

4th Annual Competition and Economic Development (ACER) Conference

Johannesburg, South Africa, 19-20 July

Regulatory independence choices in the regulatory design phase

Author: Sarah Truen

sarah.truen@dnaeconomics.com¹

Abstract:

While regulatory independence is widely recognised to enhance the functionality of economic regulators, such regulators nevertheless must function within a wider system of democratic accountability, and in practice there are real tensions and trade-offs between the two concepts. Regulatory design thus needs to take into account both aspects of the attributes of regulatory independence.

In 2018 the Department of Transport gazetted the first draft of the Economic Regulation of Transport Bill (the Bill), which when implemented will establish a Transport Economic Regulator (TER) and a Transport Economic Council (TEC), to undertake economic regulation of the aviation, ports, road and rail sectors. This paper investigates some of the theoretical and practical questions raised in the pursuit of independent, effective economic regulation, as illustrated by the regulatory design choices made in this Bill.

JEL classification: L51

¹ Sarah is a Manager at DNA Economics, heading up the competition and regulation practice. She has consulted to the Department of Transport on the design of the Economic Regulation of Transport Bill.

1. *Introduction*

While regulatory independence is widely recognised to enhance the functionality of economic regulators,² such regulators nevertheless must function within a wider system of democratic accountability, and in practice there are real tensions and trade-offs between the two concepts. Regulatory design thus needs to take into account both aspects of the attributes of regulatory independence.

In 2018 the Department of Transport gazetted the first draft of the Economic Regulation of Transport Bill (the Bill), which when implemented will establish a Transport Economic Regulator (TER) and a Transport Economic Council (TEC), to undertake economic regulation of the aviation, ports, road and rail sectors.³ In this paper we will investigate some of the theoretical and practical questions raised in the pursuit of independent, effective economic regulation, as illustrated by the regulatory design choices made in this Bill. The paper will begin by detailing some of the available literature on regulatory independence, before turning to analysis of how these issues are addressed (or not) in the current version of the Bill.

2. *What do we do when we regulate infrastructure?*

Economic regulation provides a potentially effective means of dealing with the efficiency problems posed by natural monopolies in infrastructure. While it is often practically impossible to duplicate infrastructure such as ports and rail networks, it may be technically feasible to allow competition in operating such infrastructure, and by doing so to achieve a market outcome which mimics those achieved in naturally competitive markets, in terms of the price, volume and quality of products and services. However, achieving these outcomes via the introduction of competition only becomes feasible if the ability of the infrastructure owner to charge monopoly fees can be constrained, and competing operators are offered equitable access to the infrastructure.

From the outset, therefore, the task of economic infrastructure regulation will affect the ability of existing monopolies to realise monopoly profits, and will affect the price, volume and quality of goods and services provided off that infrastructure platform. These characteristics mean that there are typically intense incentives to capture regulatory institutions. For the regulated industry, a captured regulator can facilitate the restoration of monopoly profits; while for politicians, control of an infrastructure regulator potentially makes it possible to deliver larger volumes of cheaper, better public services, in order to win votes.

Increasingly, governments are attempting to solve these conflict issues by devolving regulatory authority to independent regulatory agencies (IRAs), giving rise to what can be

² (Brown, et al., 2006, p. 51) argue that the evidence of the effectiveness of independence is sufficiently strong that it should be considered a benchmark standard of good regulatory design.

³ It should be noted that the author consulted to the Department of Transport on the design of this legislation. All views presented in this paper are however my own, and do not represent the Department of Transport.

referred to as a new form of “regulatory capitalism.”⁴ In practice, *“independence means that the classical administrative supervisory authority of political power and administrative units is not implemented over organs and functions of these agencies and that other organs can not order or instruct to these agencies.”*⁵ The independent agency is deputised by the state to meet a specified set of policy objectives, and because its decisions are delinked from its political authorities, it can credibly commit to long term objectives which would otherwise be put under intense pressure during election cycles.

Regulatory independence can be both formally ensured in legislation, or a de facto operating characteristic of a regulator, ensured to some extent by norms of behaviour in the interface between the regulator and its political principles. Some commentators argue that *“the de jure independence of institutions is less important than their mandate, powers and political support,”*⁶ or alternately that *“formal independence is neither a necessary condition for de facto independence, nor is it in itself sufficient.”*⁷

Even if independence is rigorously protected by legislation, multiple pathways often remain available for political principals to erode that independence, for example by appointing politically connected individuals to head regulators. A study of appointees to regulators in Western Europe between 1996 and 2013 found that higher levels of de jure independence were in fact associated with higher levels of politicised appointments,⁸ which speaks to the practical ability of lawmakers to subvert legislation. In practice, therefore, some combination of both de jure and de facto independence is probably needed to ensure regulatory efficacy, and the political economy in which the regulator will be implemented will likely have a substantial impact on its ultimate success.

