparison with expenditure on the public employment scheme. The implementation of the wage subsidy scheme drove the share of total expenditure attributed to the public employment scheme down to 75 percent in only two years. The implementation of this scheme therefore reflects an important milestone in the landscape of ALMPs in South Africa, as it is the only large-scale active labour market policy implemented since 2005.

Figure 24: Contribution of South African ALMPs to Total Fiscal Cost



Source: SACN (2017) and Department of Public Works (2009); NSF (2013); Chatterjee and MacLeod (2016); Own Calculations using SARS tax data.

To provide context for the cost of ALMPs in South Africa, Figure 25 compares total expenditure on ALMPs, as well as expenditure as a proportion of GDP, across nine LAC countries. In 2010, Brazil had the highest expenditure on ALMPs (\$ 2.9 billion), followed by South Africa (\$ 2.2 billion). South Africa's expenditure on ALMPs was substantially higher than the remaining LACs and more than four times higher than the LAC with the next highest expenditure, Chile (\$ 531 million). Furthermore, South Africa's expenditure on ALMPs as a proportion of GDP was more than double that for any of the nine LACs. While South Africa spent 1.2 percent of GDP on ALMPs, the second highest proportion spent was in Argentina, at 0.4 percent of GDP. In the three countries where 2016 data was available – South Africa, Mexico and Chile – expenditure on ALMPs as a proportion of GDP has decreased between 2010 and 2016.

Figure 25: Expenditure on ALMPs as a Percentage of GDP: Cross-country comparison

Source: Cerutti et al. 2014; SACN (2017) and Department of Public Works (2009); NSF (2013); Chatterjee and MacLeod (2016); Own Calculations using SARS tax data.

Figure 26 assesses the total number of jobs created, supported or retrained by South Africa's ALMPs between 2004/5 and 2015/16. South Africa created, supported or retrained a total of 9.1 million jobs in this 12-year period. This equates to an average of 800,000 jobs per year over the period. The total number of beneficiaries of South Africa's ALMPs has grown steadily since the inception of the public employment scheme in 2004, from 223,000 in 2004/04 to 1.8 million in 2015/16. There is a large increase in beneficiaries between 2013/14 and 2015/16, driven by the implementation of the wage subsidy scheme in 2014. The dip in beneficiaries between 2014/15 and 2015/16 is driven by a decrease in the number of work opportunities created under the public employment programme, which went from 1.1 million in 2014/15 to just under 750,000 in 2015/16.

The number of beneficiaries as a proportion of employment and the labour force reveals a similar pattern. In 2004/15, the 223,000 beneficiaries supported under South African ALMPs equated to 1.3 percent of the total labour force and 1.8 percent of total employment in that year. This has grown in 2015/16 to 8.7 percent of the labour force and 11.6 percent of total employment. While the size of the labour force and employment in South Africa is relatively low in comparison with other developing countries, this nevertheless represents a sizable cohort of individuals moving through ALMPs in South Africa.

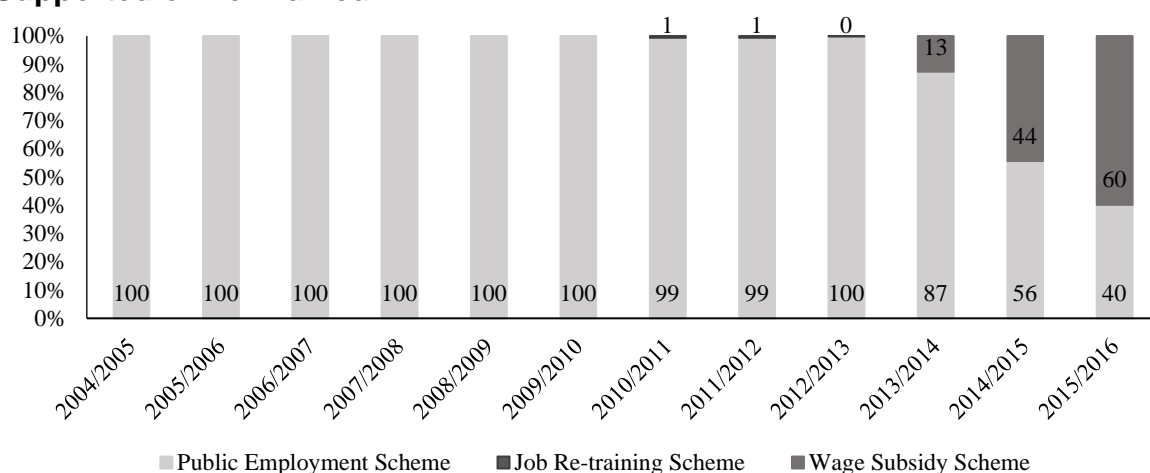
Figure 26: Total Jobs Created, Supported or Re-Trained by ALMPs



Source: SACN (2017) and Department of Public Works (2009); NSF (2013); Own Calculations using SARS tax data.

