Against the expansion of a failed economic regulation model in South Africa

Seán M. Muller and Mike Muller[1]

Draft paper presented to 5th Annual Competition and Economic Development (ACER) Conference

Chobe, Botswana, 18-19 July

Democratic South Africa has favoured an institutional model in which state-owned entities have an arms-length relationship with the state itself; appropriate conduct – most notably in relation to pricing – is overseen by economic regulators. The government is looking to extend this model to the transport and water sectors. But this model has not met South Africa's needs. The financial and operational crises at Eskom provide a notable demonstration of the model's limitations and failures in South Africa.

The corporatise-and-regulate model was partly a product of the Washington Consensus, in which the unreliability and incapacity of the state could be counteracted by disciplining effects of markets and regulators. Literatures on the developmental state and complexity of regulation, on the other hand, provide a basis for understanding why the model may be inappropriate in the South African context.

Eskom demonstrates that corporatisation and regulation did not lead to institutional efficiency, insulation from corruption or even a stable pricing path. The structure furthermore requires a triplication of capacity: in the enterprise, in the shareholder (the state) and in the regulator. In the current situation of crisis management, the regulatory model is obstructing crisis measures and even more roles are being added to circumvent this.

The policy of creating regulators to oversee pricing and performance in the transport and water sectors is a costly distraction from the critical issues in each sector. A new approach is needed.

JEL: L51, O20, L94, L91, L95.

[1] Dr Seán Muller (seanm@uj.ac.za) is a Senior Lecturer in the School of Economics, and a Research Associate at the Public and Environmental Economics Research Centre (PEERC), at the University of Johannesburg; Prof Mike Muller (mike.muller@wits.ac.za) is Adjunct Visiting Professor at the Wits School of Governance, University of the Witwatersrand, and former director general of water affairs.

1. Introduction

State-owned entities[2] (SOEs) can play a key role in economic development and such a role is often envisaged in formulations of the 'developmental state' to which South Africa notionally subscribes (National Planning Commission, 2012). The broader institutional structure in which such entities are contained is extremely important, however, which draws attention to questions of political economy (Chang, 2010). As with some other areas of economic policy, South Africa has arguably vacillated on the positioning of state-owned entities: in certain periods decisions have been taken that appeared intended to prepare for large-scale privatisation, while in others specific entities have been presented as a key lever for government intervention in the economy.

Economic regulators have been an important component of the institutional model for state-owned enterprises adopted since 1994. In energy, the National Electricity Regulator (NER) and then the National Energy Regulator (NERSA) have overseen electricity pricing decisions by the national power utility (Eskom) since 1995 and 2005. NERSA has also overseen the freight logistics operator (Transnet) in relation to tariffs of fuels carried by Transnet pipelines. More recently, a ports regulator was established to oversee the National Ports Authority (NPA), which falls under Transnet. In telecommunications, where the state used to own the fixed line operator Telkom, the sector is subject to regulation by the Independent Communications Authority (ICASA).

The basic model under which all these regulators fall is one where the regulator has substantial operational independence under law to regulate the state-owned entity on the basis of promulgated state policies, with a strong emphasis on pricing decisions. The logic – sometimes explicit, but often implicit – is that the state entities cannot be relied upon to make decisions motivated by the public good. The model's adoption was arguably a function of policy decisions in South Africa's new democracy being taken towards the end of the era of the Washington Consensus and with an eye to privatisation of some SOEs (Muller, 2013). The consequence of such decisions internationally has been the creation of an "anaemic regulatory state unlikely to perform the required functions of a developmental state" (Mkandawire, 2010, p. 59).

At various points, the state has indicated an interest in expanding this model further by establishing economic regulators for the water and transport sectors. The former sector is entirely run almost entirely by state-owned entities of some kind, while the latter sector has a mix of operational forms except in rail (freight and passenger) where the state is the only significant operator. At present an Economic Regulation of Transport Bill is before Parliament, which would establish a Transport Economic Regulator and Transport Economic Council for the transport sector ("shipping and ports, aviation, rail or road").

[2] Note that, following the Presidential Review Committee on State-Owned Entities, we use the term 'entity' rather than 'enterprise' since the latter forms a subset of the former. State-owned enterprises, sometimes referred to as 'state-owned companies' (SOCs), are often incorporated under the Companies Act and are supposed to operate as financially independent from the state. Examples are the national power utility (Eskom) and freight logistics company (Transnet). State-owned entities, on the other hand, are quasi-autonomous entities that in some instances raise little revenue of their own and are heavily reliant on direct transfers/appropriations from the state. Examples in this much broader category include water boards and the passenger rail agency (PRASA).

The rationale for economic regulation in South Africa has largely been concerned with pricing. The traditional justification for this is the theoretical result that (state or private) monopolies maximise profit by setting excessive prices, leading to sub-optimal social welfare.[3] More broadly, government has been concerned about the effect of pricing by public entities on the economy as a whole. Notable in this regard are the efforts to consider the dynamics and effects of 'administered prices'[4] (Storer & Teljeur, 2003; NEDLAC, 2011) – a topic which continues to recur temperamentally (PMG, 2013) depending on the prevailing political and policy dynamics of the country at the time.

The pricing of goods and services, not least critical ones like water and electricity, by state entities has clear implications for citizen welfare, but also economic development and competitiveness. It therefore certainly requires well-thought out approaches that balance society's various objectives with the institutional and political realities. The public interest issues, along with institutional and political complexities and poor regulatory performance, have been adequately analysed by arguably the two most important recent government initiatives: the National Development Plan (NDP) (National Planning Commission, 2012) and the Presidential Review Committee on State-Owned Entities (PRC) (PRC, 2013).

Our argument here is, firstly, that the economic regulation model adopted to date has failed in material ways. This concurs with the views of many experts on South African regulation. But our second argument, building on Muller (2013) and Muller et al. (2015), is that such failures indicate the need to revisit the rationale and justification for the entire model that has been adopted – especially given intentions to expand it to other sectors and entities.[5] This is in contrast to the general approach in the regulation literature (van Basten, 2007; Steyn, 2012) and some of the associated policy literature, which has been to identify particular challenges that could be addressed to improve the efficacy and performance of regulators. Finally, we suggest that given the poor performance of regulators within the political and institutional realities of the country, and drastic skills and resource shortages more generally, the favoured model (of regulation and SOE management) is wasteful and counterproductive. Instead, we argue for the need to grasp the nettle of effective, direct operation of state-owned entities, from which independent economic regulators are a costly distraction.