A number of studies of the link between better market outcomes and regulatory independence have been undertaken, and some of them highlight this link between the wider political system and regulatory effects. For example, Acemoglu et al (2008) examine the impact of central bank independence, and find support for the hypothesis that it has its greatest impact when political governance systems⁹ are of intermediate strength. They posit that introducing an independent central bank in a country which has a very weak governance system is unlikely to be effective; but conversely that in countries which have strong levels of political accountability, the central bank is likely to already be pretty well-governed, even if de jure independence is weak. The impact of bolstering de jure regulatory independence thus seems to be strongest when there is a sufficient governance framework to give the

⁴ Levi-Faur, 2005, in (Guidi, 2014)

⁵ (Sobaci, et al., 2008)

⁶ (das Nair & Roberts, 2017)

⁷ (Ennser-Jedenastik, 2016, p. 509)

⁸ (Ennser-Jedenastik, 2016, p. 508)

⁹ Which they describe as “constraints on political officeholders, in the form of checks and balances on their actions and means of holding them accountable.” (Acemoglu, et al., 2008, p. 353)

regulator teeth, but that framework is patchy enough to give a regulator without such legally assured independence implementation problems.

Similarly, Guidi (2014) examines how the level of de jure independence of national competition authorities varies across the EU. His hypothesis is that “*an independent competition authority is supposed to embody the commitment of a government to treat all investors fairly and to offer a stable regulatory environment, not subject to political oscillations.*”¹⁰ As a result, regulatory independence will be more highly valued when investors are likely to see the policy environment as unstable, which he posits will happen more frequently in mixed market economies, than in coordinated markets economies or liberal market economies, which display greater policy coherence. In the EU, the study does find some support for this hypothesis.

Some sympathy can certainly be felt for politicians who wish to retain a degree of control over IRAs. Elected officials are still held accountable for the performance of regulatory agencies, even if they have little day-to-day input into how they function. Extensive delegation of responsibility to independent agencies thus arguably results in:

*“... a weakening of the chain of delegation that typically links voters to elected officials, and elected officials to the bureaucracy (Müller 2000)— a fact that has not been lost on scholars who anticipate a waning of democratic accountability as a result of this process (Christensen and Lægreid 2007; Maggetti 2010; Mair 2008, 228; Majone 2001).”*¹¹

As in any principal-agent relationship, accountability mechanisms are needed at IRAs to address the fact that the incentives of the electorate and the incentives of the regulatory staff will not always align. As far back as 1968, Niskanen for example highlighted the fact that the pecuniary and non-pecuniary perks of office at a regulatory agency tend to increase in line with the size of that agency’s budget, and thus that bureaucrats are incentivised to grow the budgets of the institutions they manage beyond what is socially most beneficial. Political accountability of regulatory agencies is needed to ensure that budget inflation, shirking, capture by industry, and so forth is guarded against. The pursuit of regulatory independence thus needs to be undertaken in a context which allows for balance as regards systems of accountability.

As pointed out by Trebilcock & Iacobucci (2010), the tension between the objectives of regulatory independence and accountability is far from the only trade-off that needs to be made between competing regulatory objectives/dyads. The following four areas also pose difficulties for regulatory design:

- Expertise-detachment: regulatory staff need to have sufficient subject matter expertise to fulfil their mandate, but achieving deep expertise can compromise

¹⁰ (Guidi, 2014, p. 9)

¹¹ (Ennser-Jedenastik, 2016, p. 509)

analytical detachment, for example if it has been achieved by working closely with industry

- Transparency-confidentiality: infrastructure regulators typically need to access detailed and often highly confidential information to perform their functions, and the secrecy of such data needs to be protected. However, excessive levels of confidentiality make it difficult to improve transparency as regards the fairness of regulatory decisions.
- Administrative efficiency-due process: regulatory decisions should ideally be made quickly and efficiently, but the faster the decision making process is, the less time there will be to put in place the checks and balances required to ensure due process
- Predictability-flexibility: a more predictable regulator will improve investor confidence, but may struggle to address rapid changes in market circumstances

It is easy to see that many of these values will also create trade-offs with regulatory independence considerations.¹² For example, the need to protect data confidentiality could be used to hide regulatory capture by industry; and a more flexible regulator might be easier to influence.