Figure 27 indicates the contribution of the three schemes evaluated to the total jobs created, supported or re-trained by South African ALMPs. The public employment scheme was the only active ALMP in South Africa until 2008/9. While the job re-training scheme was implemented in 2009/10, the number of workers re-trained under this scheme is too low to contribute substantially to the share of total beneficiaries. The onset of the wage subsidy scheme in 2013/14 marked a shift in the dominance of the public employment scheme. In 2013/14, the wage subsidy scheme contributed 13 percent of all beneficiaries in South Africa, despite only being active for two months in that year. In 2015/16, the wage subsidy scheme covered more beneficiaries than the public employment scheme, making up 60 percent of total beneficiaries of ALMPs in South Africa.

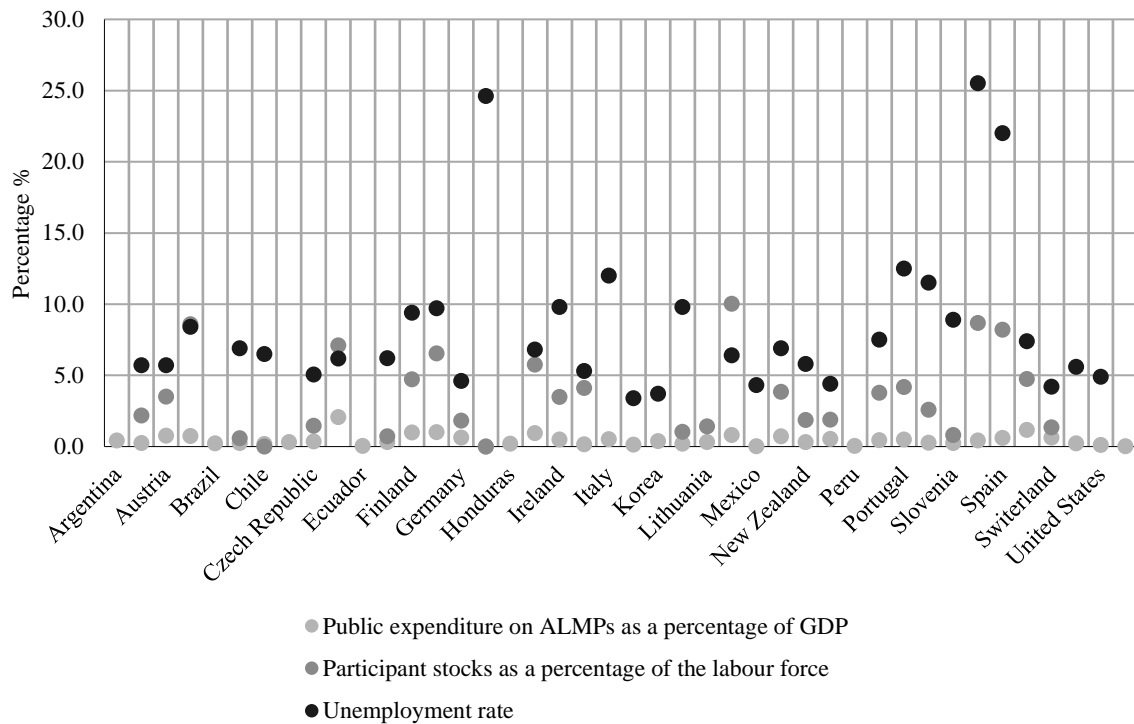
Figure 27: Contribution of South African ALMPs to Total Jobs Created, Supported or Re-Trained



Source: SACN (2017) and Department of Public Works (2009); NSF (2013); QLFS 2008-2015; PALMS; Own Calculations using SARS tax data.

Figure 28 compares South Africa’s expenditure as a proportion of GDP, and beneficiaries reached as a proportion of the labour market, to ALMP data from 41 OECD and LAC countries. While the data is not directly comparable as it is based on different years, it does provide an indication of the relative spending on ALMPs in South Africa. In 2015, South Africa spent the equivalent of 0.4 percent of GDP on ALMPs. This was close to the average for the group (0.45), with 23 countries spending a lower proportion and 18 countries spending a higher proportion. The reach of South African ALMPs is notable. In comparison with 29 OECD and LAC countries for which data was available, only Luxembourg reached more beneficiaries as a proportion of the total labour market.

Figure 28: ALMP expenditure as a share of GDP, participants as a share of labour force, and unemployment rates, by country



Source: Cerutti et al. 2014; South Africa: SACN (2017) and Department of Public Works (2009); NSF (2013); Chatterjee and MacLeod (2016); Own Calculations using SARS tax data.

