

Liberalising Communication Services in South Africa

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There is a broad consensus that for the communications industry to flourish in a country, it must be opened to private competition. However, countries have adopted varied approaches to liberalisation, some more cautious than others. This paper critically assesses South Africa's approach to liberalising its communications industry. It argues that although there have been some gains from the current phased approach, these fall short of the potential gains that could have been achieved had more competition been introduced sooner. It also argues that with hindsight some of the fears that gave rise to the approach adopted in the country may have been misplaced. It concludes that there is still considerable scope within the current regulatory arrangements to bring about some of those additional gains now.

Introduction

The communications industry is amongst the most innovative and rapidly growing sectors of the modern economy. Besides the direction contribution the sector makes to economic growth and development, it also plays a key role in the fortunes of other sectors. This is because it is an important intermediate in production and the infrastructure on which the information age is being built. The attitude of governments to the industry have changed, with a growing consensus that the days of national monopolies are over and that the sector must be opened to private competition if it is to flourish. However, the pace of change has varied amongst countries, with some far more cautious than others in introducing competitive regulatory regimes. For the laggards, the WTO process of negotiations on Basic Telecommunications may just act as a force to move them towards a far more liberal regime in a shorter time period.

The initial movement towards public monopolies in the communications industry came from arguments that the sector was a natural monopoly and that there were social gains from giving all members of society access to the network (universal service). However, the natural monopoly argument has weakened due to regulatory innovation and changes in technology and the level of demand.

Regulatory innovation came in the form of separating the communications market into network and service provision. The provision of services could become a competitive market if non-discriminatory access to the networks was ensured. In a similar fashion, if networks were forced to interconnect with each other in a non-discriminatory manner, then different firms could provide different parts of the network and the gains from network economies would not be lost.

It has been technology and demand growth that has altered the competitive dynamics of network provision. Lower economies of scale and rapidly growing demand for communication services² has meant that it is now more feasible to have duplicate networks

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² This demand growth predominately comes from growth in demand for data services (i.e. Internet and corporate data transfer)

competing for the same customers. Technological advance has also opened up the opportunity for competition between different network technologies. Fixed line networks must now compete with cellular, satellite, Internet and cable.

Removing the natural monopoly constraint still leaves the question of public provision for the sake of universal service. However, changes in the regulatory structure of the industry can still accommodate social goals such as universal service. Instead of internalising these goals in the form of cross-subsidisation by the public monopolist, they can be fulfilled through a direct subsidy to those requiring assistance.

Clearly the gains from liberalising the communications industry are predominately the gains from unleashing this potential competition. These pro-competitive effects have both a static price and a dynamic innovation dimension. On a static level, more competition should increase the elasticity of demand faced by incumbents forcing them to lower their mark-up of prices over costs. It should also remove any X-inefficiency in the operations of the incumbent, enabling costs to be reduced. The dynamic benefits are potentially more important as competition increases the incentive to innovate, driving both the long-run growth of the sector and a steady decline in real prices.

There are also potential for gains from trade with other countries, even if the form of trade is through foreign direct investment rather than cross-border transactions. Trade enables the transfer of technology between countries. This permits a faster pace of technological change in follower countries and a greater incentive for innovation in leader countries (from a larger market)³. It also enables some of the scale economies in production to be realised. Although the provision of fixed physical infrastructure in a location precludes trade from affecting many of the opportunities for scale economies, it does not preclude realising scale effects from common investments in technological knowledge, product development and training. Product variety should also improve as economies of scale enable product differentiation.

The role of communications services as a key intermediate input means that the gains from trade and competition are far more extensive than those measured in the industry itself. Price reductions and improvements in the quality and variety of communication services will filter down into improving the performance of other parts of the economy through affecting their costs and production possibilities. In fact, it is these economy-wide gains that are often considered most significant in the liberalisation process⁴.