[3] An additional concern in sectors where there are private operators is that state entities may unfairly outcompete the private sector by *under*pricing – we touch on this briefly in the subsection on competitive neutrality.

[4] Administered prices have been defined as, "all prices for services provided by state-owned enterprises or those regulated by organs of the state" (Storer & Teljeur, 2003) and "prices set via a regulated framework where the market alone would not have ensured an efficient outcome" (NEDLAC, 2011, p. 12).

[5] Muller (2013, p. 675) states that "there is a need to stand back and reflect on the challenges of network infrastructure provision in the twenty-first century and to consider the role of regulation, more or less formal, more or less independent, in achieving the intended outcomes from the substantial public and private investments made in providing and operating infrastructure systems".
While Muller, et al. (2015, p. 31) ask:
"Is economic regulation not working because it has not been implemented properly (or is too complex to implement), or might there be some inherent tensions between the arms-length 'corporatise and regulate' approach and the more activist developmental state? If the latter then arguably a broader rethink of the current financing framework is required."

2. Economic regulation in the post-apartheid era

Many surveys of the post-1994 approach to economic regulation now exist, along with an increasing number of reviews of the actual South African experience with such approaches. Here we provide only a brief sketch for the sake of completeness.

South Africa's democratic government was established in 1994, shortly after the collapse of the Soviet bloc (a key supporter of the African National Congress) and with China adopting various dimensions of market capitalism. With hindsight, the Washington Consensus was already on the wane in Western Europe and North America. But given that this economic ideology was firmly entrenched in international institutions such as the World Bank, International Monetary Fund and World Trade Organisation, it is hardly surprising that the new government felt compelled to accept its prescripts in a variety of areas.

This inevitably shaped policy perspectives not just because of the absence of credible alternatives but also because of the direct pressures that were brought to bear on the new government. In the field of public utilities, a particular focus was on reducing the role of the state (and creating opportunities for the private sector) through the privatisation of sectors such as electricity, transport and water. A key intervention in support of this approach was the retention of the Department of Public Enterprises, which had been established by the apartheid government with the specific mandate of privatising the SOEs.

The external and internal pressures experienced have been documented in the water sector (Muller, 2013) but were even more evident in transport and energy. There was a strong push to unbundle and privatise Eskom, separating transmission and generation but potentially also privatising generation assets (power stations) themselves. Similarly, it was argued that rail should be privatised, either vertically (separating track infrastructure from above-rail operations) or horizontally (selling vertically-integrated routes to different private operators). The introduction of economic regulators was, therefore, conceived in an environment where their primary role would be facilitating such privatisation or other means of introducing of private participation into sectors where the state previously had a monopoly. The two most important regulators whose existence dates to this era are the National Energy Regulator (NERSA) and the Independent Communications Authority (ICASA).

Putting aside our own broader qualms for the moment, it is generally recognised that independent economic regulation can only be effectively implemented if there is coherent policy guidance and stable institutional structures. Yet, in all three sectors mentioned, the early years of democracy were characterised by intense policy debates and radical institutional restructuring – much of which is still continuing. While some of these processes benefitted from regulatory insights and experience, they were arguably not yet in a state amenable to conventional economic regulation of the textbook kind cited by local proponents. Furthermore, there were already cogent cautions about the limitations of the 'privatise and regulate' approach (Vickers & Yarrow, 1988; Vickers & Yarrow, 1991), but there is little evidence that these were considered in South Africa at the time and indeed continue to be neglected even in present day debates.

While there has been much contestation and indecision, there is one model for economic regulation in South Africa that keeps emerging. This is where an independent economic regulator is established by law, the policy ministry/department determines its mandate and appoints board members, while the shareholder ministry/department oversees – via a board

– the relevant SOE using a 'shareholder compact' in which the SOE is also supposed to comply with the relevant policies of other departments.[6] It is this model that will be discussed in the remainder of the paper.

3. A failed and contradictory model

The model described above has failed. To be specific, in fact, both the underlying model of SOE management and the overlaid model of SOE regulation have failed. These failures have been recognised in all major policy reviews of SOEs in South Africa (PRC, 2013; National Planning Commission, 2012) and various reviews of economic regulation (van Basten, 2007; Steyn, 2012).

The National Development Plan summarised the situation after fifteen years of independent regulation as follows:

> Although regulators have succeeded in issuing licences, developing pricing methods and establishing technical and service standards, they have not achieved the positive outcomes initially envisaged. Based on the performance of the ICT, electricity and port sectors, South Africa is slipping down international benchmark rankings. The reliability of electricity supply has deteriorated and prices that were previously below economically viable levels are now climbing at rates that consumers are unable to absorb. Communications quality, speed and cost are significantly worse in South Africa than in comparable nations, with a similar situation in rail and port performance. (National Planning Commission, 2012, p. 162)

The PRC, in a similar vein, identified as 'issues and challenges': "inadequacy of tariffs…inability of regulators to review market entry and new capital projects…unpredictable, arbitrary and poor quality of regulatory decisions…inconsistent regulatory methodologies" (PRC, 2013, pp. 2_125-2_127).

The situation described has arguably not systematically improved since 2012/13. Similar issues are raised, in more detail, by van Basten (2007) and Steyn (2012).

But despite their dire assessments of regulatory performance, all the above analyses, endorse to varying degrees a 'doubling-down' on the existing model. The recommendations of Steyn and the PRC come across as most determined to entrench the existing model, while van Basten and, in particular, the NDP (2012, p. 162) are somewhat more cautious.

Of course, should the existing framework be retained then its flaws should be addressed where possible. But our view is that the theory and evidence warrant a reconsideration of the entire regulatory model and the implicit and explicit notions that underpin it.

One likely counter-argument is to cite political decisions and pressures as causing the various sectoral failures, rather than the model itself. Our view, which we suggest is consistent with much the political economy literature on development, is that if the model is not robust to the political realities of the country then it is entirely appropriate to deem the model a failure.

[6] A recent overview of the legal framework in which SOEs operate is provided by DOI (2019).