Overall, the use of ALMPs in South Africa has grown substantially in the last decade. An initial analysis indicates a substantial number of beneficiaries reached under the three ALMPs evaluated. Expenditure on ALMPs is also increasing, indicating renewed focus on demand-side interventions for the unemployment problem in South Africa. Even in comparison with OECD and LAC countries, the reach of ALMPs in South Africa is notable. This provides motivation for thorough and effective monitoring and evaluation of these programmes, as currently the data required to systematically compare these schemes are not available. In addition, the means to evaluate each of South Africa’s ALMPs in terms of different outcomes – and especially job creation – needs to be in-built into the implementation process for each of these schemes.

5 Conclusion

Economic growth has been slow in the post-apartheid period in South Africa, leading to the empirical and analytical assessment that the South African economy is effectively mired in a long-run, low-level growth trap. Both economic growth and employment generation have thus been constrained by the inability of the South African economy to experience growth-inducing structural transformation – wherein manufacturing led growth is prominent. This is of particular concern due to the high levels of entrenched structural unemployment in South Africa.

Post-apartheid South Africa has witnessed a rapid and extensive integration into the global economy. This is evidenced by the liberalisation of trade policy, the negotiation and implementation of a variety of trade agreements, and rising levels of trade and openness. This rapid increase in openness has increasingly subjected South Africa to global shocks. The financial crises, particularly, has exacerbated an already pervasive level of unemployment – as our data illustrate for example, that over a million jobs were lost during the recession resulting from the 2009 financial crisis.

In order to address unemployment caused by both short-term shocks to the labour market, and long-term structural constraints, policy makers have responded with a number of ALMPs. All three of these APLs target those individuals who are most vulnerable to unemployment – youth, women, those with disabilities, those in low-wage occupations, and those with low skills levels. Results from the analysis of these schemes indicate mixed results.

The immediate crisis emerging from the global shock of the financial crises led policy makers to introduce a job retraining scheme, which aimed to reduce job losses arising out of the financial crises, particularly by re-training workers at risk of retrenchment. However, the job retraining intervention appears to have been ineffectual in making a real impact on the job losses stemming from the financial crises. Very few workers have been retrained under this scheme, and there is no indication on the number of jobs that were saved through this retraining process. The public employment scheme, on the other hand, has been successful in creating a large number of work opportunities for the unemployed, although the extent to which these work opportunities resulted in long-term employment – and therefore alleviated structural unemployment in South Africa – is unclear. Similarly, while the wage subsidy scheme supports over a million jobs per year, it is unclear to what extent jobs have been created, rather than supported, under this programme.

The cost per beneficiary of each of the three ALMPs reviewed provides insight into the overall effectiveness of these schemes. The public employment scheme has the highest cost per beneficiary, at \$1,180 per work opportunity created. This is followed by the job re-training scheme, which costs \$980 per worker retrained. The wage subsidy scheme is the cheapest, costing only \$211 per worker supported. On this basis, as well as the overall reach of each of these schemes, the most successful of the schemes appears to be the wage subsidy scheme, which has benefitted the highest number of beneficiaries at the lowest cost per beneficiary. It should be noted, however, that the measurement of the cost of these schemes per beneficiary is not comparable in terms of the impact of each of these schemes on the individual in question. While the wage subsidy scheme appears at a glance to be the most

successful, there is currently no indication of the number of jobs created under this scheme. While the public employment scheme is creating (rather than supporting) work opportunities, there is also no indication as to the extent to which they translate into longer-term employment.

In total, South Africa spent \$14.2 billion on ALMPs between 2004/15 and 2015/16, an annualised average of \$1.2 billion per year. The total fiscal cost of ALMPs in South Africa was 1.2 and 0.4 percent of government expenditure and GDP, respectively, in 2015/16. Peak spending on ALMPs occurred during the financial crises and the years immediately after – in 2010/11, total expenditure on ALMPs equated to 1.2 of GDP, and 3.5 percent of government expenditure. Until 2013/14, expenditure on ALMPs was driven almost entirely by the public employment scheme. By 2015/16, however, the wage subsidy scheme was contributing 25 percent to the total expenditure on ALMPs in South Africa.

The number of beneficiaries under South African ALMPs also increased substantially in the 12 years between 2004/5 and 2015/16. In total, there were 9.1 million jobs created, supported or re-trained during this period, averaging around 800,000 per year. In 2015/16, the 1.8 million beneficiaries equated to 8.7 percent of the labour force and 11.6 percent of total employment. Until the implementation of the wage subsidy scheme in 2013/14, total beneficiaries under South African ALMPs was driven almost entirely by the public employment scheme. In recent years this has shifted, and by 2015/16 the wage subsidy scheme was the dominant ALMP in terms of the number of beneficiaries, contributing 60 percent of the total beneficiaries reached in that year.