The South African Approach to Liberalising Communications Services

Internal Regulation of the Communications Market. The momentum towards restructuring the telecommunications market in South Africa came in the late 1980s when the previous government investigated the option of having the public telecommunications managed as a commercial enterprise. After Telkom was incorporated in 1990, a study by Coopers & Lybrand was initiated to examine the policy options for restructuring the industry to maximise the economic and social benefit, including improving telephone penetration, affordability and service levels. The recommendations of the report, released in 1992, included most of the elements of the eventual regulatory regime enacted in the

³ Grossman and Helpman (1991)

⁴ Markusen (1989)

Telecommunications Act of 1996. These included an exclusivity period for Telkom, resale of capacity for voice traffic prevented for 3-5 years, stringent licence conditions for Telkom during this period of exclusivity, and the establishment of an independent regulator. It also included a call for some immediate steps to be taken – including the issuing of two mobile communications licences and the opening up of the VANS and customer equipment markets.

The government acted on the mobile licences (issued June 1994) and the opening of the VANS and customer equipment markets (1993). However, the major revamp of the regulatory regime had to wait for first a change in government and second a process of broad consultation through a Green/White Paper process. The Green/White Paper process did contribute to the final regulatory outcome because it included a number of objectives other than increasing competition, efficiency, innovation and profitability in the industry. In particular it called for the following social goals to be part of the objectives of a telecommunications policy:

- promote the universal and affordable provision of telecommunication services;
- ensure that, in relation to the provision of telecommunication services, the needs of the local communities and areas are duly taken into account;
- encourage ownership and control of telecommunication services by persons from historically disadvantaged groups;
- encourage the development of human resources in the telecommunications industry;
- promote small, medium and micro-enterprises within the telecommunications industry;

The attainment of social objectives played an important role in deciding how to regulate the fixed line market as enacted in the Telecommunications Act of 1996. At the time it was felt that rapid infrastructure rollout to previously under-serviced areas was critical to the promotion of universal service and economic empowerment. As these areas are generally either low-income or rural, the feeling was that immediate competition in fixed line services would not serve the objectives best. The reasoning was:

- a) new entrants would target the more lucrative and easily established business and long-distance markets first and not seek to rollout in these under-serviced areas,
- b) competition in these markets would squeeze the profitability of Telkom and so limit its own ability to rollout in these unprofitable areas, and
- c) the option of contributions to a universal service fund was not desirable until basic exchange infrastructure was in place in some areas to which low income households could be more cheaply connected.

This coincided with the need to restructure Telkom itself to face competition – such as improving efficiency and re-balancing its tariffs to remove cross-subsidisation. It is also felt that the granting of an exclusivity period helped raise the market value of Telkom allowing for a better price on the equity sale.

For these reasons, the Telecommunications Act gave Telkom a regulated monopoly for five years, extendable to six, in the following market segments:- public switched telecommunications network, national long distance, international, local access, public pay phones, and fixed line infrastructure for value added network services, mobile cellular network operators, and private networks (other than Transnet and Eskom).

However, to ensure that this exclusivity period fulfilled the goals of infrastructure rollout and preparing Telkom for competition, strict licence conditions were placed on the network provider. The licence conditions included rolling out 2.81 million new lines over the exclusivity period, of which 2/3rds will be in under-serviced areas and for priority customers. There are financial penalties for failing to reach these targets.

Communications Trade Policy in South Africa. Communications trade policy is intertwined with regulatory policy, as regulations remain the primary trade barriers in service industries. Therefore, legislation that South Africa has put in place for communications had already defined much of the trade policy stance for the immediate future. However, trade policy is not just about maximising the benefits to South Africa, but also complying with international agreements. In this way, trade policy may lead domestic regulatory policy as a country is forced to comply with pressure to liberalise at some time in the future. It can also give an indication of future regulatory intent if a future regulatory commitment is bound in an agreement.

South Africa is a signatory to the WTO Agreement on Basic Telecommunications and is therefore committed not only to gradual liberalisation of its market, but also an acceptance of principles of how competition should be governed as contained in the reference paper. The reference paper is an important part of the multilateral agreement and has guided existing regulation in South Africa and regulatory decisions by SATRA for the time when competition is opened in the industry⁵.