3.1. Electricity regulation and Eskom's crisis

There is no better, or more important, illustration of the failure of the preferred regulatory model than the case of electricity regulation and the power utility Eskom.[7] In the last decade, South Africa has experienced nationwide loadshedding in order to maintain integrity of the grid, rapid and large increases in electricity prices, and hundreds of billions of Rands transferred from the fiscus to stabilise Eskom's balance sheet. As Fine (2010) notes:

> [the electricity crisis] is indicative of the absence of a developmental state in South Africa…Unlike any developmental state in the past, policy for electricity supply has effectively been devolved to a regulator with limited powers other than the short-termism associated with pricing (Fine, 2010, pp. 176-7)

The limits to the regulatory model that had been enforced were becoming evident some years before its failures manifested in power cuts. Already in 2003, members of the Parliamentary Portfolio Committee on Minerals and Energy questioned the applicability of the tariffing methodology adopted by the National Electricity Regulator (PMG, 2003). Other observers asked whether orthodox approaches to the restructuring of South Africa's electricity industry were suitable to meet its social and economic objectives (Gaunt, 2008)

By 2012, even once-enthusiastic advocates of NERSA's approach had to acknowledge that, in terms of both prices and a reliability of supplies, the system was failing to deliver and that regulatory reforms were needed to achieve steadier prices and ensure adequacy of supply:

> The MYPD (multi year price determination) was meant to create certainty. It has achieved the exact opposite…Nersa appears to change its assumptions in order to get the tariff increase it judges to be acceptable (Eberhard, 2012)

The only consolation put forward for NERSA's failures in terms of price predictability and security of supply was that there was, "No guarantee that government departments would do a better job" (Eberhard, 2012).

These outcomes of formal economic regulation in electricity served to demonstrate the limits of the model. Yet proponents of economic regulation have largely continued to defend the NERSA model, ruling out alternatives ('old style regulation') from the outset (Steyn, 2013). Meanwhile, major private sector stakeholders, who are often key in the success of developmental state industrial policy, have been less enthusiastic. The South African Chamber of Mines chief economist Roger Baxter, had suggested that price smoothing was needed but also cautioned that a phased approach was needed to help users to become more energy efficient, was the best way for South Africa to proceed: "There are many ways of doing this [increasing the electricity price] effectively without either damaging Eskom's credibility, or causing economic dislocation" (Van Der Merwe, 2008).[8]

While abrupt price increases and price uncertainty had negative impacts, subsequent supply failures highlighted the challenges and strengthen the conclusion that the regulatory structure had failed. And Eskom's current crisis of solvency demonstrates once again the governance

[7] One very detailed, relatively sober overview is provided by Das Nair, et al (2014) – albeit that this suffers from the same failure as other analyses, namely the consideration of any possibility of abandoning the current model.

[8] Some might suggest that mining companies are part of a broader problem (Fine, 2010), but there can be little doubt that unpredictability in pricing paths has no benefits and many costs.

challenges created by proliferating centres of power between different departments of government, the utility and the regulator.

Despite appointing a new board, and the board appointing new management, recovery efforts at Eskom have been slower than desired. The intervention of the Minister of Public Enterprises to drive improvements is understandable in the circumstances but it contradicts the formal governance framework for SOCs under which the SOC is accountable to the shareholder ministry through its Board. While existing structures were apparently easily subverted in service of state capture, they are proving to be an obstacle to crisis management and reform.

As important, the other Ministry involved, now the Ministry of Minerals and Energy, has not yet pronounced on the future electricity strategy that government wants to follow. The revision of the Integrated Resource Plan, the statutory instrument that must guide Eskom – and its regulator – has been pending now for some years.

This is a vital consideration since the general consensus is that formal economic regulation cannot be applied in a context where basic policy direction is unclear. And the situation has recently been further aggravated by proposals for institutional reform to address the current crisis. So discussions are (once again) underway about the possibility of 'unbundling' Eskom. These seem to ignore an influential survey which, thirty years ago, warned that the costs incurred by such efforts at separation, usually a prelude to privatisation, should not be ignored:

> Sappington and Stiglitz (1987) argue that privatization affects the transactions costs of government intervention in enterprise decision-making (Vickers & Yarrow, 1991, p. 114)

Amongst various other supposed benefits, proponents of unbundling claim that it will resolve informational problems (Steyn, 2018), but provide no basis for this other than a one-sided reading of economic principles.[9] As discussed elsewhere, the claim that unbundling is necessary, or even a 'necessary first step' (de Vos, 2019) , to resolve Eskom's crises are wholly unconvincing (Muller, 2019) .

Meanwhile, the consequence of the competing centres of power has been illustrated once again by efforts to address Eskom's financial crisis. In 2019, no sooner had the National Treasury proposed (National Treasury, 2019) a series of R23billion per year cash injections for Eskom – largely funded by cuts to other expenditure areas – than NERSA gave a lower-than-hoped-for tariff award. This is reported (Paton, 2019; de Vos, 2019) to have wiped out most of the financing benefits of the net present value of the cash injections (estimated to be R150billion).

[9] "South Africa urgently needs an Independent Transmission, System and Market Operator (ITSMO)… It will significantly reduce the information asymmetries in the industry by establishing an independent centre of system expertise without vested interests in the generation sector" (Steyn, 2018). Note that no consideration is given to the political context in which the proposed institution would operate: it is simply assumed that the new creation would operate as intended, even though the relevant SOE, ministries and regulator have failed to do so.

3.2. Ports regulation: outsourcing of a failure of political will

Since the consolidation of various freight transport SOEs under Transnet, it has been clear that the revenue of the Ports Authority has cross-subsidised other 'business units' within Transnet. As a NEDLAC study put it:

> [port] pricing practices in South Africa are strategic with their defining characteristic being the inclusion of non-port financing objectives in the setting of port pricing…The pricing principles underlying the largest component of port charges are revenue targets set by the holding entity Transnet (NEDLAC, 2007, pp. 1-2)

The Department of Trade and Industry, along with other government departments and the private sector, at various points expressed concern that excessive transport costs due to high overall port tariffs would impede export competitiveness and increase the cost of imported inputs for manufacturing and services.

The National Port Regulator was established in response to such concerns, but in practice is arguably an exemplar of the logical conundrum in pro-regulation arguments.

Transnet's port pricing was, and remains, agreed to in shareholder compacts with the Department of Public Enterprises (DPE). It would have been possible in principle, therefore, for the DPE itself to insist on more cost-reflective, competitive tariffs with or without a regulator. That it did not do so may have reflected a combination of three factors:

1. Lack of suitable competence within DPE to determine and argue for lower tariffs
2. Lack of political will to enforce such a decision on Transnet
3. Lack of competence and political will in the broader state to address any financing issues that may have arisen from implementing such a decision.