3. Regulatory independence and the Economic Regulation of Transport Bill, 2018

Most economic regulators are established by legislation, and while de facto practices may strongly influence the independence of a regulator, the provisions of this legislation will still have an influence. Care thus needs to be taken at the regulatory design phase to ensure that the architecture of the IRA is appropriate. In practice, the range of criteria which influence regulatory independence are extremely broad, as shown in the table below.

¹² (Trebilcock & Iacobucci, 2010, pp. 457-459)

Table 1: Operationalizing the independence of regulatory authorities

Formal	Chairperson and management board	- Term of office
		- Appointment procedure
		- Dismissal procedure
		- Renewability of Appointment
		- Compatibility with other offices
		- Formal requirements of independence
	Relationship with elected politicians	- Independence formally stated
		- Formal obligations
		- Overturning of decisions
	Finances and organisation	- Source of the budget
		- Agency's internal organization
		- Control of human resources
De facto	From politicians	- Rule-making
		- Monitoring
		- Sanctioning
		- Frequency of revolving door
		- Frequency of contacts
		- Influence on budget
		- Influence on internal organization
	From regulates	- Partisanship of nominations
		- Political vulnerability
		- External Influence on regulation
		- Frequency of revolving door
		- Frequency of contacts
		- Adequacy of budget
		- Adequacy of internal organization
		- Professional activity of chairperson/board members
		- External influence on regulation

Source: (Gilardi & Maggetti, 2010)

Before analysing whether the Economic Regulation of Transport Bill (ERT Bill) meets the de jure requirements shown in the table, and if so whether the associated trade-offs with regulatory accountability are acceptable, it is worth taking a step back and considering what the limitations of legislation are. In other words, what can usefully be put in legislation, what belongs instead in regulation, and what can only effectively be expressed as a de facto practice?

Legislation is the appropriate way to codify powers that will require legal enforcement mechanisms. For example, it is very useful to put the right of the regulator to discover confidential information, including via search and seizure powers, in the legislation. The operator and the regulator are likely to have disagreements here, as withholding data is an effective way of preventing a regulator from operating, so the regulator needs to be granted

the legal rights to overcome this information asymmetry, and operators need the protection of due process while those investigations occur. However, legislation is difficult to change, so for areas of regulatory practice where more flexibility is needed, subsidiary regulations or even directives may be more appropriate. This would be likely to include the details of price regulation methodologies, for example, where the regulator will frequently be tweaking the methodology from one price review process to the next.

What is clear is that there are also a range of areas where legislative provisions would be, from inception, an empty letter, or even actively harmful. For example, a clause which prohibited the Minister from interacting with senior regulatory staff outside of formal processes could reduce the ability of the Minister to hold the regulator accountable, and would certainly make it more difficult for the regulator to access political support from the Minister during times of crisis.

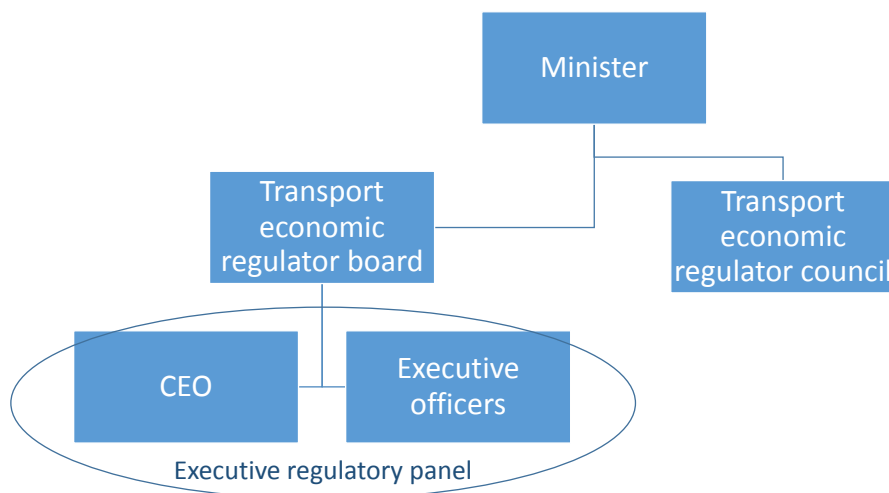
Given these considerations, we will now provide an overview of the regulatory system which will be introduced by the ERT Bill, and then examine how the provisions of the ERT Bill impact on regulatory independence and accountability, in the following areas:

