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Fast-Tracking Telecommunications Reform in Southern Africa

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1. Introduction

In late 1990s the SADC region adopted model policies for telecommunications sector reform. The framework made provision for privatization, an exclusivity period, followed by further review of options for introducing competition. Effective competition was recognized as the longer term goal with potential to "leap-frog" the region from slow past performance in the sector. The reform plan, however, has stalled and the fundamental elements associated with the approach should be revisited.

South Africa pioneered the approach within the region and emerged from the exclusivity period in May of 2002. South Africa now appears to be planning to follow a UK Mercury model of establishing a Second National Operator (SNO) a duopoly for years prior to full liberalization.

The fundamental concern with exclusivity has been its tendency to slow the pace of necessary reforms and to constrain service and prices available to consumers. Restrictive licenses and oligopoly frameworks for managed competition raise similar concerns, albeit to a lesser degree. The policy of limiting entry and managed competition may limit the introduction of new services, innovation, and price levels only achievable in competitive environments.

The purpose of this presentation is to outline an alternative approach to sector reform. The proposal includes the original elements of a establishing a sector regulator, privatization, and liberalization but recommends a fundamentally more aggressive approach in pursuit of sector liberalization.

At its core, the proposal is to invite not one additional operator, but allow unlimited entry into the market. From the standpoint of consumers, it is also important for the region to develop itself as a regional market, rather than 14 individual markets, so that regional integration and economies of scale and scope extend to the delivery of service at more affordable levels.

To the extent that any subsidy is required, it would be accomplished not through grants of exclusivity or limits on entry, but through explicit subsidies.

This paper will identify differences in sector development in countries that have proceeded along various paths for sector reform. International experience demonstrates that economies adopting a more ambitious path for liberalization and market-friendly forms of subsidization perform better after liberalization. Economies that adopt both a policy of liberalization and privatization are the best performers.

[1] Thanks to Mr. Anders Sandstrom for providing commentary on earlier drafts. The opinions, errors and omissions are solely the responsibility of the author.

2. Key Features of Sector Reform

The main components of sector reform include three areas, privatization, establishment of an independent sector regulator, and the introduction of competition (liberalization of the sector). These components are now well established as important elements of reform throughout the globe. As will be discussed further below, the three components have many variations and subordinate elements. The focus of the three part strategy was on the incumbent fixed-line operator. Other markets, including customer premises equipment, VANs, paging, and cellular were to move along a separate track toward open competition.[2]

Privatization involves the sale of all or a portion of the operator to the private sector and outside investors, such that government dissolves all or a portion of ownership. It may involve the sale of shares to the public, a strategic partner, or a combination thereof.[3]

Liberalization can proceed formally through a "managed" transition, as it has in South Africa, with attempts to legislate or license the boundaries of exclusive service provision until terms expire and laws change. Liberalization can also occur on less formal paths, involving little role for the courts or regulators through permissive entry.[4] Or it can occur along a more pro-active path involving the active support of regulation and the courts as has occurred in the US and EU countries.

The establishment of *independent regulation* is also an important determinant of successful reform policies. In a competitive environment, independence is needed to help ensure outside investors that their investments will receive no less favorable treatment than any others. Independence is also needed to help balance the interest of investors in a fair return against consumer desires for lower rates. Independence here refers to independence from political and operational influences. Regulators in the region have adopted many different approaches to regulation with vastly different levels of independence in the region.[5]

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[2] However, in the case of cellular, many countries in the region have experienced delays in entry caused by cumbersome licensing practices.

[3] A fourth element includes the initial separation of the government department into a commercial corporation and precedes privatization. *Corporatization* of the monopoly state-owned fixed-line operator involves placing telecommunications services under relevant company laws and the separation of telecommunications from government, so that decision-making is based on market and commercial factors.

[4] *Permissive entry* here refers to a framework in which government and the regulator permit entry without formally or actively encouraging competition through mandatory interconnection. It stands in contrast to the current framework used throughout Southern Africa of formally restricted market in legal barriers existing on top of economic barriers. It also stands in contrast to an active entry or pro-competitive model used in most liberalized environments now that protects new entrants from the exercise of market dominance by mandating interconnection under established terms and conditions.