Although South Africa bound some commitments to the WTO on the timing of liberalisation, these were in most part vague and incomplete. For cellular there was a clear commitment to add at least one more network licence within 2 years (by 31 January 1999) which was delayed in the end by one year. For resale of fixed line services, there is only a commitment to liberalise between 2000 and 2003. For international services there is a clear commitment to add competition by end 2003. For additional competition in local fixed line network providers, there is only a commitment to investigate the feasibility of an additional supplier by end 2003. These are at least a step further than the domestic regulation as a specific time period has been defined while the domestic regulation left this to ministerial discretion but with a rough timetable.

Finally, South Africa has made no commitment to liberalise certain aspects of the communications industry. First, South Africa currently restricts foreign investment in suppliers up to a cumulative maximum of 30%. Second, FDI requires the movement of persons to establish and operate a branch. SA has made a commitment on work visas for foreign employees, but much discretion still lies with the Department of Home Affairs and it is considered obstructionist. Third, SA reserves the right to prevent companies with foreign ownership of over 25% from raising capital locally. Full liberalisation would require that these conditions be dropped as they are discriminatory.

In the next round of negotiations, it is unlikely that SA will come under pressure to bring forward the dates of liberalisation as the negotiation process is likely to take place over a number of years itself. However, there may be pressure to confirm that actual competition will commence on these dates, that additional licences in cellular and fixed line be

⁵ In fact some of the SATRA rulings use the exact wording of the WTO principles

investigated, and that restrictions on foreign holdings are removed. What may also become an issue is how these services are regulated once opened to competition and how will licences be issued.

An Assessment of the Gains from the South African Approach

The market expansion created by opening competitive cellular and VANS sectors. The single most important change in the South African communications industry has been the immediate opening of a competitive market for the provision of cellular networks and Value Added Network Services (VANS)⁶. This favourable operating environment has seen these services grow at an extremely rapid rate. South Africa is now the largest GSM technology network outside of Europe with an average annual growth rate of 50% and the country is the 18th largest Internet market in the world based on number of Internet hosts.

The introduction of the cellular networks to South Africa has mostly served to expand the market for communication services rather than displace existing fixed line telephony. Although the products are similar, the cellular product makes use of different and more expensive technologies, which limits the extent of direct price-based competition and so limits market displacement. Pricing in the cellular market is more likely to only set an upper boundary to the pricing decisions of the fixed line operator. However, competition also takes place on product development. Greater product development by the cellular companies makes a premium for the service more justifiable and hence makes them more competitive.

What is important is not just the opening of the market but creating a competitive structure. The cellular companies have chosen to compete with each other on coverage and value-added services⁷, which has enhanced the attractiveness of their product. This has also forced Telkom to respond by introducing its own value-added services in order to remain competitive on product at least while retaining its price advantage. The rapid introduction of value-added services has had market expansion effects in addition to the mere introduction of cellular.

The market expansion has generated considerable new investment and employment. The employment growth has been largest amongst the local service providers who retail phones and airtime to the public. These jobs have also been less highly skilled as those created in the actual network providers. The growth of the industry has had few spillovers on the domestic capital equipment industry as most transmission equipment and receiving equipment (hand-held phones) have been imported. However, there is assumedly a very large impact on industry in general as these new products would have contributed to new product development elsewhere and higher productivity.

The opening of the VANS sector has had a similar effect to cellular but on a smaller scale. It has a product that differs to public telephony and so expands the market rather than competes away market share. Although it is feasible to provide telephony services over data networks, this is legally restricted for corporate networks and public Internet. For the

⁶ The VANS market covers data communications and so includes Internet Service Providers and corporate data communications.

⁷ voice mail, caller ID, email, messaging, map directions, etc

Internet in particular, telephony is not of the same quality as networks built for voice transmission. It also only offers competition to national and international telephony for dial-in users as this makes use of the local public network anyway. As data communications are becoming more central to business operations, a competitive VANS sector that improves product quality serves to lower transactions costs in business.

Introducing foreign participation in the industry. Foreign participation has been a feature of all sectors – fixed line, cellular and VANS. This has provided considerable amounts of capital, technology and human capital. The difference has been most marked in the fixed line sector where Telkom has taken on an equity partner. This has permitted an acceleration of the network rollout and a large improvement in service. This has an impact on user industries – including other communications industry players who lease Telkom facilities (VANS) or use them for international connections (cellular). The expectation from Telkom is that they will reach current best-practice productivity levels by 2002 when their exclusivity period ends.

