Regulating the ICT Industry: too little, too late?

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Whereas industries like banking and mining have enjoyed centuries of trading and built up a body of practice and associated government regulation, the Information, Communications and Technology (ICT) industries are mere decades old, and the government organs tasked with regulating the ICT sector are even younger. It may therefore be premature to expect that the dialogue between these businesses and the regulators should be cooperative, or constructive.

Many technology businesses start rapidly and have meteoric growth paths, but disappear when their product life-cycle is exhausted. The internet industry in this country is less than 20 years old. Even Microsoft was an upstart in the '80s.

The selection process of those that survive and flourish is ruthless. New technologies proliferate, many are simply great ideas looking for a problem, but the success rate is low. Venture capitalists may be happy if 3 out of every 100 start-ups make money; and these funders rely on such successes to be so spectacular that they are able to recoup losses on the losers.

Many of these industries are typified not by the usage of finite resources, such as minerals, but by the creation of virtual products and meeting consumer demand which may not have previously existed, such as Facebook or Google. A warning for governments and regulators is that information-based businesses are not reliant on resources and may easily be moved to a friendlier jurisdiction. Even an industry like banking can move operations away from those jurisdictions which intend tightening regulatory laws.

Regulatory Organs affecting the ICT Industry

In the early years there was not much of an industry to regulate. Telkom was the state-owned monopolistic provider of fixed telephony; the South African Broadcasting Corporation (SABC) was also state-owned, and a few alternate broadcasters such as Bop TV and some radio channels existed. For this broadcasting sector, the incumbent government seemed more focused on managing content, especially news, than on commercial issues. In Telkom's case, the mandate was an attempt to provide telephone services to the majority of the population (in practice, this was mainly in white metropolitan areas). Regulation of broadcasting and telecommunications was not seen as particularly onerous, and was for many years the preserve of the Department of Home Affairs. This devolved later into the Department of Posts, Telecommunications and Broadcasting, subsequently re-named the Department of Communications (DoC).

However, international practice prescribed the separation of policy, regulation and operations[1]. Policy was to be the preserve of the DoC, and in 1993, a law was passed to create two independent bodies: the Independent Broadcasting Authority (IBA) and the South African Telecommunications Regulatory Authority (SATRA). In 2000 these were merged into one body, the Independent Communications Authority of South Africa (ICASA) in 2000.

The Competition Commission also scrutinises the industry in its periodic review of tariffs and practices. Due to the finite number of players in the telecoms industry, and their size, the assumption is that the temptation to engage in anti-competitive behaviour is high.

The intention was that this body, like the judiciary, should be independent of political partisanship. ICASA is consequently subject only to the Constitution and the due process of law. ICASA's Chairperson is appointed by the President for 5 years on recommendations of parliament and after due process. Councillors are appointed for 4 years. This creates continuity issues, especially given the technical complexity of the industry, and the slowness in promulgating new laws and regulations affecting the industry. This Council is ostensibly non-executive, as the Chairperson appoints a Council and a Chief Executive, who hires suitable full-time staff. Councillors are also precluded from holding other positions.[2] The temptation for this non-executive body to involve itself in day to day issues is sometimes great, as can be seen later.

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Government Policy towards the Industry

Telkom and the SABC are the oldest players in the sector, and were created by the previous government using public money.

Telkom, like state-owned fixed-line providers in many other countries, became too big and inefficient and its mandate for universal coverage obliged it to provide uneconomic services. Its poor customer service ensured that it became the whipping-boy in any discussion on telecoms, and after decades of operation failed to provide telephones to more than a tenth of the population. The lack of separation of its wholesale and retail functions made it an easy target for allegations that it was acting as both player and referee, especially as sole provider of links to new players such as the Value Added Networks (VANs). This groundswell of negative sentiment must surely have been a liability for the new government, which seemed genuinely committed to liberalising this inherited enterprise. Any conversation about Telkom seemed to start with the premise that they were in the wrong.