The analysis also indicates that South Africa's expenditure on ALMPs as a proportion of GDP is high in comparison with nine LAC countries. In the year for which comparable data was available, South Africa spent the equivalent of 1.2 percent of GDP on ALMPs, more than double the proportion spent by the next highest country. Even in comparison with OECD countries, South Africa has a relatively high expenditure on ALMPs as a proportion of GDP. The reach of South African ALMPs is also notable. In comparison with 29 OECD and LAC countries for which data was available, only Luxembourg reached more beneficiaries as a proportion of the total labour market.

Overall, then, South African ALMPs have enjoyed relative success in terms of beneficiaries reached. The analysis from this paper, however, indicates that poor monitoring and evaluation, government capacity, fiscal leakages, difficulty in balancing trade-offs and an inability to convert the support offered under the scheme to long-term employment have generally hampered the success of these schemes thus far. Of utmost importance is the implementation of a rigorous monitoring and evaluation programme for each of the ALMPs. Without the appropriate evaluation tools, there is an inability to perform long-run, high quality analysis of the impacts of these schemes. With a thorough understanding of the impact, strengths and weaknesses of ALMPs, it will be possible to evaluate their versatility to be used as responses to future shocks affecting the South African labour market.

In times of adjustment, governments should have in place a toolkit of labour market policies designed to assist workers who have experienced job losses with the

possibility of sourcing full-time regular employment. Re-training, public employment and wage subsidies are critical components of such adjustment policies. Finding the correct balance in programmes, ensuring that outcomes are optimal and also carefully measured, and ensuring that innovation in programmes are considered is critical for the long-run success of ALMPs in a developing country setting such as that of South Africa.

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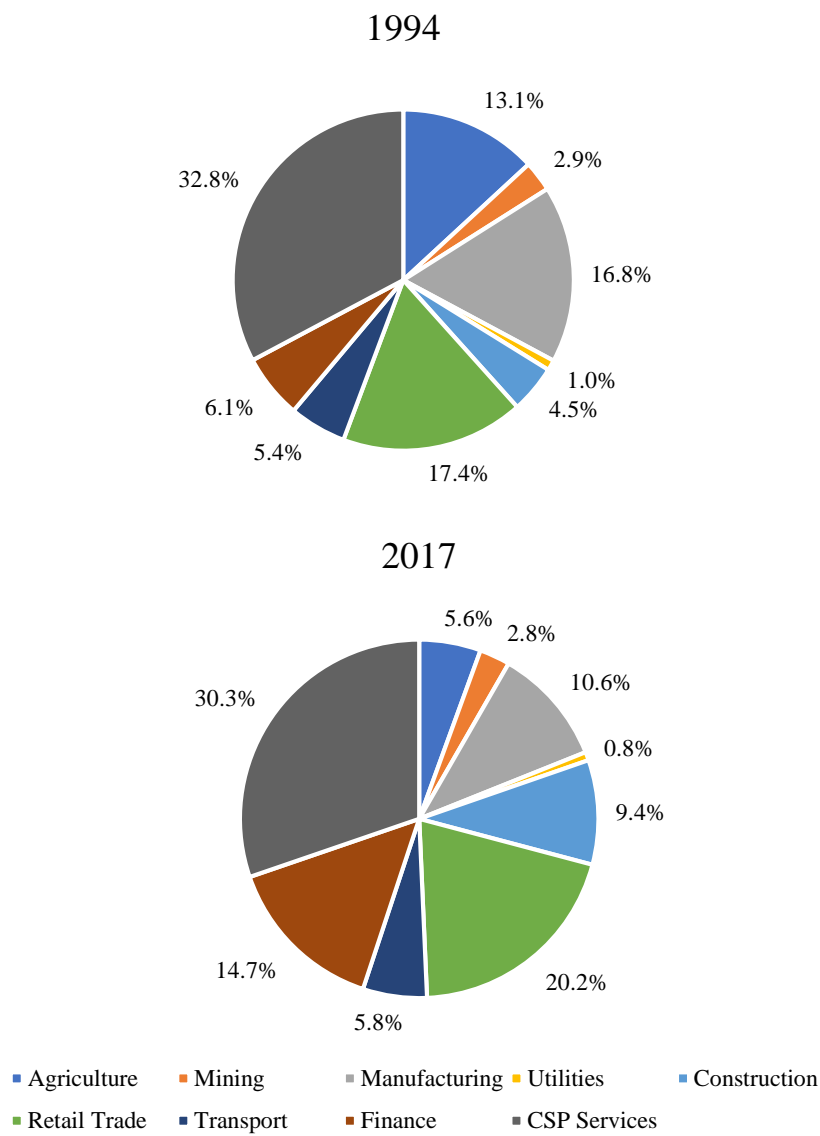
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Appendix

Figure A 1: Contribution to Employment by Industry, 1994-2017



Source: Own calculations using data from Kerr et al. (2017)



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