Encouraging exports of communications services. A more liberal environment has also encouraged the network operators to export into newly liberalised African markets. The incentive to do so comes from

- wishing to lower the costs of capital equipment through bulk purchasing for numerous markets (economies of scale),
- diversification of risk through developing more than one income source tied to the economic cycles of different countries, and to more than one currency, and
- reaping some of the increasing returns to investments in learning and knowledge creation in the communications network operation back in SA.

So far all network operators are expanding into other African markets, with MTN the most significant player. This is a natural response to the threat of entrance of new competitors into the SA market in the future because although they may lose some market scale at home, they can compensate for that through exports.

Extension of network infrastructure. The argument for granting the Telkom monopoly is that it will allow higher profit margins, which will allow Telkom to expand the network to unprofitable low income areas to raise equality of access. This expansion will lead to high levels of growth in main lines, providing all the benefits associated with that in terms of derived demand for capital equipment and operating inputs. Incentives to use local manufacturers (most of which are international subsidiaries) has meant the expansion of the local telecommunications equipment manufacturing base, creating a number of skilled jobs. It has also seen expansion into under-serviced areas at a pace yet to be seen in SA. The criticism of this process is that many of the lines opened in under-serviced areas are closed relatively quickly afterwards due to the inability of the residents to afford the fees.

Improvements in human resources and employment equity. The current policy has seen the emergence of a Human Resources Fund to invest in training human resources for expansion in the telecommunications sector. In addition, the network operators have contractual obligations to training up lower skilled workers for positions in a more productive enterprise. These programs serve a) to offset some of the potential for a shortage of skilled workers to inhibit expansion of the industry and b) remove the natural tendency for

inequality by ensuring lower skilled workers are retrained rather than retrenched.

An Assessment of the Limits to the South African Approach

Despite the gains that have been made from the limited liberalisation of the industry, the question is whether South Africa could have done better with a different approach. It is argued here that South Africa would have done better with a more liberal approach from the beginning, even when considering alternative objectives such as universal service and empowerment.

A lack of competition as a source of limited gains. The primary problem with the South African approach is that it severely limits the extent of competition in the market. The primary gains from liberalisation are the pro-competitive effects and so the removal of these effects serves to limit the gains from lowering price-cost margins and greater levels of productivity growth.

The South African approach ensures that there is no direct competition in the market for public telephony. This enables Telkom to continue to price like a monopoly and not reduce price-cost margins in order to reap higher profit margins. The South African arrangement has also limited indirect sources of competition from other technologies. One source of this competition is from cellular providers. However, these providers are concentrating on competing on value-added services and coverage, and not on price. Part of the reason for this is that as long as Telkom's fixed line prices remain high, there is little pressure for the cellular providers to reduce theirs. Telkom in turn feels lower competitive pressure to reduce its prices as long as the cellular companies do not. This convenient stand-off can be explained in part by Telkom's 50% share of the dominant cellular provider, Vodacom. The legislation has formally prevented the VANS from providing telephony and competing.

The second-best alternative to using competition to lower price-cost margins is to impose stringent price capping on the monopoly. South Africa has even failed to do this and has regulated a price cap for fixed line telephony call cost increases of consumer price index (CPI) less 1.5% and for cellular at the CPI for a representative bundle of services. Considering that labour productivity in Telkom is increasing at an average of 8.5% for the last 4 years (see table 1 below), asking for a decrease in prices of 1.5% per annum is not a binding constraint to the monopoly.

Table 1 below uses a number of imperfect measures to demonstrate that price-cost margins are not decreasing. The imperfect measure of price-cost margins are the gross and net operating profit margins. Although gross operating margins have fluctuated, the net margin has steadily increased over the entire post-liberalisation period. Therefore, it suggests that part of the gains from any productivity increases that come from having a foreign equity partner are feeding into higher margins and not lower prices.