- Organisational autonomy
- Appointment, dismissal and employment terms of senior regulatory staff
- Funding sources
- Relationship with elected politicians

a. Overview of the TER and TEC

The ERT Bill establishes two new institutions, the Transport Economic Regulator (TER) and the Transport Economic Council (TEC). Both report to the Minister of Transport, as shown in the figure below. The TER board provides governance oversight, but regulatory decisions are made by the executive regulatory panel (ERP), which comprises the CEO (an ex officio member of the board), and at least three executive officers. The ERP and the CEO are appointed by and report to the board.

Figure 1: TER and TEC structure



Source: own extrapolation

The TEC is functionally separated from the TER, and reports to the Minister. The TEC provides a specialised appeal and review function for decisions made by the TER, or by any entities regulated by the TER which have regulatory functions (such as the National Ports Authority). At inception its secretariat functions will be provided by the Department of Transport, but it is given the ability to establish its own secretariat if case flow is sufficient to warrant it, or if support from the DoT is inadequate.

A key difference from the models followed by other South African regulators is the structure of the board. In institutions such as ICASA and NERSA, for example, the powers which in the ERT Bill are split between the ERP and the board, are vested in a single decision-making structure, with authority over both governance and regulatory decisions. The purely governance board of the TER is thus unusual. The institution of a specialised appeal body via the TEC most closely resembles the Competition Commission/Competition Tribunal model.

b. Organisational autonomy

Malyshev (2008) identifies four distinct forms of regulatory organisation in the OECD. From least to most de jure independence, they are as follows:

- Ministerial departments: regulatory functions are carried out directly by the department concerned. The people undertaking regulatory functions report to the Minister, but may have some limited statutory independence. This is the model used by the Independent Police Investigative Directorate (IPID), for example, whose executive authority is the Minister of Police.
- Ministerial agencies: regulatory functions still report to the Minister, but now are housed in an arm's length agency, which may have its own budget and management team. The Government Printing Works, which resides within the Department of Home Affairs, is arguably an example of this. While the Printing Works has some operational autonomy, it shares services like IT and HR functions with the

department, staff are appointed in accordance with the Public Service Act, and the head of the government component is the accounting officer of the organisation and he/she is directly accountable to the relevant Minister.

- Independent advisory bodies: the agency is independent of the department, and can offer advisory opinions/recommendations, of varying levels of force. Examples of these kinds of bodies include the National Health Research Committee (NHRC) and the Broad-Based Black Economic Empowerment Advisory Council.
- Independent regulatory authorities: political intervention in agency decisions is deliberately limited to policy matters. A distinction can be made here between the constitutional institutions instituted in terms of Chapter 9 of the Constitution, which include for example ICASA, and are governed by Schedule 1 of the Public Finance Management Act 1999 (PFMA), and Schedule 3 institutions, of which the most relevant sub-category is the National Public Entities in terms of Schedule 3A, which includes for example the Ports Regulator of South Africa, the Railway Safety Regulator, and NERSA.

The chosen form for the TER and TEC is a Schedule 3A independent regulatory authority, which provides the greatest assurance of regulatory independence. In terms of s48(1)(a) of the PFMA, the Minister of Finance classifies public entities in this manner, and thus the ERT Bill itself does not contain these provisions. Section 28 of the ERT Bill does however state that the *“Transport Economic Regulator is established as an organ of state within the public administration, but as an institution outside the public service,”* and further that it *“is independent, and subject only to the Constitution and the law.”*

Once classified as Schedule 3A entities, the TER and TEC will be subject to the financial reporting systems and obligations imposed by the PFMA, which provide some assurance of financial accountability to counterbalance the greater financial autonomy this model provides.

c. Appointment, dismissal and employment terms of senior regulatory staff

Sobaci et al (2008) distinguish between organic and functional measures of regulatory independence, and describe organic independence as relating broadly to the level of employment security of senior regulatory staff.¹³ To safeguard the propensity of those staff to make truly independent decisions, it is necessary to ensure that the right people are appointed, and that it is not possible to dismiss them for failing to follow purely political instructions.

