South African Growth: Context, Cause and Consequence

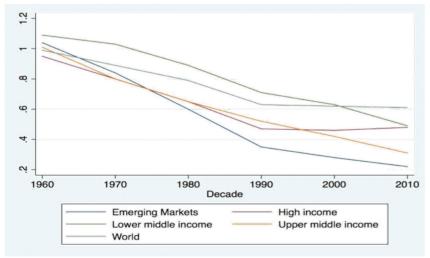## South Africa's growth performance in comparative context

By international standards, South Africa's growth performance over the last half century has been woeful. Recently, the growth rate barely in positive territory, finally triggered something of an engagement with growth in the South African policy debate. In fact, the problem is far more serious, and of a deeper structural nature than reference to the most recent performance would suggest.

Figure 1 displays South African real per capita GDP as a proportion of a set of group averages, with all real GDP measures indexed to 1960, allowing for a comparison of relative rates of change.[1] Comparisons are made with five distinct reference groups of countries over six decades (1960s – 2010s):

- 17 emerging markets, [2]
- high income countries,
- lower and upper middle income countries,
- and all countries (the World),[3]

Irrespective of the comparator group the inference is the same - South Africa has lagged all comparator group averages in terms of its ability to grow.

Figure 1 – South African real per capita compared with five reference groups of countries, indexed to 1960

Source: Fedderke (2017a)

Dr. Johannes Fedderke is Director of Economic Research South Africa, Professor at Pennsylvania State University and the Wits Business School. His research interests center on the determinants of economic growth, with special interest in the role of institutions in long run economic development. His published work includes empirical and theoretical contributions, and has provided cross-country, panel and country specific time series evidence on the interaction of growth and institutions.

Indexed real per capita GDP declined from:

- 104% of the group average in the 1960s to 22% of the group average in the 2010s for the comparator emerging markets;
- 95% of the group average in the 1960s to 48% of the group average in the 2010s for high income countries;
- 109% of the group average in the 1960s to 49% of the group average in the 2010s for lower middle income countries;
- 101% of the group average in the 1960s to 31% of the group average in the 2010s for upper middle income countries;
- 99% of the group average in the 1960s to 61% of the group average in the 2010s for all countries in the world.

Thus while South African real per capita GDP has increased over time, the country has steadily lost ground when compared with other countries. The failure in South Africa is long-standing, profound, and of a deeply structural nature.

South Africa's growth path is not balanced, since the sectors of the South African economy are not growing at the same rate.

Currently, South Africa's growth is very low, and shows signs of secular stagnation rather than catch-up. Even under the most optimistic assumptions it is difficult to see a structural growth rate for the economy above 2% per annum (see Fedderke and Mengisteab, 2017) - insufficient to raise average welfare, given the current population growth.

Some underlying structural Constraints

Consideration of the structural characteristics of the South African economy only deepens concerns. The focus here is on some central issues of most immediate concern.

1. Unbalanced growth

South Africa's growth path is not balanced, since the sectors of the South African economy are not growing at the same rate. The result has been an ever increasing relative importance of service sectors, at the expense of the primary and secondary sectors of the economy.

Specifically, within the Ngai and Pissarides (2007) framework, where total factor productivity[4] (TFP) growth that is differentiated across economic sectors, balanced growth emerges only if the price elasticity of demand[5] is unity. By contrast, employment shifts to low-TFP-growth sectors for a price elasticity below unity, and to high-TFP-growth sectors for a price elasticity above unity. The reason is that sectors with faster TFP growth produce more real output over time, so under a price elasticity of demand below/equal to/above unity, their relative prices fall, with the price changes triggering increases in consumption demand that less than/proportionately/more than offset the price fall. Hence sectoral shares in nominal output decline/remain constant/increase, and hence employment shares decline/remain constant/increase.
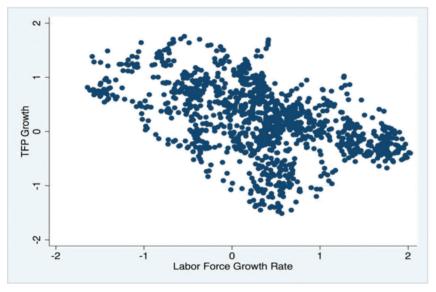
Fedderke (2017a) confirms that South Africa reports differential total factor productivity growth across sectors, combined with a price elasticity of demand that falls below unity. This carries the implication that over time, the labour factor input will shift from high, to low productivity sectors. Figure 2 gives a simple verification that this empirical prediction of the underlying structural econometric modelling holds true.