Table 1: Measures of Telkom Productivity, Profits and Prices, 1994-1998

	1994	1995	1996	1997	1998	% change (1994-98)
Telkom profit margins						
Gross margin	27.0	24.3	22.8	27.1	22.7	-16%
Net margin	8.3	7.8	9.1	11.9	12.0	+45%

Telkom labour productivity (lines per employee)	59	63	70	75	82	+39%
Telkom real price changes						Real price change 95-98
Price of local calls per minute		7.3c	8.0c	10.3c	12.9c	+44.6%
Price of long distance calls per minute		1.55	1.54	1.36	1.18	-37.7%

Source: Telkom Annual Reports 1995-98

The second problem from limited competition is that productivity is probably not increasing as fast as it could. As reflected in table 2 below, South Africa's labour productivity in telecommunications is about 45% of the most efficient nation – the USA. Many may argue that part of these differences are due to differences in scale and the mix of cellular and fixed line provision. However, the case of Malaysia serves to show the insignificance of this argument. It has a similar labour productivity level to the USA but has a similar scale of provision to South Africa.

At the current rate of productivity growth of 8.5%, South Africa will only close the current productivity gap in 10 years. However, productivity continues to grow rapidly in these countries, further widening the gap. In 1996 Telkom said that it was confident that it would reach best-practice productivity levels by the end of its exclusivity period – at the time estimated at 200 lines per employee. However, it is already closer to 250 lines per employee and is likely to continue to grow.

Table 2: Labour productivity for a few countries (1997)

	South Africa	Malaysia	USA
Lines (fixed and mobile)	6,445,000	6,684,000	327,764,000
Employees	57,813	27,484	922,000
Labour Productivity			
Main lines per employees	111	243	247

Source: ITU Yearbook of Statistics 1999

If a country like Malaysia can reach these levels of productivity, then it seems that much of the productivity gap can be explained in terms of differences in the regulatory structure rather than other developing country differences. In particular, the lack of competition and the lack of a stringent price-capping regime to compensate for it. The same lack of competition (direct and indirect through other technologies) that prevents price-cost margins from coming down, prevents Telkom from hastening to improve productivity levels. It is also aware that even when competition arrives, it will have considerable market power anyway, allowing it a degree of flexibility in pricing to compensate for any productivity lags.

The overall impact of these competitive issues is that prices throughout the communications industry will not be reduced at the rate which may be feasible under a more competitive regime. This applies not only to fixed line telephony, but to all other parts of the industry because of its link to Telkom. For VANS, the link is that they must use Telkom facilities and use Telkom as the international carrier. For cellular phones, fixed line represents an

important source of competition and as long as Telkom's prices remain high, there is little competitive pressure to lower their rates. In fact, a recent study put the cellular call prices in South Africa amongst the highest in the world in terms of purchasing power parity.

The result of not seeing the level of price reduction that is feasible under a more competitive regime, is that South Africa will experience many of the costs of reform without many of the benefits for the remainder of the exclusivity period. In particular,

- Output and employment growth in the entire telecommunications industry will be below its potential as higher prices limit demand growth. In fact, employment may decline as productivity improvements in Telkom are not compensated for in terms of price-induced output growth.
- Growth of e-commerce and information services for the Net will be restricted as they hinge significantly on the cost of access. This is where much of the communications industry output gains will come from.
- Lower output growth will limit the benefits of derived demand in the downstream industries. Although much of this is import-leaked, what remains in SA will be smaller.
- There will be very limited price-induced downstream effects on other industries, limiting the potential employment creation, output expansion and deflationary impact that will have. In fact, current policy favours skilled workers even more than full liberalisation because only the high tech capital equipment industry is benefiting, while the other industries that may see a demand expansion from price reductions employ more lower skilled workers.
- There will no real increase in consumer incomes that comes from price reductions.

Fears over universal service rollout. An important reason for granting the Telkom monopoly was the fear that a more liberal regime will result in a lower rollout to currently underserved areas. However, there seems little reason why the same universal service obligations would not be achievable under a more liberal regime, with the added bonus of larger price decreases. This has been the case in a number of countries that have liberalised their communications industry. For instance, the Philippines saw their teledensity rise fourfold in the three years after liberalisation from 2 lines per 100 people to 8 lines per 100 people⁸.