[5] The mere existence of a separate regulator provides only a limited view of regulatory potential that has failed to be realized in most of the SADC region, a problem that exists in other developing economies in South America as well. Independence represents only one dimension of an effective regulator. *Credibility*, with industry, *legitimacy*, with the consumer, and *accountability* represent other important dimensions of an effective regulator. With respect to the issue of *independence*, key indicators usually include (i) fixed

These elements have emerged as the key features of a global standard for reform that, in 1998, SADC adopted as part of a comprehensive reform strategy.

As will be discussed further below, the performance of the sector is strengthened by the introduction of these features to environment, whether introduced independently or in combination. By performance we mean to include the impact on entry, investment, overall service, and price levels.

Liberalization is a central feature of reform, and is probably the most critical from the standpoint of consumers. It stands as a key object of considerable attention by the regulator in both developing and developed regions of the world. For purposes of this discussion, the central concern with reforms in the Southern Africa region has been delays to sector liberalization.

The focus of the discussion here is on the reform path associated with fixed-line communications and networks. With a few exceptions, cellular communications in Southern Africa has not suffered the full delays experienced in liberalizing the fixed-line market and provides a useful reference point for reforms in a discussion of fixed-line networks.[6]

3. Exclusivity and Limited Licensing

The current path to reform in SADC contemplates the several stages of reform mentioned earlier in sequence. A critical feature of the reform, however, is the initial sale of all or a portion of that operator to a strategic partner or the public, leveraging the value of the incumbent through exclusivity, and management of the transition to competition through the establishment of a sector regulator.

Exclusivity is an integral feature of the existing reform path within the region and for the purpose of this paper presents a central concern. Provision is made for exclusivity in the context of a legal monopoly, or by constraining the number of licenses issued subsequent to the initial monopoly. After the conclusion of a monopoly exclusivity period comes competition. Even with the onset of competition, however, limited licensing of new service providers may continue as a "next stage" of a managed competition.

The reasons given for a period of exclusivity are two-fold. First, exclusivity is used to make the operator more attractive to investors. This may attract additional capital and the interest of investors from more developed and competitive markets, potentially able to help mold the flagging operator into one that can compete. Second, some time is needed

terms for appointed leaders, (ii) independent funding, and (iii) independence in key features of regulation (including tariffing, licensing, establishment of rules and regulations) from sector ministries.

[6] Considerable delays, however, have been experienced in the region due to the licensing process and, even subsequent to licensing, in the development of interconnection terms between fixed-line and mobile operators prior to first delivering service.

to allow existing institutions (e.g., newly established regulators) and operators to adjust to the newly emerging competitive market.[7]

There is little dispute that preserving and extending a legal monopoly over a longer period will, other things equal, enhance the value of the sale, come time for privatization. Market conditions, however, are changing in ways that appear to be working against extracting value from incumbent state-owned operators, whether in a competitive or monopoly environment. Delays to date caused by plans for privatization and exclusivity appear to be diminishing rather than escalating the value of these sales.

Developments in technologies are able to circumvent the network and defy any effective policing, such as VoIP, present an ever increasing threat to the value and ability of incumbent operators to compete. Cellular service is also competing with fixed-line service in certain segments of the market, and in ever increasing ways. The quantity and quality of bidders appear to be on the decline. No government in SADC has privatized through a strategic partnership since 2001. The value of the sales also appears to be on the decline, perhaps the result of a variety of factors including a difficult investment climate.

Further delays in privatization run the risk of further reducing the value. Reliance on exclusivity to bolster value may be a costly tool.

The second stated reason for delaying liberalization was to allow institutional development institutions, like regulators. Delaying liberalization on such grounds was questionable from the start, since regulators exist only as a surrogate for competition. The development of competition at an earlier stage could only have reduced the overarching burden on regulators in protecting consumers from monopolistic abuse from dominant operators.[8]

Nevertheless, the region now has 11 regulators among the 14 countries in the region, most of which now have years of experience, an well established regional association from which to share experiences, and considerable involvement of the international donor community further developing the capabilities of regulators in the region. Regulators in the region are no longer immature institutions.

4. Current Status and the Path to Reform in Southern Africa

Telecommunications infrastructure and service is poor in most of the Southern Africa region. Africa generally scores poorly by global standards in both developed economies and developing economies. Telecom sector development within the region is now recognized as lagging even the developing world.

[7] *See* SADC Telecommunications Policies, approved June 1998 at Section 2.6.4.