The first aspect of organic independence which needs to be addressed is who will be responsible for the appointment process. The line ministry responsible for policy is arguably more motivated to attempt to intervene in regulatory operations than other parts of government, so Brown et al (2006: 69) suggest that senior regulatory staff should be

¹³ (Sobaci, et al., 2008)

appointed by the head of state and/or approved by the legislature. Storer (2008) and Tremolet & Shah (2005) find multiple examples of appointment of regulators at presidential or prime ministerial level internationally. Appointment by a parliamentary body is less prevalent. In South Africa, appointment by the National Assembly has historically been the methodology used for ICASA councillors, for example, but has proved time-consuming and unwieldy in practice.

The ERT Bill empowers the Minister of Transport to appoint the board of the TER and the members of the TEC. The board then appoints the CEO and the other executive officers, who jointly make up the executive regulatory panel. Thus while appointments at board level are made by the line ministry rather than by Presidency, there is arguably a layer of insulation from political processes provided by the fact that the ERP is then appointed by the board. For example, this structure will prevent the problems associated with performance review of regulatory decision-makers by the Minister, as experienced at with ICASA councillors.¹⁴ It is however not clear that sufficient opportunity for public consultation and transparency in appointment processes is as yet provided for.

The other relevant aspect of organic independence considered here is the terms and conditions of dismissal of senior regulatory staff. Board members, council members and the CEO are appointed for four year terms (which does not coincide with the five year election cycle), and can be reappointed once. In contrast, executive officers in the ERP, while also subject to four year appointment terms, may be re-appointed indefinitely. The goal is to allow for the retention of highly skilled individuals in the ERP, while ensuring more rapid turnover at more politically exposed levels of the organisation. Sections 32, 36 and 44 then limit the grounds for which a board member, member of the ERP or Council member may be removed from office.

d. Funding sources

Economic regulation of infrastructure is a data intensive and highly technical task, which cannot be adequately performed unless the regulator receives sufficient funding. The manner in which a regulator is funded, and its ability to scale up funding to meet its needs, is thus an important component of regulatory independence.

A number of South African economic regulators have unfortunately been impaired by inadequate funding models. For example, in the 2011/12 financial year, the Ports Regulator South Africa (PRSA) estimated that its required budget to fulfil its mandate was R20.9 million, but instead the regulator received a budget allocation of R14.4 million,¹⁵ or around two thirds of requirements. The PRSA is an example of a regulator which is funded from National Treasury, via allocations made in the departmental vote during the annual budget

¹⁴ (Hawthorne, 2015, p. 2)

¹⁵ Estimates of National Expenditure, 2012; PRSA Annual Report, 2010/11

process. Because these allocations are administered by the line department, this funding model potentially substantially compromises independence.

The funding model chosen for the TER and TEC will allow them instead to assess the amount of funding needed to perform their statutory tasks, and then collect those funds from regulated entities. This is closer to the self-funding model used by NERSA, for example. In terms of section 8 of the ERT Bill, the Regulator and Council must submit a financial proposal for evaluation by the Ministers of Transport and Finance which conforms to the following principles:

8(1)(a) the regulated entities are to bear the cost of the Regulator and the Council; and

(b) there must be general proportionality between the cost of regulating each regulated entity, service or facility and the extent of its contribution to the shared revenue pool for the Regulator and the Council.

The goal is to avoid material cross-subsidisation of regulatory costs between modes regulated, and between the Regulator and the Council. However, because it is anticipated that there will be substantial economies of scale from sharing costs between the various divisions of the TER in particular, there is no requirement for full accounting separation between divisions.

While this funding model reduces the potential for regulatory capture from the political sphere, it does raise the possibility that non-payment of regulatory fees could be used by regulated entities to attempt to choke regulatory capacity. In other words, this funding mechanism increases the risk of regulatory capture by industry. This is partially mitigated by the fact that a number of entities will be regulated, which will spread the funding sources of the regulator, and make it more difficult for any one entity to materially affect cashflow. The Bill also does allow for funding from the fiscus if necessary.

e. Relationship with elected politicians

As has been discussed, while the relationship between an IRA and elected officials needs to allow for sufficient independence to make credible regulatory decisions, there also needs to be allowance made for political accountability mechanisms. The ERT Bill attempts to clearly define the guidelines for a transparent relationship between the DoT and the regulator, which can then be bounded by due process. The approach has thus been to formally allow for/describe interactions which would otherwise potentially happen behind closed doors, or could be strongly influenced by the personalities and pre-existing relationships of the individuals involved.