First, lack of access to some of the underserved areas reflects past discrimination and therefore reflects pent-up demand rather than an inability to pay. This is clear from both a waiting list of over 100 000 for residential phones in 1997 and the uptake of cellular technology in some of these areas. Second, considering that even in more productive OECD countries like Germany prices have the potential to drop by some 20-30% after the introduction of competition⁹, many more low income households are likely to be drawn into the demand catchment. Thirdly, new entrants are likely to roll out to currently unattractive low-income areas if they see future potential. The reason is that it gives some a degree of market power by being already active in an area. Lastly, there are the universal service contributions that can be used to subsidise access. Even if the level of these contributions are

⁸ Cowhey and Klimento (1999)

⁹ OECD (1996)

increased to a point of the current price-cost margins in Telkom, prices will still come down further than current levels because of the additional productivity gains from the pro-competitive effects.

In fact, not only does current policy have immediate effects on the potential of the industry to deliver lower prices, but it may have a lasting effect after liberalisation. This is because allowing Telkom to expand main lines further will give it more market power in a post-exclusivity period, enabling it to have more control over price-setting.

Fears of the ability of Telkom to compete. A central reason for the granting of the Telkom monopoly was concern over the company's ability to survive and compete. This fear was misplaced. Dominant firms with high sunk costs in fixed assets will not exit a market with the entry of a more efficient competitor. This is because they have market power and because exit is costly as assets are not easily redeployed. In the event of a competitive entry, the likely response from Telkom would have been to seek foreign partners to accelerate its own cost-cutting and productivity growth. Studies by James Tybout of large manufacturing firms facing liberalisation bear this out¹⁰.

It is also likely that the competitive threat from a new entrant would be gradual. This is because the establishment of an operating network demands time and significant domestic human capital. The shortage of human capital has proved to be a barrier to foreign expansion in the domestic IT industry and so would most likely be the case in the communications industry.

Fears of rapid employment loss. A further reason for gradual liberalisation has been the possible employment loss. This fear stems from an assessment of the employment effect from examining the incumbent only. Telkom is over-staffed and a quick manner in which to bring about productivity gains is to retrench excess staff. However, the rapid growth of the sector that tends to accompany liberalisation is likely to create as many jobs in other communications firms. There are also the additional gains from employment creation amongst industrial users of communications services as their demand expands with lower prices of inputs. In addition, communication costs represent a significant share of household consumption. Lower prices should increase real wages in all other sectors which represent a gain for labour.

Promotion of economic empowerment. The promotion of economic empowerment has had little effect on the decision to maintain the Telkom monopoly, but rather on the level of foreign participation and trade with the local communications industry. The reason for the low gains from liberalisation has been the lack of competition rather than access to foreign capital and technology. Limited foreign participation at least allows some capital and technology to enter. Therefore, economic empowerment provisions could easily be retained with the legislative framework while opening up Telkom to more competition.

Improving the Gains from liberalisation

An approach to improving the benefits of reform is to renegotiate the monopoly period with Telkom. This approach will most likely involve some form of compensation to the company

¹⁰ Tybout, de Melo and Corbo (1991)

and so could be costly to government. This might make it an unattractive option. An alternative approach is to try and maximise the benefits within the constraints of the current legislation until the monopoly ends in 2003. With both approaches, there also remains the issue of how to structure the industry when it opens to competition. What follows are options to improve the gains from liberalisation within the current monopoly constraint.

Introduce more stringent price capping of Telkom. If we accept a fixed line monopoly until 2003, then one of means of removing some of the monopoly price-cost mark-up and increasing the speed of productivity growth is to set far more stringent price-caps. These need to be applied not only to call rates but also interconnection and leasing rates. Current legislation sets the price cap at the consumer price index less 1.5% for call rates for the first three years of the exclusivity period. After this, SATRA will determine the price-cap rate. SATRA is also in the process of establishing rules for interconnection charges. The discretion in the regulation will allow price caps to be set more stringently to bring down prices. Further, because the Universal Fund is now up and running, these monies can be transferred to Telkom to continue its programme of rollout to under-serviced areas.