[8] A second major role for regulators, of course, is that of controlling market abuse by dominant operators of new entrants and competitors. It seems unlikely; however, that inadequate regulatory capacity here provides foundation for creating additional hurdles to competitive entry (i.e., by erecting legal barriers to entry on top of the long list of market barriers that regulators and providers must overcome).

The sector suffers from generally antiquated equipment and facilities in an environment of inefficient operations. Despite the considerable drag of political instability and low per capita incomes, the potential for the sector is considerable, as has revealed itself in the growth of cellular communications.

Figure 1
Status of Reforms in SADC Countries

	Liberalization		Privatization	Sector Regulator
	Fixed	Mobile		
Angola	5	2	No	Yes
Botswana	1	2	No	Yes
DRC	1	10	N/A	No
Lesotho	1	2	Partial	Yes
Malawi	1	2	No	Yes
Mauritius	2ndIP*	2	Partial	Yes
Mozambique	1	2nd IP*	No	Yes
Namibia	1	2nd IP*	No	Yes
Seychelles	2	2	Yes	No
South Africa	2nd IP*	3	Partial	Yes
Swaziland	1	1	No	No
Tanzania	1	4	Partial	Yes
Zambia	1	4rth IP	No	Yes
Zimbabwe	2	3	No	Yes

* IP = In Process

Reforms in the region have been successful in one area …, in establishing sector regulators, and importantly, in introducing competition for cellular services. Already the region has regulators in 11 of the 14 SADC countries[9] and competition in cellular services exists, or at least multiple licenses are scheduled to have been issued, in all but one country in the region. Partial privatization has occurred in only 3 countries in the region since adoption of the SADC Policy in 1998.[10]

Angola, Seychelles, and Zimbabwe have taken a more aggressive path toward sector reform by licensing more than one fixed-line operator. Zimbabwe and Seychelles have

[9] The success in establishing regulators in SADC, however, should not be overstated. As noted earlier, independence still remains more a goal than a reality for SADC regulators. Sector Ministries in SADC typically retain much of the authority over matters of regulation in the sector, despite the obvious conflicts associated with government ownership of the fixed-line operators. The reach of sector Ministries under these circumstances would seem to cast a shadow over perceived investment opportunities in competitive operators, even if markets were fully liberalized.

[10] In Seychelles, the fixed-line operator, Cable and Wireless Seychelles, Ltd., was already privatized and initial steps toward privatization in South Africa preceded the adoption of the SADC Policy. South Africa's initial steps toward sector reforms preceded establishment of a regional policy framework.

introduced a second operator and Angola has issued licenses for four additional operators. South Africa, of course, is poised to issue competitive rural access licenses in 39 areas, and, along with Mauritius, a second national operator. Malawi also has plans for rural licenses.

The greatest concern with the current path to sector reform is the slow pace. It has now been more than five years since the region first adopted a cohesive strategy for reform, but progress has been slow and on a declining trend.

And there is increasing pressure from the technologies that compete and undercut, to break the mold. Pressure also appears to be mounting in the political arena, and from users, as is evidenced by the moves of Angola, Seychelles, and Zimbabwe.

5. International Experience with Reforms

International experience with reform is varied, but provides some useful context for guiding Southern Africa on reforms planned for telecommunications. The discussion includes both developing and developed regions of the world.[11]

The United Kingdom stands out in its leadership globally in helping to shape a transition from a state-owned monopoly to a privately owned company. The European Union has generally followed the lead of the UK and stands out as a region for its aggressive path to reform. The United States established itself in a position of leadership with respect to sector regulation and liberalization.

In the developing world, Latin America has generally taken a more aggressive, or at least an earlier path, to reform, relative to other developing regions of the world and provides a potentially useful basis for comparison and discussion relative to reforms in Africa. Chile moved early toward liberalization and then privatization. Brazil's reform came later, but has taken a fundamentally more aggressive path toward reform than its neighbors in the region.

European Union

Full liberalization of the telecommunications sector was realized by the majority of European Union Member States by January 1, 1998. Efforts are underway to establish a pan-European market by establishing harmonized policy frameworks. Despite the liberalization and attempts at integration, incumbent operators remain dominant in national markets.[12] With the EU, the UK stands out for its leadership being the first to liberalize and privatize, among member nations. Denmark is also a recognized leader in reforms within Europe.

[11] While not included in this review, markets in the East, including the Pacific region, have moved aggressively in some regions toward sector reforms and provide further evidence of the influence of sector reforms on performance.
[12] UK Department of Trade and Industry, 2001.