The SABC was also inherited from the previous regime. As a content provider mainly of news, it was politically sensitive and more useful to the government. Whereas most governments fund a public broadcaster, the SABC still operates as both a public and commercial broadcaster, using public funding. It thus competes head-on with Multichoice, a privately funded pay TV channel providing commercial services to a significant portion of the viewing population, but without news, or political comment, and 16 years into the new democracy we still have effectively a broadcasting duopoly.

Sentech is also state-owned and funded, and has a significant legacy business in signal distribution. And although this does seem to demonstrate the separation of wholesale and retail functions, the continued financial problems faced by Sentech suggest that this separation may be more theoretical than economically practicable. Government's actions in firstly supporting industry recommendations on a new digital broadcasting standard, then creating uncertainty by calling for a subsequent review under the leadership of a new Minister, and now under the current Minister agreeing on a third revised standard, suggests that, although Sentech is separate from the SABC, as both report to the DoC, government may once again be confusing the roles of referee and player.

On the one hand we have government supporting state-owned enterprises which are still bloated and inefficient consumers of public funds, whereas on the other hand, these are examples of private ICT enterprises succeeding spectacularly. It may be tempting for the current government to take credit for these successes, but as we shall see later this appears to have been more to do with regulatory frameworks lagging developments of these operators.

State-owned ICT Enterprises VS Private ICT companies

The most notable successes in the ICT space over the past 16 years have been the mobile telephone operators. Initially viewed as a specialised product for the elite, within 15 years the industry has provided phones to the majority of the population, and has an annual turnover in excess of R140bn.

On the one hand, the commitment to creating jobs suggests the industry should encourage the establishment of small businesses. On the other hand, given the massive capital expenditures required to build a national infrastructure, it is clear that the services we currently enjoy in South Africa are provided by huge operators, not by smaller licensees.

We have a government committed to providing affordable ICT services to the populace and there is clear evidence that the private sector can do (and has done) this much more effectively than the state-owned players, and this in a time of lax regulatory controls and minimal price scrutiny! So, should policy continue along this laissez faire route, or should these industries, which have benefited both their shareholders and the general public, be regulated?

Consideration should also be given to those most capable of providing ICT services. On the one hand, the commitment to creating jobs suggests the industry should encourage the establishment of small businesses. On the other hand, given the massive capital expenditures required to build a national infrastructure, it is clear that the services we currently enjoy in South Africa are provided by huge operators, not by smaller licensees. Perhaps the emphasis should be on these less well funded players competing in the services sector, rather than in the physical infrastructure space. This seems to have been envisaged in the dual-layer licensing structure detailed in the Electronic Communications Act, now thrown awry by the judgement in the Altech Autopage case.[3] More about this later.

This emphasis on encouraging small players in the sector also tends to view the major conglomerates holistically and ignores the flow-down effects, through their distribution networks, on small retailers and traders. Although their networks are large and their revenues and costs commensurately high, who else has proved capable of delivering airtime vouchers to the remotest rural areas?

Performance of the ICT Regulatory Organs

Too Little Too Late

One of the challenges facing regulators of the technology industry is the speed of change. Many industries have short lifecycles and even the language changes rapidly (IP, 2G, DSTV). To draft regulations for these industries is a challenge; and to do so in a manner which foresees all technology changes is well-nigh impossible. The existence of regulators with the expertise to interpret and codify legislation capable of tracking these changes, is key.

A consequence of these rapid developments is that many of these industries have developed in a regulatory vacuum. It is only those that flourish and grow that attract the scrutiny of the regulator.

This begs the question, at what stage should regulators get involved? Ideally, regulation should create an enabling environment which will maximise the chances of new technologies succeeding. In practice though, it appears rather that the technologies which survive the first development hurdles are penalised by regulatory interventions that change their business models *post de facto*. For the funders of these businesses, especially at the venture capital stage, the proportion of successes is so small that they rely on these to recoup losses on their other ventures. If these profits are reduced by regulatory action, future investments may be at risk, as was the case with Microsoft which started in a garage, but which is now subject to a barrage of litigation and government intervention.