At the moment the price-capping and interconnection decisions for both the cellular and fixed line industries will be based on a cost analysis of the industry players. This has its downside in that current poor performance or misinformation from the industry players may result in continued lenient price capping. It is a better option to base part of this decision on a cost analysis of foreign players (as available from other regulators) as this will provide greater pressure to reduce costs and close the gap with international best-practice¹¹.

Enforce changes in the price structure of fixed line supply. The power to establish price-caps could also be used to bring about changes in the structure of call charges to that of a more efficient one involving higher connection charges and lower call charges. This will have the dual effect of increasing Telkom's capital productivity by increasing call minutes and also of encouraging internet usage which will help grow the e-commerce and information service markets. A precedent for such action by the regulator has been set in the UK. In 1999 the regulator threatened to force industry players to introduce a single monthly fee for unlimited local calls to promote Internet use. In the end the industry introduced the changes without the regulator having to act.

Promote stronger competition between technologies. The current communications legislation provides for action by SATRA if it finds uncompetitive behaviour taking place. It also contains safeguards for competition by preventing cross-holdings in a concentrated market. However, the central question is how is the market defined. The current practice appears to be one of keeping narrow definitions of markets and so cellular telephony is considered a separate market to fixed line. Considering that the technologies do compete with each other to some extent, the cross-holding of Telkom in Vodacom should be investigated to see if it is impacting on price-setting in both markets. The opportunity for collusion exists, especially during a period where no fixed line competition exists.

As part of a broader initiative around promotion of competition, it should be considered extending the reach of the competition authority into issues of communications regulation.

¹¹ This approach has already been used by Argentina due to the domestic cost information being unavailable to the domestic regulator (Cowhey & Klimento, 1999)

Currently the competition authority is excluded from interference in the regulation of the communications industry and competition issues are handled as one of many considerations by SATRA. However, competition should receive a greater profile as it is through competition that most of the potential gains from liberalisation are achieved.

Fast-track dispute settlement in the industry. The development of parts of the communications industry has been hindered to some extent by uncertainty over the interpretation of the legislation. Originally Telkom challenged the Internet Service Providers over whether Internet was considered public telephony and then they challenged the VANS providers as to whether telephony was being provided to their clients. These disputes have taken time to resolve and create investment uncertainty while the regulator and the courts make decisions on the matters. One can expect further challenges to regulatory decision in the future as companies wish to use the courts to protect their market power or at least delay competitive entry. To prevent the courts being used for this purpose there either needs to be a fast-track dispute settlement process or clear guidelines of responsibility between the regulator and the courts need to be defined. The latter will allow the regulator to make enforceable decisions for the industry.

Deregulate the industry in full at the earliest opportunity. The current legislation provides both an earliest date for deregulation of certain markets and ministerial discretion as to when the exact date may be. It is important that South Africa deregulate at the earliest point so as to begin to reap some of the price reduction benefits of deregulation. In order to quicken the process even further, the process of calling for tenders and issuing of licences could happen sufficiently in advance to enable the new licensors time to make some infrastructure investments prior to the date when they begin offering services to consumers. This will enable active competition from the earliest start date.

At present, legislation only requires that the feasibility of an additional fixed line operator be investigated before end 2003. Based on the experience of the issuing of the third cellular licence, it could be another year before a licence is issued, and even longer before effective competition emerges. These delays can prevent the benefits of liberalisation from emerging for another 5-6 years. The same principles apply to other parts of the industry that will be liberalised at even earlier dates, namely resale and international services. With both of these there is still ministerial discretion over when exactly they will be liberalised, even though a rough timetable has been laid down. A means of achieving this is to make formal WTO commitments in this regard which locks in the government and provides some policy credibility.

Maximise the amount of potential competition with liberalisation. Ensuring effective competition after a market is opened up is a difficult process as the original incumbent has considerable market power. For example, years after the UK opened up their communications market there was still a high degree of market power displayed by BT, which meant prices were still not as responsive to competition. A means ensuring that incumbents make less use of their market power is to raise the amount of potential competition that they face. There are a number of ways that this can be achieved. The first is to allow new operators access to the physical networks of the other operators active in the market. In this way only parts of the network need to be replicated initially, enabling a broader reach for new service providers in local telephony.