Section 37(1)(a) requires the regulator to “*exercise economic regulation of transport facilities and services in line with prevailing national economic policy,*” but the Bill does not otherwise explicitly grant the Minister power to determine regulatory behaviour via policy

announcements. The path between policy and regulatory behaviour is thus less clearly linked than in the Electronic Communications Act, for example, which explicitly allows the Minister to determine policies on matters such as radio frequency spectrum and universal service and access policy. What the ERT does not do is define which kinds of policy pronouncements (for example, gazetted white papers, versus Ministerial speeches) should be given credence by the regulator. It is also not clear what would happen if a decision of the TER as regards the behaviour of a state owned entity was then contradicted by a government instruction to that state owned entity, which has arguably occurred in the energy regulation area.¹⁶ More attention may be needed to this area in the Bill.

The Bill also spells out that the TER may provide feedback to the Minister on regulatory matters, in terms of section 42, and section 39 (2) allows the TER to “*advise the Minister to consider the promulgation of new regulations in terms of this Act, or the amendment or repeal of any existing regulations.*” It is arguable whether this needs to be formally provided for in the legislation, as presumably even without such a requirement, senior regulatory staff would be able to approach the Minister informally with commentary on the regulatory needs of the sector. However, including these clauses in the Bill hopefully signals that there is a strong expectation that the Regulator will be encouraged to provide feedback into the policy development process.

Section 21(2)(a) empowers the Minister to appeal decisions of the TER to the TEC. While this privileged position afforded to the Minister may be viewed as problematic, it can be argued that the Minister always has a legitimate policy interest in regulatory decisions in the sector, and thus that this power is warranted. It should also be noted that this mechanism would require the Minister to go through a transparent public process of appealing TER decisions, which will hopefully reduce the incentive for the Minister to informally lobby the regulator. This is also the only point in the regulatory decision-making process at which the Minister is provided a means of input, and the process is otherwise insulated from political intervention.

Section 4 of the Bill outlines a somewhat unconventional means of setting the scope of the regulator’s authority. Specifically, the Minister is allowed to extend or retract the scope of the regulator’s oversight functions, if the following holds (or stops being the case):

- (i) the facility or service is provided by only a single operator; or*
- (ii) the entity, market, facility or service is not functioning competitively; and*
- (b) economic regulation can adequately address the economic consequences resulting from the non-competitive nature of the market.*

¹⁶ See for example Eskom sidestepping NERSA’s review process on Kusile Power station on Cabinet instruction (das Nair & Roberts, 2017).

Any entity which is subject to economic regulation will experience compliance costs associated with that regulation, and section 4 thus tries to ensure that there is a mechanism in place which will allow the scope of regulation to be tailored to circumstances where it is actually warranted. This mechanism does involve the Minister in decisions on how regulatory scope is set, but political discretion as regards who should be regulated is substantially restricted by the transparent procedural and technical requirements to investigate market conditions laid out in section 4.

Finally, section 9 of the Bill also requires the Minister to undertake five-yearly reviews of “*the exercise of the functions and powers of the Regulator and of the Council, relative to the policy and purposes of this Act.*” This provides an accountability mechanism for the Minister to ensure that the regulator remains fit for purpose.

4. Conclusions

Both the theory and the practice of regulatory independence are fraught with ambiguities and uncertainties, and the process of designing an independent regulator must take cognisance of the need to keep in place sufficient political accountability mechanisms. The TER Bill provides an illustration of the complexity of the process. The Bill itself is currently under review by the Department of Transport, and is likely to be amended. It includes some regulatory innovations which are as yet untested in South African circumstances, but which will hopefully meet the right balance between independence and accountability for this regulator going forward.

Bibliography

Acemoglu, D., Johnson, S., Querubin, P. & Robinson, J., 2008. *When does policy reform work? The case of central bank independence*, s.l.: NBER Working Paper Series, Working Paper 14033.

Brown, A., Stern, J., Tenenbaum, B. & Gencer, D., 2006. *A Handbook for Evaluating Infrastructure Regulatory Systems*. Washington, D.C.: World Bank.

Cambini, C. & Rondi, L., 2010. *Regulatory Independence and Political Interference: Evidence from EU Mixed Ownership Utilities*, Milan: Fondazione Eni Enrico Mattei (FEEM). FEEM Working paper n. 69/2010.