These structural forces driving structural change in the South African economy have major implications for policy making. Since labour absorption is concentrated in low productivity (and output) growth sectors, labour market policy that drives up the real price of labour is likely to be particularly counterproductive in addressing an unemployment rate of 25% (or more).

Instead policies targeting the supply side of the economy and international competitiveness are likely most effective for raising employment and growth.

The analysis also suggests that policies targeting returns to labour and wage growth alone will be insufficient to address unemployment and poverty in South Africa. Instead policies targeting the supply side of the economy and international competitiveness are likely most effective for raising employment and growth. For South Africa, this may require considering sectors outside those that have historically been the focus of policy. Instead of mining and manufacturing, new service industries particularly in finance, transport and communications that report high TFP growth may have more growth potential, especially given potential exports to the African continent.

Figure 2 – Total factor productivity growth vs. employment growth

The points are sectoral 10 year moving averages over 1960-2012, for the two digit[6] economic sectors of South Africa.
Source: Fedderke (2017a).

2. Product Market Distortions

South Africa faces serious product market distortions.

One of the persistent recent findings about South African output markets is that they manifest high levels of concentration.[7] As well as high levels of pricing power,[8] with negative growth consequences.[9]

These findings interact with the nature of South Africa's unbalanced growth path. Since high mark-ups are associated with lower TFP growth, and labour is shifting to low TFP sectors, labour absorption should occur in sectors with high mark-ups. Importantly, output market distortions and labour market distortions

reinforce each other, in the sense that sectors with the strongest output market pricing power, also have the highest level of labour market inflexibility.[10]

Since productivity growth is a predictor of long-run growth, policy focussed on removing constraints on the supply side of the economy, particularly in increasing competitive pressure, encouraging economies of scale in production, and access to world markets, will be of particular importance. The structural product market forces shaping South Africa's unbalanced growth, combined with the already unusual industrial structure of the South African economy, thus points to the importance of liberalizing both labour and output markets.

3. Growth and inequality

South African academic research in economics over the past two decades has been dominated by a focus on poverty and inequality. The vast preponderance of public funding both for field work, as well as in terms of funding for research chairs has been focussed on poverty and inequality. Yet virtually no work (to my knowledge none) has emerged exploring the link between poverty and inequality on the one hand, and the fundamental motor for long-term welfare improvement that is provided by economic growth. This is surprising since there exists a deep symbiotic association between growth and inequality, that has been the subject of theoretical and empirical interest to economists for decades. Useful reviews of the literature can be found in Aghion et al (1999) and Bènabou (1996).

Thus inequality is driven by economic growth, but equally growth is determined by the level of inequality. What is more, the interdependent association is benevolent. Growth serves to lower inequality, and falling inequality is itself beneficial to economic growth.

Fedderke (2017b) empirically explores the relationship between growth and inequality in South Africa in the context of the theoretical transmission mechanisms proposed in the international literature. Robust econometric results are conditional on allowing for multiple mechanisms linking the two aggregate outcomes.

The core result is that growth and inequality co-determine one another in South Africa in the 1960-2014 period. Thus inequality is driven by economic growth, but equally growth is determined by the level of inequality. What is more, the interdependent association is benevolent. Growth serves to lower inequality, and falling inequality is itself beneficial to economic growth. Moreover both linkages are substantively significant, with a 1% increase in real per capita GDP associated with a 0,45 unit decrease in the Gini coefficient (on the 0 – 100 scale), and a decrease of 1 unit in the Gini coefficient with a 2 percentage point increase in real per capita GDP.

The impact of labour absorption on inequality is dramatic. Increasing labour absorption by only 1%, serves to decrease the Gini coefficient by 2,60 units, the single strongest driver of inequality in South Africa amongst the variables considered. In this context the empirical evidence on labour absorption in the economy is of grave concern, with approximately 10% of the population now in private formal sector employment - see Figure 3. Labour market distortions in the economy remain a critical concern.