The conundrum, then, is this: creation of a regulator does not address the second and third problems, and to address the first problem requires a triplication of notional capacity (from the existing duplication) within the broadly-defined state. It is thus a costly solution with low, or at least highly uncertain, prospects of success.

One possible response to this goes as follows. While there was not the political will, or support, to enforce lower tariffs on Transnet directly, will and support were sufficient to outsource such a decision to a quasi-independent entity so that politicians and senior civil servants could deny responsibility in any conflict or controversy that might result. There is some merit to this argument: a common rationale for independent and quasi-independent institutions is that they serve as societal 'commitment devices' by which political actors tie their own, and their successors', hands in perpetuity (hopefully in the public interest).

Against this more sophisticated argument, we would counter with the following points. First, the nature of economic regulators is such that a significant amount of political will is always required given that regulators operate within a politically-set policy framework and their decisions have direct implications for citizens and businesses, as well as indirect implications for public finances. The creation of a regulator to give politicians and senior civil servants some kind of deniability for unpopular decisions does not provide much confidence that the regulator will not be interfered with if its decisions turn out to be too inconvenient, regardless of how well-founded they are.

Second, the implicit view that competence can be established in a regulator even though it is not present in the shareholder ministry seems unlikely but certainly requires explicit substantiation. In principle, creation of a new organisation is an easier way to create technical capacity in the state without taking the difficult decisions required to remove incompetent incumbents. In practice, the new entity is most likely to draw from a similar pool of candidates and be subject to similar (weak) appointment processes, resulting in a concomitantly similar outcome. The obvious result being further waste of resources on employees of the state without realising the necessary benefits.

Lastly, the above arguments are not contradicted by the small successes some studies (Farrell, et al., 2014) claim have been achieved by the Port Regulator to date; we suggest that the ability of the NPR to obtain tariff concessions from the NPA is a function of political will, which could have been used to obtain the desired effect without a regulator.

The importance of political will is reflected in the fact that the NPA remains under Transnet, despite the National Ports Act (RSA, 2005) and prior National Commercial Ports Policy (RSA, 2002) envisaging that the Minister of Public Enterprises would ultimately take steps to establish it as a separate state-owned company.[10] The significance of such separation is that it would leave port services ('Transnet Port Terminals') under Transnet while ports infrastructure would be in the new NPA – resulting in vertical separation. As in other cases such as rail, whether such separation is desirable is very much a moot point. For our immediate purposes, however, the point is the unavoidable reliance on political will even just to implement laws that have been passed.

3.3. Competition instead of regulation, but what about the developmental state?

As noted above, the standard response in the regulation literature to the indisputable failures of the independent regulator model is to try and identify various dimensions of the model that need to be 'fixed'. An alternative argument has been that the state should place more emphasis on creating a competitive environment in the relevant sectors, rather than solely, or even mostly, relying on regulators. For example, in relation to the example of ports discussed above, NEDLAC (2007) argues that:

> Ports that are leaders in pricing and performance measures around the world are located in regions characterised by a high degree of port competition. The implications for administered pricing in South African ports is the critical requirement for practical intra and inter port competition to be encouraged (NEDLAC, 2007, p. 3)

In many respects, however, such endorsements of competition operate from a similarly naïve application of textbook logic as the original Washington Consensus-influenced endorsement of independent economic regulators.[11] In sectors where SOEs play a major role, endorsing competition naturally raises questions about the mandate and role of the relevant SOE. These tensions are most clearly represented in the literature on 'competitive neutrality' (Muller, et al., 2015; Robb & Mondliwa, 2017). A relevant parallel literature concerns the tensions between,

[10] Another example is the apparent underfunding of the Regulator, leading to a recent Bill (RSA, 2019) that proposes to allow the Ports Regulator to fund itself from charges. This of course draws attention to the fact that regulators are costly in financial as well as human resource terms.

[11] Or, in the case of the particular quote used, dubious extrapolation and possible failure to consider negative aspects of competition.

and possible reconciliation of, industrial policy and competition policy (UNCTAD, 2009; OECD, 2009).

There have been a number of efforts to reconcile the promotion of competition with a South African developmental state model (Roberts, 2004; Roberts, 2010; Banda, et al., 2015; Banda, et al., 2015). Some of these arguments are clearly cogent; for example, it does not make sense to protect an oligopoly in the steel sector if the net effect is harm to domestic users of steel as an intermediate input (Roberts, 2004; Blonigen, 2015). Nevertheless, we suggest that endorsing competition as an alternative solution where independent economic regulation has been introduced and failed largely begs the key questions. For that reason, we take a different stance to Robb and Mondliwa (2017), and the PRC (2013) which never adequately resolves the tension between its endorsement of interventionist SOEs (principle 3) and its endorsement of competitive neutrality (principle 7).

Robb and Mondliwa (2017) discuss the standard textbook rationale for SOEs linked to market failure, but fail to note that while this view coincides with 'mainstreaming' of industrial policy (see for instance the many contributions by Dani Rodrik) it is not one that is universally held. Notably, advocates of the developmental state have often envisaged a role for SOEs that goes beyond correcting, or compensating for, market failures and extends to interventions that strategically increase a country's export competitiveness (such as deliberately subsidising electricity tariffs to reduce costs for firms). Here we do not endorse one view or the other, but for our analysis to have maximum relevance we assume the possibility of a full range of reasons for maintain state ownership of SOES and the associated implications for their mandates.[12]

For example, consider the case of electricity regulation. As we discuss further below, for a variety of reasons Eskom has found itself in the midst of both operational and financial crises. While recent policy announcements suggest that the Presidency has been hoodwinked into believing that unbundling, privatisation and expansion of private power generators are a solution to these problems, it is more likely that such steps will *exacerbate* Eskom's problems (Muller, 2019), and hence the risk it poses to society at large through operational and fiscal risks. In this regard, Robb and Mondliwa's (2017) use of the renewable energy independent power producer (REIPP) programme to assert that competition is likely to have *net social benefit*. The link between the REIPP 'competition for the market' approach, as managed and overseen by state entities with enormous guarantees from the National Treasury[13], and the 'competition in the market' approach advocates of unbundling appear to be suggesting is another apparent lacuna in such arguments.[14]

At a higher level, the notion that competition is inherently good in developing countries – arguably a core tenet of the Washington Consensus and 'neoliberalism' more broadly – has increasingly been questioned across a range of topics in economic theory. As one example, in trade theory the importance of firm economies of scale for social welfare outcomes has

[12] A lengthier discussion of the issue of mandates, using the categories of commercial and non-commercial, is provided by Muller et al (2015) building on the analysis of the PRC (2013).
[13] The guarantees provided by the Treasury were valued at R200.2billion in 2018/19, of which R146.9billion had been utilised (National Treasury, 2019, p. 86).
[14] One possibility would be to make a more nuanced argument about 'competitive rivalry' even without competition per se (Roberts, 2010). But the creation of competitive rivalry by developmental states historically has not required independent economic regulators, so this does not contradict our argument.

been recognised in theoretical work for at least three decades (Venables & Smith, 1986; Devarajan & Rodrik, 1989).