Çetin, T. & Oğuz, F., 2009. *Institutional reform and regulation in Turkey*, s.l.: s.n.

das Nair, R. & Roberts, S., 2017. Competition and regulation interface in energy, telecommunications and transport in South Africa. In: J. Klaaren, S. Roberts & I. Valodia, eds. *Competition Law and Economic Regulation*. s.l.:Wits University Press, pp. 120-150.

Edwards, G. & Waverman, L., 2005. *The Effects of Public Ownership and Regulatory Independence on Regulatory Outcomes: A Study of Interconnect Rates in EU Telecommunications*. [Online]
Available at: <http://www.ssrn.com/>

Égert, B., 2009. *Infrastructure Investment in Network Industries: The Role of Incentive Regulation and Regulatory Independence*, s.l.: CESIFO Working Paper No 2642.

Enns-Jedenastik, L., 2016. The Politicization of Regulatory Agencies: Between Partisan Influence and Formal Independence. *Journal of Public Administration Research And Theory*, pp. 507-518.

Gasmi, F., Noumba, P. & Virto, L., 2006. *Political Accountability and Regulatory Performance in Infrastructure Industries: an Empirical Analysis*, Washington DC: World Bank Policy Research Working Paper No. 4101..

Gilardi, F. & Maggetti, M., 2010. The independence of regulatory authorities. In: *Handbook of Regulation*. Cheltenham: Edward Elgar.

Guidi, M., 2014. Delegation and Varieties of Capitalism: Explaining the Independence of National Competition Agencies in the European Union. *Comparative European Politics*.

Hawthorne, R., 2015. Economic Regulation of the Telecommunications Sector in South Africa 2009-2014. *African Journal of Information and Communication 2015: insights into economic regulation and regulatory performance*.

Malyshev, N., 2008. *The Evolution of Regulatory Policy in OECD Countries*, Paris. Available [Online]: www.oecd.org/gov/regulatorypolicy/41882845.pdf: OECD.

Montoya, M. & Trillas, F., 2007. The measurement of the independence of telecommunications regulatory agencies in Latin America and the Caribbean. *Utilities Policy* 15, pp. 182-190.

Niskanen, W., 1968. The peculiar economics of bureaucracy. *The American Economic Review*, Vol. 58(No. 2), pp. 293-305.

Rogoff, K., 1985. The Optimal Degree of Commitment to an Intermediate Monetary Target. *Quarterly Journal of Economics*, 100, pp. 1169-90.

Sobaci, M., Cetin, T. & Nargelecekenler, M., 2008. *Independent Regulatory Agencies in Turkey and their formal independence levels*, s.l.: ICME - International Conference on Management and Economics. Available from <http://dspace.epoka.edu.al/handle/1/90>.

Stern, J. & Trillas, F., 2002. *Regulation of Telecom: What Works & Why? Lessons from Independent Central Banks*, s.l.: Regulation Initiative Discussion Paper Series Number 47.

Storer, D., 2008. *Current International Trends in the Economic Regulation of Network Industries Energy, Telecoms, Water And Transport*, s.l.: Prepared for the Presidency Republic of South Africa. Available
[Online]:http://www.commerce.uct.ac.za/research_units/dpru.

Trebilcock, M. J. & Iacobucci, E. M., 2010. Designing Competition Law Institutions: Values, Structure, and Mandate. *Loyola University Chicago Law Journal*, Volume 41(Issue 3, Spring 2010, Article 5).

Tremolet, S. & Shah, N., 2005. *Wanted! Good Regulators for Good Regulation. An Evaluation of Human and Financial Resource Constraints for Utility Regulation*, s.l.: World Bank. Final Report – January 2005.

Truen, S. & Brey, Z., 2014. *The theory and practice of regulatory independence*, s.l.: SAERC 2014.

Verhoest, K., Van Thiel, S., Bouckaert, G. & Lægreid, P., 2012 edition (December 6, 2011). Introduction. In: K. Verhoest, S. Van Thiel, G. Bouckaert & P. Lægreid, eds. *Government Agencies: Practices and Lessons from 30 Countries*. s.l.:Palgrave Macmillan.

Wu, I., 2005. *Traits of an Independent Communications Regulator: a Search for Indicators With Teaching Module on Ethics and Corruption*, Washington DC: International Bureau, Federal Communications Commission.