Openness of the economy contributes positively both to inequality, and to economic output. Finding a statistically significant positive impact of openness

on real per capita GDP is consistent with the literature on the positive impact of openness on growth (Sachs and Warner, 1995; Rodrik et al, 2004, Rattsø and Stokke, 2004), and with findings on openness and growth for South Africa (Aghion et al, 2013). The sub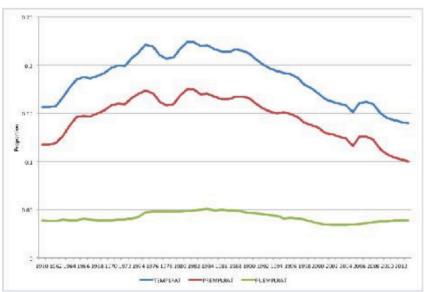stantive impact is relatively weak, however, with an increase intrade as a proportion of GDP by 10 percentage points, generating a 1% increase in real per capita GDP. The impact on inequality proves substantively much stronger, with each percentage point increase in the proportion of GDP being traded generating a 0 5 unit increase in the Gini. Despite the finding of benevolent Stolper-Samuelson effects[11] in Fedderke et al (2012), therefore, the rapid opening of the economy does appear to have had significant disruptive distributional consequences for South Africa, likely through the technical change channel (see

But the impact of technological change will require a long term response in education and training policy to improve the resilience of the labour market in absorbing labour displacement through technological change.

Fedderke et al, 2012; Fedderke and Romm, 2006). Note also that the rising importance of TFP growth in South Africa, is likely to amplify the importance of the technical change transmission mechanism over time.

Continuing trade liberalization is appropriate, especially in order to assist in the reduction of output market pricing power noted above. But the impact of technological change will require a long term response in education and training policy to improve the resilience of the labour market in absorbing labour displacement through technological change. Indeed, the impact of technology will be felt even behind any protective trade barriers.

Figure 3: Proportion of the South African population in formal employment outside agriculture

TEMPLOYRAT denotes total, PREMPLRAT private sector and PUEMPLRAT public sector employment, as proportions of the population.

Source: South African Reserve Bank.

Redit markets have played roles in the determination of inequality, both consistent and inconsistent with the theoretical mechanisms reviewed above. Improvements in corporate credit intermediation we find to have lowered inequality. This finding is consistent with the finding on labour absorption, since improvements in financial intermediation to the corporate sector, is likely associated with improved demand for labour. However, increases in household credit extension have been associated with increases in the level of inequality in South Africa. This may be a reflection of improved access to credit for some sections of the Black population, serving to widen inequality within the Black population group since the 1990s. Both household and corporate credit extension are important, with an increase of household and corporate financial intermediation as a proportion of GDP by 10 percentage points leading to a 1.74 unit increase, and 3.95 unit decrease in the Gini coefficient respectively.

The bottom line in policy terms is that the best way to address inequality is to raise growth and labour absorption.

Surprisingly, transfer payments, as measured for by government expenditure as a proportion of GDP do not have a statistically significant association with inequality. However, they do report a statistically significant positive association with real per capita GDP. Given that GDP growth reduces inequality, transfer payments reduce inequality only indirectly via economic growth. The insight that the execution of public policy is likely subject to public choice constraints has been made before - see Simkins (2004, 2011).

The bottom line in policy terms is that the best way to address inequality is to raise growth and labour absorption.

4   Political economy constraints

Political economy constraints are back.

For South Africa uncertainty from political conditions have major impacts in; (a) lowering investment in physical capital (Fedderke, 2004), and (b) lowering foreign direct investment (Fedderke and Romm, 2006), and (c) triggering capital flight (Fedderke and Liu, 2002). The reason for the negative impact is immediate and intuitive: in the presence of uncertainty, particularly systemic uncertainty, investors defer commitment. The good news post-1994 was that political uncertainty was dramatically reduced (Fedderke et al, 2001a, Fedderke and Pillay, 2010). The bad news is that uncertainty has risen again in recent years.