So while the arguments made by Robb and Mondliwa (2017) for greater competition in telecoms are fairly convincing, albeit in a context where the state has already become a minor player, we are entirely unconvinced by arguments that competition will resolve (or would have avoided) the dramatic failures in the electricity sector.

Furthermore, as the authors note (and was also noted by Muller et al (2015)), insistence on competitive neutrality is to some extent, question-begging:

applying rigid competitive neutrality rules can end up being self-defeating, as if SOEs must be treated and behave exactly the same as private firms, it begs the question of why they exist in the first place (Robb & Mondliwa, 2017, p. 17)

The case for competition as a disciplining device clearly needs to be thoroughly substantiated on a sector-by-sector basis. Furthermore, it requires more serious reflection on developmental objectives and ambiguous implications for net social welfare than is usually the case. It may well be that in some instances better state management of dominant SOEs is a better social alternative than creating elaborate regulatory structures to introduce private competition, the effects of which could easily be negative as well as positive.

4. Misguided attempts to extend the model – and some alternatives

The extensive failures described above do not appear to have led to adequate critical reflection on the merits of independent economic regulators. An obvious example is the PRC's misguided, and largely unsubstantiated, recommendation that government create "an economic regulator that will immediately regulate all of South Africa's network industries" (PRC, 2013, pp. Recommendation 6a, 1_17).

At various points the state has considered introducing an independent economic regulator for the water sector and, after many years of debate and vacillation, draft legislation has been tabled in Parliament to create a single transport economic regulator. The transport case arguably illustrates how the momentum created by policy discussions in the Washington Consensus environment of the 1990s continues to spill over into later eras where more nuanced, and better-informed, decision-making should be occurring. In both the cases of water and transport, we argue that establishment of independent economic regulators is undesirable and will therefore be wasteful at best, but at worst could cause similar or worse harms to those inflicted on the energy sector.

4.1. Water

Repeated calls since 1994 for the establishment of an independent regulator for water have addressed two separate challenges. First, the DWA[15] set and collected tariffs for the extensive water resource infrastructure which it built and operated, with little external oversight or consultation. Second, with its new function of promoting household access to water supply and sanitation services came Constitutional responsibility for national government's regulatory oversight over municipal water services.

Post-1994 legislation sought to systematise economic regulation of water *resource* management. A formal pricing strategy for water use was introduced with the explicit objective of promoting user-funded management of water for economic purposes (SA 1998). The strategy included provision to recover capital and operational expenses incurred in making water available, charges for water management activities more broadly and even a charge "for achieving the equitable and efficient allocation of water", allowing the 'auction' of available water where demand for economic purposes exceeded supply. The legislation also provided for social and environmental policy objectives, notably the protection of the resource.

The regulation of municipal water *service* tariff setting is guided by regulations in terms of the Water Services Act (1997) and broader municipal financial regulation. Here, the primary regulatory objective was to promote sustainable universal access to basic services which requires investment in services, effective operation and affordable social pricing. The longer term objective was to ensure that services were efficiently, reliably and sustainably provided. The DWA also has direct authority over the family of water boards responsible for bulk water services and establishes parameters for their tariff setting. The Minister is required to monitor

[15] Since the name of the Department has changed repeatedly since 1994 when it was the Department of Water and Forestry (DWAF) and subsequently, Department of Water Affairs (DWA) and Department of Water and Sanitation (DWS) under a succession of combined Ministries, the acronym DWA will be used throughout to avoid confusion.

the performance of all water services institutions and the institutions themselves to provide the information required.

The implementation of these two regulatory mandates was initially reasonably successful, in stark contrast to the experience in the electricity sector. A review commissioned by NEDLAC (2007) found that municipal prices for water supplied to industry rose by around 60% between 2001/2 and 2006/7 compared to PPIX and CPIX rises of 30% and 32%, respectively. Bulk supplies from water boards rose by an average of 42% over the same period.

Higher than inflation increases were expected since the unit costs of new sources for growing populations and higher levels of service are invariably greater than those from existing sources and new environmental requirements impose additional costs. South Africa performed reasonably well, with water supply costs to industry not substantially different to that in comparator countries, although there were variations in the nature and quality of the services provided. Lower costs in countries such as countries such as Malaysia and India were associated with lower quality of service while South Africa's costs were the fourth lowest of 11 OECD countries.

DWA also regulated tariffs for projects implemented by the parastatal Trans Caledon Tunnel Authority. Cost-based tariffs for water from the Lesotho Highlands Water Projects, set by DWA in consultation with National Treasury, are widely accepted (PMG, 2017). Tariffs for other TCTA projects - the Berg River dam, supplying Cape Town; VRESAP which supplies SASOL and ESKOM's Highveld power stations; and the Mooi Mgeni transfer which supports the system supplying Ethekwini and Msunduzi – are set through contracts with the major bulk water users, guided by the pricing strategy. These projects, whose bonds are well rated by independent agencies, have functioned effectively and have been funded by private capital.

Serious concerns have been raised about the performance of municipal distribution functions but the primary problems are generically weak municipal management and failure to comply with policy. This is exemplified by a declining trend in the number of households paying for water, down from 65% in 2006 to just 41% in 2018 (StatsSA 2019). But this is a problem to be addressed by policy intervention rather than formal economic regulation.

Against this background, there is no obvious case for independent economic regulation. Reviewers such as van Basten (2007) have raised concerns about the complexity and opaqueness of the sector but this is widely recognised as characteristic of the sector's governance generally, not just its regulation (Woodhouse & Muller 2017). This complexity adds to the difficulty of establishing independent regulation, which works best when institutional structures are amenable to a common analytical framework.