United Kingdom

The UK experience is important to the Southern Africa region because of the strong historical and current linkages. It also appears to be used as a model for reform within the region.

The UK began its process of sector reform in a cautious and phased manner in 1981. At the time British Telecom ("BT") was separated from the Post Office. A year later, Mercury (now called Cable & Wireless Communications) was licensed to establish a competing network, but permitted only to compete in local and national calling. From 1983 through most of 1990, the two provided service under a protected wireline duopoly. In 1984, BT underwent the first stage toward privatization. Also in 1984, The Telecommunications Act of 1984 established the independent regulatory body, the Office of Telecommunications (OFTEL), to promote competition and ensure a fair deal for the consumer.

In 1991, the Department of Trade and Industry decided to abandon the duopoly in favor of a fully competitive market and the wireline duopoly ended in practice in 1993 when eight additional Public Telecommunications Operator ("PTO") licenses were awarded, one of those using a national radio-based system. By 1995 there were approximately 19 PTO licenses issued and in 1997 45 licenses were issued for international service. More recent figures show some 177 licensed PTO, mostly providing domestic and international telecommunications services.[13] Many alternative forms of infrastructure deliver telecommunications of various sorts to that of BT. The UK now has one of the most open and competitive telecoms markets in the world. Although a full review of the UK experience is beyond the scope of this paper, the many studies and reports that have been conducted conclude broadly and emphatically that the reform efforts benefited both consumers and former state-owned monopoly alike.

Despite its many successes to report, no sector of the UK telecommunications market, other than international calling, has been declared fully competitive even 19 years after competition was first introduced.[14]

United States

The US experience is unique in many respects because the telecommunications industry there remained largely in private sector hands since the industry was first established. The US also enjoys a long and well developed history with sector regulation through the Federal Communications Commission and then the states. Competition took root gradually in the market for customer premises equipment, followed by private long haul links (MCI), next switched long distance network communications (MCI) and gradually making way to long distance communications and finally local loop competition. The break up of the Bell Operating System in 1984 and the Telecommunication Act of 1996

[13] OECD, 2002.
[14] Id.

represented important milestones on the road toward sector reform, but represented neither a start nor a conclusion down the trail.

The Federal Communications Commission initially approved the applications by MCI to provide private long distance in 1969, and final court decisions allowing MCI to provide services in 1978. By 1996 there were over 500 long distance carriers in the U.S.[15] Concerns regarding favorable provision of access to the local market and other anticompetitive accusations resulted in the vertical divestiture of the AT&T monopoly into a new AT&T long distance and terminal equipment company, and seven regional Bell holding companies offering local services (and other services) in 1984. Between 1984 and 1996 AT&T's share of the national long distance market dropped from about 82% to below 55%.[16]

From the standpoint of consumers, service is inexpensive and abundant. The reach of advanced services, especially broadband into homes and businesses, exceeds almost anywhere in the world.[17] Despite the bankruptcy of WorldCom, Inc. the major operators in the US are financially robust can compete in any markets in the world.

South America

Following the lead of the UK and British Telecom, telecommunications reform in Latin America and the Caribbean has led to greater privatization than in any other regions of the world. Chile's initiatives served as an important model in the region. Chile allowed competition in telecommunications in 1978 and privatized its state-owned companies in 1988. Other countries in the region to pursue aggressive reforms included Mexico and Argentina.

In general, Latin American countries provide useful comparisons. The Public Utility Research Center ("PURC") indicates that by 1994, Latin American countries were evenly split between those that had privatized and those that had not. Of those that had privatized about half had liberalized by 2000.[18] Unfortunately, for our purposes, with a few exceptions, liberalization has only been occurring recently.

Strong progress can be seen from both mobile and fixed telephony. Teledensity rates increased from four to almost thirteen lines between the first part of 1980s to the last period, 1996-2001. Although this is still far below the level of developed countries, Latin America's rate is now twice that of Asia's about five times the African average of teledensity (2.0 in 1997).

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[15] *Trends in Telephone Service* (Federal Communications Commission, Statistics of Communications Common Carriers, 1992) (showing the number self identified as long distance service providers). Even by 1989, there were over 500 entities registered with carrier codes (Federal Communications Commission, Statistics of Communications Common Carriers, 1992).