The second is to ensure real number portability. Number portability has a large effect on the amount of potential competition. Clients are less likely to switch communications companies if they cannot keep their phone numbers. The reason is that the process of informing customers or acquaintances of changes in numbers can be very a costly business. If numbers can be retained then clients are more likely to switch communications providers in response to small changes in price differentials. True number portability requires investments in intelligent networks by operators and this is the likely barrier that regulators will face. Operators will use this as an excuse to prevent raising the level of potential competition.

Ensure that there are adequate human resources for industry development. There is a distinct possibility that shortages of skilled human resources could constrain the development of the communications industry. The existing human resource development policy is a good approach as it also addresses the issue of equity. However, it may not be able to provide the quantity of skills required. The communications industry has a broad reach and so a human resource policy may need to extend into fields such as the Internet industry.

Further, current immigration policy should be reviewed to determine the extent to which it inhibits immigration of skilled labour in this field. It is unlikely that South Africa will be able to produce the skills at the rate at which demand expands and so immigration might be a necessary policy to plug the gap¹². This is especially urgent, as South Africa appears to currently have a significant brain drain of information and communications industry skills.

Make more aggressive use of trade policy to open other markets. South Africa has embarked on a liberalisation process that is in compliance with the WTO Agreement on Basic Telecommunications. By the time the next Round of negotiations is completed, South Africa will be finally opening up its fixed line telephony to competition and so should remain in compliance. The other free trade agreement of concern to South Africa is the SADC Free Trade Agreement. However, this makes no move to liberalise services beyond making countries move in that direction by complying with WTO principles. SADC has been intimately involved with telecommunications from the start, but the focus has been on building infrastructure and connectivity between countries.

However, compliance with trade agreements is only one side of the coin and the side that South Africa has emphasised until now. If South Africa is in compliance, then it should begin to look at where it can gain from the process. South Africa will gain from liberalisation efforts in other countries for a few reasons. First, international call rates are determined to a large extent by interconnection charges with other countries. If these countries persist with public monopolies or uncompetitive oligopolies, then they will penalise South African consumers through higher call rates to those countries. Second, South African communications companies have expressed a desire to invest internationally in order to take advantage of economies of scale and a diversification of income and exchange risk. The extent to which these companies can invest abroad depends on the extent to which the other countries have liberalised their communications industry.

South Africa needs to be aggressive in its trade policy because its likely targets are those countries in the region that have not yet opened up their industry. This is partly because

¹² Even industrial economies are supporting the immigration of ICT personnel to cover their own shortfall.

industrial countries are relatively open already and will open each other further in negotiations (from which SA will benefit through the most favoured nation principle) while African countries remain relatively closed. It is also because South Africa has more to gain from liberalisation in these economies as a considerable amount of trade and investment is already taking place in the region which can be enhanced through better and cheaper communications infrastructure regionally.

Foreign ownership issue. Full liberalisation of the communications market would include permitting full participation by foreign firms instead of the current 30% limit. There are obviously gains for the local industry from having foreign participation. These include access to technology, capital and work practices, in addition to a sharpening of competition. The reason for keeping them out is mostly a question of economic empowerment and no longer some form of strategic industry argument.

It can be questioned whether the gains from liberalisation are severely affected by preventing full foreign participation or not. It does seem that the major gains come from the introduction of competition and some participation at least allows access to technology, capital and work practices, even if this is more limited than might be realised in the event of full participation. Therefore, it may be beneficial for SA to consider dropping the foreign ownership issue only later in the process once licences have been issued. In this case, empowerment groups will already be entrenched in the industry and already reaped the rents from owning a licence. It would also help SA negotiate the removal of such restrictions in other markets that it wishes to get into.

Concluding Remarks

South Africa adopted a cautious approach to communications liberalisation partly through fear of how it may damage the domestic industry and partly through concern that it would not be the best way to remove existing inequalities. However, the approach finally adopted appears to have limited the potential gains for the country, even accounting for the range of objectives put forward in the reform process. It seems that competition and partial foreign participation are the dominant sources of gains in the industry. If this is the case, countries may wish to limit foreign participation rather than limiting competition if they wish to adopt a gradual approach to the liberalisation of their service sectors.

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