While Fedderke (2014) provides a more detailed discussion of corruption, here the World Governance Indicators are considered. These indicators have 6 dimensions: Control of Corruption; Government Effectiveness; Regulatory Quality; Political Stability; Voice and Accountability.
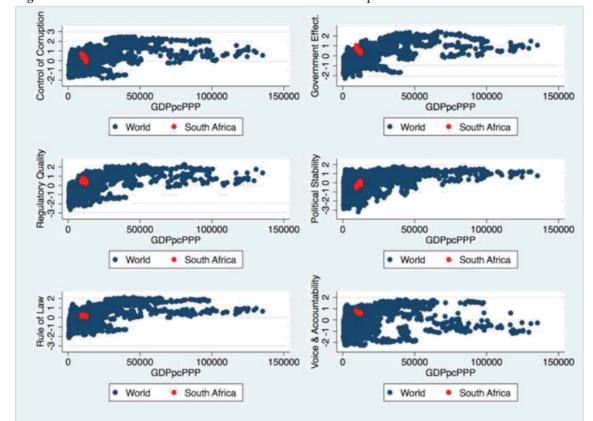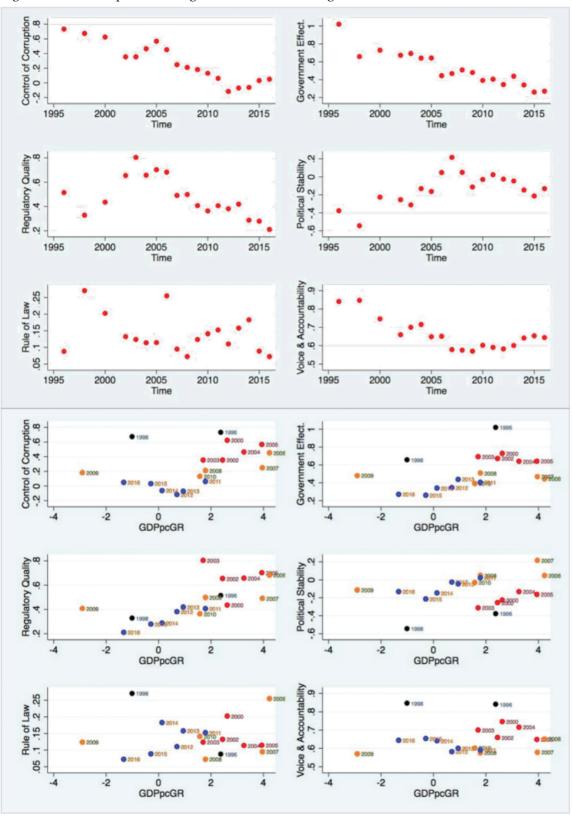
Figure 4 - World Governance Indicators: South Africa in world comparative context[12]

Three conclusions can be drawn:

- While South Africa improved its governance quality with the democratic transition of 1994 (see Fedderke et al, 2001), for all governance indicators it remains at best mid-table in international comparative terms. See Figure 6.
- Since the late 1990s, South African governance indicators have been on a downward trend - see Figure 5. The only nuance is that political instability began its decline in the mid 2000s.
- The positive association between the governance indicators and growth continues to be confirmed for South Africa - see Figure 6, and the evidence in Fedderke et al (2001b).

Erosion of the quality of governance thus means: (a) that South Africa's relative world ranking is declining; with (b) increasing dampening effects on economic growth.

Figure 6 – Relationship between SA governance indicators and growth

Some structural policy consequences

The implications of the structural findings are serious: labour absorption is being forced into the sectors with the lowest growth potential, reinforced by anti-competitive, concentrated output markets, and non-clearing labour markets that show an ever decreasing capacity to create sufficient jobs for a growing population.

A non-exhaustive list of policy inferences is:

- The implication of the nature of the unbalanced South African growth path is that policies targeting returns to labour and wage growth will be insufficient to address unemployment in South Africa. Instead policies targeting the supply side of the economy and international competitiveness are likely necessary complements for raising employment and growth.

- The implication of output market distortions is that policies targeting the supply side of the economy, industry concentration, but above all competitive pressure on markets are necessary for raising employment and growth.