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In the South African context, the mobile phone industry is an instructive case-study. Vodacom and MTN were started in 1994, but the Telecommunications Act was only promulgated in 1996[4], and dealt primarily with fixed telephony. By 2005, when the Electronic Communications Act (ECA)[5] was promulgated to regulate these mobile players, they had a turnover in excess of R100bn p.a. and had provided telephony to the vast majority of the population. So why regulate them after the event? If the industry had failed there would not be this clamour for access. Now that it has created and built an entirely new subscriber service, new entrants want a part of the action. If these major networks had been so inefficient would they have succeeded so spectacularly?

Another example is the internet industry, which started in this country in the mid-90s. Administration of domain names was initially done without regulatory oversight, but in line with international practice. Only in 2002 did the DoC bring these functions under their jurisdiction with the formation of .zaDNA under Chapter 10 of the Electronic Communications and Transactions Act.[6]

These enterprises relied on market forces and peer-to-peer negotiations to form their businesses. It was left to the new mobile phone industry to negotiate interconnect rates (the rates networks charge each other when a subscriber on one network calls a subscriber on another network) with the monopolistic Telkom. Once again, while the Telecommunications Act of 1996 imposed an obligation to interconnect, no guidance was forthcoming on what rates were appropriate. Rates were set by

negotiation and later revised in 1999. These rates were substantially asymmetric: it cost approximately 5 times more to terminate on a mobile phone than to terminate on a fixed line subscriber. This had the practical effect that the incumbent fixed line operator, Telkom, has for the past decade cross-subsidised the mobile industry by being net payers of substantial interconnect revenues to this newer industry.

A popular myth still persists that in 1999 Vodacom and MTN conspired to raise interconnect rates to keep out Cell C. While the motivation and timing for this change is conveniently lost in the mists of corporate memory, the increase was in line with international fixed/mobile ratios, and reflected the fact that wireless networks are considerably more costly to build. In fact, the increase was opportune for Cell C who were net earners of interconnect revenues in their first few years of operation, and their growth was thus partially funded by the incumbent majors.

Only now, 10 years after Cell C struggled to build a market-share of around ten percent, does the Regulator scrutinise and prescribe a framework to reduce interconnect rates. And once again, they appear to have got it wrong by allowing cheaper mobile termination rates for a new sub-brand of Telkom, and for a network operator who has been running for 10 years?! Far from levelling the playing field, this rewards failures and penalises successes.

ICASA also seems to have focused on technologies which are now over ten years old, but has not applied its mind to the upcoming technologies constituting the next wave of telephony. Where are the Regulator's determinations on Voice Over Internet termination rates? Perhaps these will also be regulated ten years after the event.

Treading on Toes

For new entrants into the ICT market this slowness of regulation can be frustrating in the extreme. For years, the internet service providers (ISPs) were forced to lease their fixed links from Telkom at prices higher than the new mobile network providers. This put them at a price disadvantage to Telkom's own ISP. Once again, a state owned enterprise was operating as referee and player. The Value Added Network's (VANs) grouped together to lobby government to level the playing field. In late 2004, the monopoly of Telkom and the second network operator, Neotel, to be sole providers of these links was terminated by notice of the Minister of Communications in the Government Gazette. After a public process, ICASA published regulations which purported to allow these VAN's to self-provide. The day before such deregulation was to become effective, the Minister issued a press statement withdrawing the rights proposed by ICASA, and subsequently refused to approve the new Regulations. Uncertainty and chaos prevailed in the industry, investments were put on hold, and providers continued to be bled by overpriced fixed-link leases.

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Who leaned on whom? On the one hand, the Regulator is accused of moving too slowly with de-regulation. On the other hand, Government has a shareholding and vested interest in Telkom. So a public schism developed between ICT policy makers and ICT regulators.