The case for regulatory independence is also not clearly articulated. An international review undertaken for DWA found that, often, "economic regulation is driven by the presence of private sector companies in the provision of water services" (Pegasys 2012). While this was a primary driver globally for the establishment of independent regulation, it is not a significant factor in South Africa's water sector.

There is also confusion about whether the scope of regulation proposed is limited to municipal services only. Recent statements target the 'full water value chain', reflecting the desire of a succession of Ministers to replace the separate water resource and services legislation (South Africa, 1997; South Africa, 1998) with a single Act (DWA, 2017). Again, this attempt to simplify complexity has no theoretical basis. The 2012 study concluded that, "… there is no existing

model of one economic regulator dealing with the economic regulation of the entire water value chain. What South Africa is proposing in terms of economic regulation of the entire value chain is a new development in the international water sector" (Pegasys, 2012). More practically, the proposed integration Bill was rejected by State Law Advisors who warned that it was simply unconstitutional (PMG, 2017).

A practical alternative that has gained some traction at municipal level is the approach of regulation by comparison or 'benchmarking'. Working with SALGA, in 2009 the DWA established a self-assessment system which assisted municipalities to evaluate their performance in three areas – drinking water quality management, wastewater treatment and water loss control. The results were collated and published as the Blue-, Green- and No-Drop reports intended to recognise and incentivise good performance and to highlight areas were performance was deficient (WRC, 2015).

The incentivisation appeared to work. Municipalities that performed well often advertised the fact in annual reports or on public billboards. However, the attention focused on poorly performing municipalities was often uncomfortable. Perhaps as a consequence, the process was stopped in 2015 although it remains well regarded and new Ministers are committed to restarting it.

So it is relevant that, following the failed electricity reforms of 2008, the 'benchmarking' approach was also proposed for municipal electricity since it allows comparison of socio-economic as well as financial performance. "Such 'competition by comparison' is not a new concept …. this form of competition is used in comparing tariffs, reliability, environmental impact, staffing and electrification rates of utilities within many countries and internationally (Gaunt, 2008).

Based on this evidence, we suggest that independent economic regulation in water is neither necessary, nor sufficient. The required regulatory oversight can equally be implemented within responsible government departments.

4.2. Transport

The most far advanced effort to expand the current regulatory model is the Economic Regulation of Transport Bill (Minister of Transport, 2018). The Bill proposes to create a single transport regulator, which would have jurisdiction over shipping and ports, aviation, rail and road, and a 'Transport Economic Council'. This would give the Transport Economic Regulator powers over at least the following SOEs: the Transnet Ports Authority (TPA), Transnet Port Services, the South African National Roads Agency (SANRAL), Air Traffic and Navigation Services, Airports Company of South Africa (ACSA), South African Airways (SAA), Transnet Freight Rail, and the Passenger Rail Agency (PRASA).

The high-level rationale for the creation of the TER is outlined in the Revised White Paper for National Transport Policy:

> The approved development of a single transport economic regulatory authority indicates the Government's intention to separate policy making from implementation, ensuring the full policy mandate rests with the Government, whilst implementation of the regulatory mandate is to be executed by an independent regulatorin accordance with its published mandate, and without undue influence by industry, government and political officials. (Minister of Transport, 2018, p. 7)

Interestingly, such a regulator was not envisaged in the original 1996 White Paper, which only proposed an independent regulator for ports (a proposal that was only acted upon much later). Instead, the original White Paper proposed an approach in which "form of regulation will differ according to circumstances"; it referred to "regulation of specific services provided under contract", "regulation of monopolies…in controlling tariffs", "regulation of the operations of competing operators…in a competitive environment" and "regulation by contract". It is not clear that this variegated approach, largely without independent economic regulation, has failed. And it is consistent with some of the alternatives outlined in the water sector.

There is certainly little doubt that there have been major failures in the transport sector. Where SOEs have maintained financial viability, it has often been due to the ease by which tariffs may be raised in the absence of competition – the example of ports has already been discussed, but ACSA is arguably another example of an SOE where financial viability provides little reassurance in relation to efficiency of operations. SANRAL had arguably performed relatively well, but is now in financial crisis due to the failure of eTolls. Freight rail had been loss making and insufficiently responsive to industry demand, but appears to have improved somewhat in the last decade albeit under the cover of cross-subsidisation within Transnet. The short- and long-distance passenger rail services provided by PRASA have deteriorated drastically, partly due to underfunding and mismanagement but later also due to extensive corruption in major procurement contracts. South African Airways has lurched from one financial crisis to another, receiving numerous bailouts and also being forced to pay significant fines by the Competition Commission, in an environment where some commercial competitors have been profitable.

However, while there are many sources of these failures, the regulatory environment is arguably not a key contributor in itself. Instead, the basic problem appears to have been the inability or unwillingness of government to wield its authority over SOEs in the public interest. A useful, albeit perhaps relatively minor, example is the difficulty in obtaining information from various SOEs. Baloyi (2014), for instance, cites information asymmetries (where SOEs have the information that the broader state and other players do not) as a key rationale for an independent economic regulator in rail.[16] But in law shareholder ministries, and boards, have the authority to order the provision of such information – the failure to do this and enforce such instructions is a failure of political and bureaucratic will. Numerous attempts to analyse SOE performance have been stymied over decades by the inability to obtain necessary information and data, but that does not on its own make a case for independent regulators.[17]

[16] "a regulator accompanied by a mode equalising financing package for rail is critical for clearing up the information asymmetries and dealing with the network inefficiencies that currently exist and are undermining the performance of the [General Freight Business] market segment" (Baloyi, 2014).

[17] One example is mentioned by NEDLAC (2007): "Data gathering was frustrated by the refusal by Transnet to cooperate as the enterprise was preparing for imminent regulation in the ports and pipeline sectors." (NEDLAC, 2007, p. 1). Another was observed when one of the authors was at the Department of Transport in 2004: an international consulting firm, funded by the UK Department of International Development, was flown in to advise on rail restructuring but was unable to access the data needed from Transnet – the SOE reportedly refused to provide the data despite a direct instruction from the relevant minister.