- The strongest policy levers suitable for raising average welfare are policies designed to stimulate growth, increase labour absorption (i.e. stimulating job creation), and extending credit to entrepreneurs. All of these policy handles are much more powerful than fiscal transfer payments, which have a positive, but merely proportional, impact via real per capita GDP, and no statistically significant impact on inequality. While results support the importance of lowering inequality as an important driver of accelerating growth, we also note that the principal, if not the sole, emphasis over the past two decades in South Africa has been on welfare transfers, the single weakest driver of the growth-inequality nexus. The consequence is the singular failure in South Africa to reverse the rising trend in inequality. The core policy orientation, if inequality is to be reduced in South Africa, must be to stimulate job creation, and to raise growth. A further priority must be to reverse the now long-standing trade-off between employment and economic growth. Whatever the reason for the non-clearing labour market, this deep structural impediment constrains not only the prospects for aggregate welfare improvements (growth), but the ability of policy to address questions of distributional equity.

> *The core policy orientation, if inequality is to be reduced in South Africa, must be to stimulate job creation, and to raise growth. A further priority must be to reverse the now long-standing trade-off between employment and economic growth.*

- The steady hollowing out of South African governance institutions must stop, and be reversed.

Currently South Africa is pursuing none of these policy priorities. Worse still, the gradual recovery of the world economy will provide a modest positive support for South African economic performance, once again allowing procrastination on the urgent need for reform, thereby locking in medium- to long-term underperformance. The country needs to move on from treating only the symptoms of an underperforming economy and to start addressing the fundamental structural constraints on economic growth.

NOTES

1   Note: given the indexing, the data are not interpretable as relative levels of real per capita GDP, merely in terms of the dynamics of change post 1960.
2   Included are: Argentina, Brazil, Chile, China, Colombia, Ecuador, Egypt, Indonesia, India, South Korea, Malaysia, Philippines, Mexico, Singapore, Turkey, and Thailand.

3   The income classification is that of the World Bank's World Development Indicators
4   Total factor productivity accounts for increases in efficiency. Thus, if a sector produces 1% more this year with the same labour and capital than it did last year, total factor productivity has grown by 1%. It is possible that a sector becomes less efficient over time, in which case total factor productivity growth is negative. Periods of strong expansion in capital stock, in anticipation of future demand/returns, would also generate negative values.
5   The price elasticity of demand measures the percentage drop in demand relative to the percentage increase in price. Thus, if demand drops by 1% while prices rise by 1%, the price elasticity of demand is 1 (unity).
6   The two digit economic sectors are a level of the Standard Industrial Classification. The first digit refers to a major sector, such as mining or manufacturing. The second digit identifies the most important subsectors within a major sector, such as textile manufacturing, or retail trade.
7   See Fedderke and Szalontai (2009) and Fedderke and Naumann (2010).
8   See Fedderke et al (2007), Aghion et al (2008, 2013), OECD (2008), Klein (2011).
9   See Aghion et al (2008, 2013), World Bank (2016), and Fedderke et al (2017).

10 Labour market inflexiblity is defined and measured as the proportion of labour cost that is part of fixed rather than variable cost - see the theory and evidence in Fedderke and Hill (2011).
11 The Stolper-Samuelson theorem states that, under certain conditions, a rise in the relative price of a good will lead to a rise in the return to that factor which is used most intensively in the production of the good, and conversely, to a fall in the return to the other factor.
12 Data are for 214 countries and territories, over the 1960-2014 period.
13 Source: World Bank.