In 2005 the new Electronic Communications Act was promulgated, with a two tier licensing regime, into which all extant licences, including the VANs were to be converted. When it became apparent that not all the VANs would get the right to self-provide, in 2008, Altech Autopage took the matter to court for a determination on the rights of the new licences. In his judgement regarding the relationship of the Minister's policy directions to the licence conversion progress managed by the Regulator, Judge AJ Davis stated "Clearly such direction oversteps the line of interference and encroaches upon (ICASA's) independence".[7]

So we have an outcome where the erstwhile VAN licensees had their licences converted to the same categories of licences, with the same rights, as the majors, who have, over the years, paid hundreds of millions of Rands for these licences. The carefully-crafted new Electronic Communications Act, with its two-tier licencing, has been thwarted by ham-handed Ministerial interference and High Court process. What now? Either amend the Act, to again attempt to give form to a heterogeneous ICT industry, or accept capitulation by the Regulator and an assumption that the mess must clarify itself through market forces?

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A further example of the schism between policy and regulation was the last ditch attempt in 2009 to stop the sale and listing of Telkom's stake in Vodacom, despite the fact that state-owned Telkom operated in both the wholesale and retail ICT markets. For the past few years Telkom had also been operating as both a fixed line network operator, and through its shareholding in Vodacom, as a mobile operator. After years of negotiation at the highest government level, it was finally agreed to sell its controlling stake to Vodafone. But the Friday before Vodacom's IPO on the JSE, COSATU served papers on ICASA who then intervened with a statement claiming it had not yet approved the transaction. This kind of action does no favours to South Africa's standing with international investors.[8]

So what is our South African Macro-economic model for the ICT sector?

Government pays much lip-service to providing services to the masses. This requires funding mainly from taxes levied on South African corporates and individuals. We know how easy it is to relocate ICT businesses, whose resources are virtual. If we create an environment of regulatory uncertainty and goal shifting, we risk the possibility that the value-end of the ICT industry will move offshore, and this tax base will be lost.

On the other hand, ICT is an input-cost to the rest of the economy, so price-controls may translate into higher taxable earnings for other South African taxpayers. ICT is an enabling technology for the rest of the economy, particularly in this information age. Imagine the effect on our banking industry if communications failed. And we have already seen that the best entities for building, maintaining and upgrading this communications infrastructure are the large well-capitalised businesses. Transferring wealth from these providers to consumers by capping prices jeopardises not just the ICT industry, but the whole economy.

Putting the problem more succinctly, in the 2010 fiscal year, the four major telecoms

companies contributed approximately R15bn to Treasury through taxes and licence fees. These funds are used by Government for building schools and hospitals. So, should the Government adopt a laissez-faire model to the ICT industry and concentrate on applying these taxes to alleviating broader social problems? Or should it interfere through regulation and attack the profits made in the ICT industry in the hope that such savings downstream will help boost the private sector, so that fewer calls are made on the government purse?

Similarly, if we view the Broadcasting industry as a closed loop, Government policy seems even more ambiguous. Naspers, the parent of Multichoice, the largest private broadcaster, paid taxes of R1.4bn to the Treasury in 2010. The Treasury subsequently subsidised the SABC and Sentech to the amount of R826m in that same year.

Surely the emphasis should be on making these state entities self-funding, so that taxes raised from private enterprise in the sector can be better used to achieve national developmental goals?

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A word of caution

Elsewhere in the monolith that is government, experiences with other state-owned enterprises such as Eskom should sound a word of warning to the state bodies tasked with regulating (or in some instances jeopardising) the ICT industry. While the electricity-buying public for years enjoyed what in retrospect appear to have been un-economic tariffs, a word of caution was sounded by Bobby Godsell at the Helen Suzman Foundation Energy roundtable in Sept 2010. 'Since 1923 Eskom has been close to insolvency 3 times because they only budgeted for operating expenses and not capital replacement'. At the same function the question was asked 'How to manage consumer tariffs for electricity while at the same time financing expansion that will meet growth projections?'