5. Rethinking the regulatory regime: developmental states and scarce capacity

To our knowledge, there is very little consideration in the extant literature of the resource-intensity, in terms of state capacity, of independent economic regulation compared to direct state management of SOEs and oversight of private sector operations (e.g. through licensing). However, this is arguably a critical consideration in developing countries where there is generally a shortage of technical skills and human capital. Here we expand on some related observations by Muller, et al (2015).[18]

Both (Mkandawire, 2010) and (Chang, 2010) note the importance of (aspirant or actual) developmental states using scarce capacity wisely. Yet this rather obvious point has not been given its due in the literature on economic regulation in South Africa. First, as we have already argued, advocates of economic regulators rarely explain in convincing detail why an independent regulator will resolve existing problems but improvement of the direct management of SOEs or sectors will not. Second, proponents of economic regulators are rarely explicit about the financing and personnel required, and never seriously consider the opportunity costs of such resources within the state as a whole. Third, the current model appears extremely inefficient in as much as it requires replication of very similar capacity across different public institutions (broadly defined).

The NDP had specifically addressed these capacity challenges:

> Improved regulatory performance is vital for national development. Capacity building remains a core challenge, requiring sustained training to improve leadership and technical capabilities. The quality of regulation, however, is not just about the regulator. The state itself must have adequate capacity and capability to formulate effective policies; support the design, establishment, review and improvement of regulators; and respond to issues identified by capable regulators. A capable state (chapter 13), with functioning, well-run utilities, departments and municipalities, will help ensure efficient regulation. (National Planning Commission, 2012, p. 162)

And in relation to independent regulators noted that:

> The relationships between SOEs and independent regulators have frequently proved problematic. The conditions for a regulator to be effective have tended to be onerous and adequate regulatory capacity cannot be built overnight. For independent regulators to be effective, they must have clearly defined powers and adequate human and financial resources (see section on regulation and the role of regulators in chapter 4). Sector regulators need to be drawn into the process when shareholder and policy departments design performance contracts. (National Planning Commission 2012: 441)

It then highlighted the capacity challenges of the SOEs, extending to the state in general:

> Clear governance structures and focused mandates will reduce the burden on limited human and financial resources. However, there also needs to be a long-term strategy to develop the skills required by SOEs and to ensure that they are financially sound. SOEs require administrative, policy, managerial and technical skills. Government needs to have a strategy for how these skills are going to be produced and developed. The skills needs of individual SOEs must be identified. Where gaps exist, government

[18] "A final, cross-cutting issue, concerns capacity in SOEs themselves, as well as shareholder departments and other relevant institutions of government…" (Muller, et al., 2015, p. 5).

> needs to formulate recruitment and training strategies to develop a new generation of skills." (National Planning Commission 2012: 441)

The problem, as we have already noted, is despite the extensive empirical evidence of institutional failures the NDP does not consider the possibility that the entire model should be rethought. (Although it does express caution about the model's expansion). Nor does it consider that the scarcity of capacity, mentioned frequently, may reflect an unrealistic set of expectations and undesirable allocation of (financial and human) resources.

We referred to 'triplication' of capacity above since in the current model capacity to assess appropriate pricing and conduct is required in at least: the SOE, the shareholder ministry and the economic regulator. Where the policy-determining department is separate from the shareholder, economic regulation in fact requires a quadruplication of capacity. SOE boards add a further layer to the bureaucracy required, as does the National Treasury. It ought to be self-evident that such replication is grossly inefficient in a country where there is a scarcity of skills as well as scarcity of funding for those skills in the public sector – such as engineers, doctors, teachers and various other forms of professionals who are critical for economic and social development.

Our analysis thus suggests something much more radical than recent efforts to address crises in SOEs through, for example, merely improving the process of board appointments (DOI, 2019): the focus on promoting independent regulation at this stage of South Africa's development is misdirected. While this position is more radical than the recommendations of the National Development Plan (2012) and Presidential Review Committee (2013), we suggest that it is broadly consistent with the *diagnoses* of those key policy documents. In addition, the comparative performance of the water resource and bulk electricity sectors provides some empirical support for the approach proposed.

Unfortunately, a characteristic of democratic South Africa that deviates from those required for a developmental state, is an unwillingness to change trajectory when confronted with failure. While serious reconsideration of the current approach to economic regulation is warranted, starting with the withdrawal of the Economic Regulation of Transport Bill, past experience indicates that this is unlikely.

References

Baloyi, B., 2014. *The role of South Africa's freight rail regulatory framework in General Freight's sluggish growth performance,* Johannesburg: Centre for Competition, Regulation and Economic Development (CCRED) Working Paper 2014/10.

Banda, F., Robb, G. & Roberts, S., 2015. *Review Paper One: Key debates in competition, capabilities development and related policies: drawing the link between barriers to entry and inclusive growth,* s.l.: CCRED working paper 4/2015..

Banda, F., Robb, G. & Roberts, S., 2015. *Review Paper Two: the links between competition policy, regulatory policy and trade and industrial policies,* s.l.: CCRED working paper 5/2015.

Blonigen, B. A., 2015. Industrial policy and downstream export performance. *Economic Journal,* Volume 126, pp. 1635-1659.

Chang, H.-J., 2010. How to 'do' a developmental state: political, organisational and human resource requirements for the developmental state. In: O. Edigheji, ed. *Constructing a developmental state in South Africa.* Cape Town: HSRC Press, pp. 82-96.

Das Nair, R., Montmasson-Clair, G. & Ryan, G., 2014. *Review of Regulators Orientation and Performance:Review of Regulation in the Electricity Supply Industry.* Pretoria: Trade and Industrial Policy Strategies (TIPS).

de Vos, D., 2019. What to do about Eskom. *CDE Viewpoints*, No 7 June.

Devarajan, S. & Rodrik, D., 1989. Trade Liberalization in Developing Countries: Do Imperfect Competition and Scale Economies Matter?. *American Economic Review Papers and Proceedings,* 79(2), pp. 283-287.

DOI, 2019. *Legal Framework of SOE Boards: Appointment: Towards Transparency and Quality in SOE Board Appointments,* Cape Town: The Dullah Omar Institute for Constitutional Law, Governance and Human Rights.

DWA, 2017. *Towards the establishment of an independent economic regulator, briefing by Department of Water and Sanitation, 8 November 2017.* s.l.:Parliamentary Monitoring Group.

Eberhard, A., 2012. *Rethinking Economic Regulation of Infrastructure Industries,* Johannesburg: presentation to South African economic regulators conference (21-22 August).