REFERENCES

1   Aghion, P., Braun, M., and Fedderke, J.W., 2008, Competition and Productivity Growth in South Africa, Economics of Transition, 16(4), 741-68.
2   Aghion, P, Caroli, E., and García-Peñalosa, C., 1999, Inequality and Economic Growth: The Perspective of the New Growth Theories, Journal of Economic Literature, 37, 1615-60.
3   Aghion, P., Fedderke, J.W., Howitt, P., and Viegi, N., 2013, Testing Creative Destruction in an Opening Economy: the Case of the South African Manufacturing Industries, Economics of Transition, 21(3),419-50.
4   Bènabou, R., 1996, Inequality and Growth, NBER Macroeconomics Annual 1996 Volume 11, 11-92.
5   Fedderke, J.W., 2004, Investment in Fixed Capital Stock: testing for the impact of sectoral and systemic uncertainty, Oxford Bulletin of Economics and Statistics, 66(2), 165-87.
6   Fedderke,J.W., 2014, South Africa's Growth Performance, in H.Bhorat, A.Hirsch, R.Kanbur and M.Ncube (eds.), The Oxford Companion to the Economics of South Africa, Oxford: University Press,pp 39-50.
7   Fedderke, J.W., 2017a, Exploring Unbalanced Growth: Understanding the Sectoral Structure of the South African Economy, Economic Modelling, forthcoming.
8   Fedderke, J.W., 2017b, Growth and Inequality: The South African Case in International Context, Under Review.
9   Fedderke, J.W., De Kadt, R., and Luiz, J., 2001, Indicators of Political Liberty, Property Rights and Political Instability in South Africa, International Review of Law and Economics, 21(1), 103-34.
10 Fedderke, J.W., De Kadt, R.H.J., and Luiz, J., 2001, Growth and Institutions: a study of the link be-tween political institutions and economic growth in South Africa - a time series study, 1935-97, Studies in Economics and Econometrics, 25(1), 1-26.
11 Fedderke, J.W., and Hill, A.J., 2011, Industry Structure and Labour Market Flexibility in the South African Manufacturing Sector: A Time Series and Panel Data Approach. Economic Modelling, 28, 1291-302.
12 Fedderke, J.W., and Liu, W., 2002, Modelling the Determinants of Capital flows and Capital Flight: with an application to South African data from 1960-95, Economic Modelling, 19, 419-44.
13 Fedderke, J.W., and Mengisteab, D., 2017, Estimating South Africa's output gap and potential growth rate, South African Journal of Economics, 85(2), 161-77, DOI: 10.1111/saje.12153.
14 Fedderke, J.W., and Naumann, D., 2011, An Analysis of Industry Concentration in South African Manu-facturing, 1972-2001, Applied Economics, 43(22), 2919-39.
15 Fedderke, J.W., Obikili, N., and Viegi, N., 2016, Markups and Concentration in South African Manufac-turing Sectors: an analysis with administrative data, South African Journal of Economics, forthcoming.
16 Fedderke, J.W., Perkins. P., and Luiz, J.M., 2006, Infrastructural Investment in Long-run Economic Growth: South Africa 1875-2001, World Development, 34(6), 1037-59.
17 Fedderke, J.W., and Pillay, N., 2010, Theory-Consistent Formal Risk Measures: Using Financial Market Data from a Middle Income Context, Oxford Bulletin of Economics and Statistics, 72(6), 769-93.
18 Fedderke, J.W., and Romm, A., 2006, Growth Impact and Determinants of Foreign Direct Investment into South Africa, 1956-2003, Economic Modelling, 23, 738-60.
19 Fedderke, J.W., Shin, Y., and Vaze, P., 2012, Trade and Labor Usage: An Examination of the South African Manufacturing Industry, Oxford Bulletin of Economics and Statistics, 74(6), 808-30.
20 Fedderke J.W. and Szalontai, G.,2009, Industry Concentration in South African Manufacturing: Trends & Consequences, 1970-1996. Economic Modelling, 26(1), 241-50.
21 Klein, N., 2011, South Africa: The Cyclical Behavior of the Markup and its Implications for Monetary Policy, IMF Working Paper, WP/11/204.
22 Ngai, R., and Pissarides, C.A., 2007, Structural Change in a Multisector Model of Growth, American Economic Review, 97(1), 429-43.
23 OECD, 2008, OECD Economic Surveys: South Africa 2008, Vol 2008/15, Paris.
24 Piketty, T., 2014, Capital in the Twenty-First Century, Harvard University Press.
25 Rattsø, J. and Stokke, H.E., 2004, The interaction between growth, openness and inequality: Intertem-poral Ramsey growth model analysis of South Africa, Norwegian University of Science and Technology Department of Economics Working Paper No. 11/2004.
26 Rodrik, D., 1999, Where Did All the Growth Go? External Shocks, Social Conflict, and Growth Collapses, Journal of Economic Growth, 4(4), 385—412.
27 Sachs, J.D., and Warner, A., 1995, Economic Reform and the Process of Global Integration, Brookings Papers on Economic Activity, The Brookings Institution.
28 Simkins, C.E.W., 2004, Employment and Unemployment in South Africa, Journal of Contemporary African Studies, 22(2), 253-78.
29 Simkins, C.E.W., 2011, South African Disparities, Journal of Democracy, 22(3), 105-19.