Telkom, has for years, been subject to tariff caps imposed by the regulator, at sub-inflationary levels. Now the mobile operators are being coerced into losing their fixed-mobile interconnection subsidy. No thought has apparently yet been given to the effect on retail tariffs to consumers. Although much of the focus has been on high mobile retail tariffs, surely removing these wholesale interconnect subsidies from the mobile operators reduces their ability to lower consumer prices?

Earlier in this article, it was pointed out how short product life-cycles necessitate re-investment and upgrading of technologies if the industry is to remain viable. The mobile industry is already investing in fourth generation technology. These new infrastructure costs cannot be foreseen in the medium term, much less further ahead. Yet the Regulator is trying to mandate a so called Long Run Incremental Cost model (LRIC), which has its origins in the western democracies, or hard-currency markets. Most of the equipment needed to build these networks is denominated in these currencies. South Africa has a currency that in the past 3 years, first deteriorated 25%, and then appreciated 40% against the currencies in which telecoms equipment inputs are denominated. How then to estimate what funds will be needed for investment in the long run?

A way forward

Good regulation starts with coherent government policy. Government needs to be clearer on what it expects from the ICT sector, ie whether to support market forces or to intervene, whether to mandate the large players and keep them in check or to open the market to small players and new entrants, and allow market forces to wean out inefficient operators.

A clearer delineation is also needed between the responsibilities of the DoC and the ICASA, and also a clearer line between the responsibilities of ICASA Councillors who are only there for their term, and ICASA professional staff who can provide continuity.

Regulation needs adequate resources. At present, ICASA has a budget of R280m per year to regulate an industry with a turnover in excess of R100bn per annum. The bodies tasked with exercising authority over the industry are underfunded to the point that they can neither hire nor retain the right calibre of staff.

Perhaps the approach rather should be to focus on efficiency. Why is it that on a continent short of technical resources, we find two mobile phone towers side-by-side? Surely the emphasis should be on the sharing of facilities through for instance, national roaming arrangements on existing networks? And do we need our streets dug up three times by multiple companies burying fibre-optic cables along the same routes?

Much was made some years ago about a Public Private Partnership process. This seems to have gone out of vogue and replaced by a fear of engagement by regulators who seem reluctant to engage with companies who have highly trained skills but who have become suspicious of government's motives in regulating their industries. The trajectory of staff is one way; from the government organs overseeing the industry, to the large industry players, often with unseemly haste.

Government needs to tidy up its legacies, which still see it acting as both referee and player. Its Telkom shareholding and its stakes in Sentech and Broadband Infraco are examples of this.

To its credit, Government has enacted competent and comprehensive legislation, such as the Electronic Communications Act. But when subsequent actions have negated these original good intentions (such as the recent re-licencing process) perhaps it is the prerogative of Parliament to review and re-enact legislation to keep the industry on track.

NOTES

1 Hon. Minister Jay Naidoo, Parliamentary Briefing by the Minister of Posts, Telecommunications and Broadcasting, 23 August 1996

2 Independent Communications Authority of South Africa Act (Act 13 of 2000)

3 Altech Autopage Cellular (Pty) Ltd vs The Chairperson of ICASA, ICASA, the Minister of Communications, and others. Case 2002/08 in the High Court of South Africa (Transvaal Provincial Division)

4 Telecommunications Act 103 of 1996

5 Electronic Communications Act 36 of 2005

6 Electronic Communications and Transactions Act (ECT), 2002

7 Altech Autopage Cellular (Pty) Ltd vs The Chairperson of ICASA, ICASA, the Minister of Communications, and others. Case 2002/08 in the High Court of South Africa (Transvaal Provincial Division)

8 Electronic Communications and Transactions Act (ECT), 2002 and (COSATU v ICASA, Vodacom and others, quoted in ICASA Annual Financial Statements 2010)