Edigheji, O., 2010. Constructing a democratic developmental state in South Africa: potentials and challenges. In: O. Edigheji, ed. *Constructing a democratic developmental state in South Africa: potentials and challenges.* Cape Town: HSRC Press, pp. 1-35.

Farrell, S., Levin, S. & Cipanda, B., 2014. *Review of regulation in the Ports Sector,* Pretoria: Trade and Industry Policy Strategies (TIPS).

Fine, B., 2010. Can South Africa be a developmental state?. In: O. Edigheji, ed. *Competition policy, competitive rivalry and a developmental state in South Africa.* Cape Town: HSRC Press, pp. 169-182.

Gaunt, T., 2008. Electricity distribution industry restructuring in South Africa: A case study. *Energy Policy,* 36(9), pp. 3448-3459.

Minister of Transport, 2018. *Draft Revised White Paper on National Transport Policy,* Pretoria: National Department of Transport.

Minister of Transport, 2018. *Economic Regulation of Transport Bill,* s.l.: Government Gazette, No.41992, Republic of South Africa.

Mkandawire, T., 2010. From maladjusted states to democratic developmental states in Africa. In: O. Edigheji, ed. *Constructing a democratic developmental state in South Africa: Potentials and challenges.* Cape Town: HSRC Press, pp. 59-81.

Muller, M., 2013. The regulation of network infrastructure beyond the Washington Consensus. *Development Southern Africa,* 30(4-5), pp. 674-686.

Muller, S., 2019. Why restructuring South Africa's power utility won't end the blackouts. *The Conversation*, 28 March.

Muller, S., Amra, R. & Jantjies, D., 2015. *Report on State-Owned Enterprises for the Standing Committee on Finance,* Cape Town: Parliamentary Budget Office.

National Planning Commission, 2012. *National Development Plan 2030,* Pretoria: National Planning Commission, The Presidency, South Africa.

National Treasury, 2019. *Budget Review,* Pretoria: National Treasury.

NEDLAC, 2007. *Administered Prices Study on Economic Inputs. Water Sector - Final report,* Johannesburg: National Economic Development and Labour Council (NEDLAC).

NEDLAC, 2007. *Administered Prices Study on Economic Inputs: Ports Sector,* Pretoria: National Economic Development and Labour Council (NEDLAC).

NEDLAC, 2011. *Study to Collate All Research Work Done on Administered Prices,* Pretoria: National Economic Development and Labour Council.

OECD, 2009. *Competition Policy, Industrial Policy and National Champions.* Paris: Global Forum on Competition Roundtable, OECD..

Paton, C., 2019. Energy regulator Nersa wipes out Eskom's R69bn bailout. *Business Day*, 8 April.

Pegasys, 2012. *Proposal to Revise the Pricing Strategy for Water Use Charges and Develop a Funding Model for Water Infrastructure Development and Use and a Model for the Establishment of an Economic Regulator (WP10465).* Pretoria: s.n.

PMG, 2003. *National Electricity Regulator: Briefing.* s.l.:Minerals and Energy Portfolio Committee, 9 April 2003 (accessed at: https://pmg.org.za/committee-meeting/2368/).

PMG, 2013. *Meeting minutes: Colloquium on Impact of Administered Prices, including energy, on the Manufacturing Sector,* Cape Town: Parliamentary Monitoring Group.

PMG, 2017. *Department of Water and Sanitation and Water Boards on 2016/17 water tariffs, Portfolio Committee on Water and Sanitation, 25 May 2016.* s.l.:s.n.

PRC, 2013. *Report of the Presidential Review Committee on State-Owned Entities,* Pretoria: Presidential Review Commission on State-owned Entities.

Robb, G. & Mondliwa, P., 2017. *SOEs and competition: reflections on South Africa's experiences in telecommunications and energy,* s.l.: conference paper: 11th AnnualConference on Competition Law, Economics and Policy.

Roberts, S., 2004. The role for competition policy in economic development: the South African experience. *Development Southern Africa,* 21(1), pp. 227-243.

Roberts, S., 2010. Constructing a democratic developmental state in South Africa: potentials and challenges. In: O. Edigheji, ed. *Competition policy, competitive rivalry and a developmental state in South Africa.* Cape Town: HSRC Press, pp. 222-237.

RSA, 2002. *National Commercial Ports Policy.* Pretoria: Government Gazette, Vol. 446, No. 23715, 8 August 2002.

RSA, 2005. *National Ports Act.* Cape Town: Act No. 12 of 2005, Government Gazette, Vol.482, No.27863.

RSA, 2019. *Draft National Ports Amendment Bill.* Pretoria: Government Gazette, No.42574.

South Africa, 1997. *Water Services Act.* Pretoria: Government Printers.

South Africa, 1998. *National Water Act.* Pretoria: Government Printers.

Steyn, G., 2012. *The impact of economic regulation on the management and performance of South Africa State Owned Enterprises,* s.l.: Presidential Review Committee on State-Owned Entities.

Steyn, G., 2013. *Response to TIPS presentation on "Review of Regulators' Orientation and Performance: Electricity".* Pretoria: s.n.

Steyn, G., 2018. *EE Publishers debate: Should Eskom be restructured, and if so how and when?.* s.l.:presentation on 10 May 2018, Meridian Economics..

Storer, D. & Teljeur, E., 2003. *Administered Prices: Executive Report,* Pretoria: National Treasury.

UNCTAD, 2009. *The relationship between competition and industrial policies in promoting economic development.* s.l.:UNCTAD.

van Basten, C., 2007. *Economic regulation of SA's public utilities: A concept paper,* Pretoria: Trade and Industry Policy Strategies (TIPS).

Van Der Merwe, C., 2008. SA mining chamber says power-tariff smoothing will do least damage. *Engineering News*, 22 May.

Venables, A. & Smith, A., 1986. Trade and Industrial Policy under Imperfect Competition. *Economic Policy,* 1(3), pp. 621-672.

Vickers, J. & Yarrow, G., 1988. *Privatization: An Economic Analysis.* Cambridge (MA): MIT Press.

Vickers, J. & Yarrow, G., 1991. Economic Perspectives on Privatization. *Journal of Economic Perspectives,* 5(2), pp. 111-132.

WRC, 2015. *The Blue Drop: Highlights and Trends from 2009 to 2014.* Pretoria: Water Research Commission.