[16] FCC, 1996. In 2001, its market share had declined to about 38%. *See*, FCC, 2001.

[17] In 2002, 19.9 million "High-Speed Lines," defined to mean lines that exceeded 200 kb in one direction, and increase of roughly 55% over the prior year. 17.4 million served residential and small-business customers. FCC News, June 13, 2003. Full report of the FCC's Summary Statistics are available at www.fcc.gov/wcb/stats.

[18] Jamison, November 2000.

The liberalization of the fixed-line telecom markets has been slow despite reform. At the time of privatization, many governments granted exclusivity to owners. The exclusivity periods granted have ended in some countries and are about to be renegotiated in others. The exclusivities awarded early in the 1990s were typically long (9 or 10 years). Those awarded in the late 1990s were typically shorter (Brazil was only six-months). A by-product of the concession of exclusivity periods has been the entrenchment of incumbents and allegations of anti-competitive behavior. Because liberalization has been slow, largely coming in the last several years, there appears to be little basis for further benchmark comparisons between countries that have liberalized and those that have not.

Central and South American countries are also interesting because they enjoyed substantial growth overall during the period from 1980 through 2001. The majority of countries initiated the process of liberalization and privatization in the 1990s. If one compares the growth in fixed-lines during the period of the 1990s (the period of reform) with that of the preceding decade across 20 Latin American countries we find that the majority of countries enjoyed greater percentage increase between 1991 and 2001.[19]

Grouping these same countries into several categories of reform (or lack thereof) is even more revealing. Between 1980 and 2000, a group of countries, which included Uruguay and Paraguay, remained state-owned monopoly but still saw fixed-line growth of 151% during the two decades. A second group of countries, including, Argentina and Bolivia proceeded on a privatization/exclusivity path and saw growth of 150% during the two decades.

A third group initiated a model that largely focused on liberalization and the creation of a supporting regulatory environment to encourage competition. This group included Chile, in 1982, and then Colombia, Guatemala, and El Salvador in 1995 and 1996. During the two decades from 1980 to 2000, fixed-lines grew by roughly 248%. Among central and South American countries, Chile attained the greatest growth in fixed-line penetration from 1980 to 2000 among all countries in Latin America. During that period Chile realized a growth in penetration of 584%.[20]

The other noteworthy performer in the region was Brazil. Despite its late start, it privatized and liberalized in 1998 (after a half year of exclusivity) and saw substantial growth in service soon after, especially relative to its neighbors. Brazil provides a somewhat unique example in that it proposed liberalization and privatization at roughly the same time, in 1998. During the 2 decade period reviewed, it experienced growth of 346%. The most substantial growth occurred after 1995 for groups that liberalized.[21]

Africa (Outside SADC)

The continent as a whole has been slow to reform the sector. Until only recently, Uganda and Ghana were the only two countries to have partially opened the fixed-line market by issuing a second fixed-line license in each. (As noted above, Angola, Zimbabwe, and

[19] Hernandez Gallardo, April 2003.
[20] Id.
[21] Id.

Seychelles also have competition in fixed-line communications. Mauritius and South Africa are soon issue SNO licenses.) In the case of Uganda, the second national license was issued to MTN. The license, however, was both a fixed and mobile license. While mobile services appear to be growing dramatically, little growth has occurred in the market for fixed-line services.[22] In contrast, Ghana has seen fixed-line growth, as measured by fixed-line teledensity grow by almost 3 times during the 6 years between 1995 and 2001.

Overall, the strongest performers in the fixed-line markets on the African continent include Senegal, Cote d'Ivoire, Sudan and Ghana.[23] Senegal appears to stand out for its consistent growth over the past two decades, in both fixed and mobile teledensity. Senegal is a bit of an anomaly as it has been slow to liberalize and to establish sector regulation.[24]

Summary of International Experience

In general, reforms that include independent regulation, liberalization and privatization lead to better sector performance. Liberalization and privatization of the sector are strong determinants of sector performance. Countries that proceed along frameworks toward more aggressive and ambitious paths for the sector reform that includes liberalization typically outperform countries proceeding on less ambitions paths. Countries that have liberalized their sectors early have typically experienced significant higher growth, service expansion, and investment since liberalization.

Africa has proceeded slowly and, as a consequence, has experienced slow growth in the sector, especially when compared to developed nations that have proceeded along the path of liberalization like the US and UK. Even when compared to developing markets, however, Africa is making slow progress.

South America is interesting because much of the reforms there preceded reforms that of Africa. The liberalization schedule in South America suffered delays similar to those associated with exclusivity, now common or planned for African nations. As a result, there appears to be limited analysis of the relative contribution of liberalization on sector performance At least one study reveals that the best performance, as measured by growth in fixed-line service, occurred in countries like Chile and Brazil that have proceeded along an aggressive path toward liberalization.

[22] Michelsen, 2002.
[23] Michelsen, 2002, at 19.
[24] Id. Sector regulation in Senegal was only established in 2002.

6. **Proposal for Fast-Tracking Reform**

The core proposal for fast-tracking reform is simple. Rather than manage or control entry into the market, unlimited entry is permitted into markets. Licensing is used not as a tool for restricting entry, but only for ensuring that all entrants are able to fulfill commitments to service and the consumer.[25] In order to provide affordable service to rural areas, subsidies will be needed. Where they are necessary, they should be established in ways that complement the broader policy reform of sector liberalization, as described further below in Section 9.

Other elements of reform can follow rather than lead reform initiatives. These include the following:

Rate rebalancing -- The potential impact of sudden entry may present cash flow concerns for the incumbent operator. The price of distance sensitive communications must come down and quickly. The rebalancing of rates is integral to plans for fast-tracking reforms as it will help limit the risk of sudden revenue losses and uneven cash flow.[26]

Establishment of an Independent Regulator – 11 of 14 countries in the region already have a sector regulator, with varying degrees of independence. The oldest of these regulators has been in existence for almost a decade and almost all have been in existence for more than three years. The association in which they work collaboratively to build harmonized policies and share experiences has been in existence for over 6 years. New regulators, such as that being planned for Swaziland, will have the benefit of now considerable experience among regulators in the region. As noted earlier, the presence of a private monopoly secured through exclusivity gives greater cause for effective regulation than does an environment with competition or the threat of competition.

Privatization – International experience suggests that privatization leads to better sector performance, and the combination of privatization and open markets perform best.[27] The earlier the shift toward privatized delivery, the speedier and more robust will

[25] The UK and US have now long adopted such an approach. Indeed the UK is proposing legislation that would permit general authorizations in place of licenses.
[26] Prices between some of the most open and competitive markets globally are available below $0.06 (US$). This includes calls even between distant locations like the New Zealand and the US. Even calling rates from the US to South Africa and Zimbabwe can be less than $0.13 per minute when the call originates in the US. This contrasts sharply with rates to overseas markets from within SADC that remain above $1/minute for almost all countries in the region. Rates listed from a competitive carrier on the internet from one service provider at www.pngsales.com/intl011402gold.shtml. Rates as low as $0.09 per minute are available to South Africa. http://www.vonage.com/rate_plans_international.php. This compares with rates in the other the other direction, (from South Africa to the US). Of course, voice communications is also available from any computer to any other computer using free software and VoIP technology.
[27] By "privatization" here we mean to include all the elements of separating the management and decision making away from government and toward sound commercial decision-making, ideally associated with the corporatization of a telecommunications operator.

be the influence on service and prices. Privatization of incumbent operators, however, should not delay efforts to allow open entry.

A major challenge for government in addressing privatization will be in mustering the political will to privatize in the face of low or even negative valuations. The prospect of this appears to be the major impetus behind exclusivity periods. Most operators in the region have been slow to face the realities of the emerging markets by rebalancing rates and tightening the workforce. Most global fixed-line competitors have been forced to focused on domestic markets in the face of a global downturn in telecommunications.

Licensing and Form of Regulation – The emphasis of licensing should fundamentally shift away from an emphasis on restricting entry, and service or technology driven categories of licenses and licensing. Such restrictions cannot be sustained in an environment of increasing competition from divergent technologies and media. Over time, the emphasis on regulation through licensing needs to shift toward general rules allowing open entry with broad application among competing providers and regulator tailored to the degree of market power and potential for abuse of market position.

Proposed competition legislation will move the UK away from a license-based system to one where companies will be operating under a "general conditions of entitlement" regime.[28] Similarly, Denmark is fully liberalized and issues general authorizations rather than licenses.

7. Potential Concerns with Fast-Tracking

The main concern with fast-tracking is its potential impact on the financial health of incumbent monopoly fixed-line operator.[29] Arguably, fast-tracking liberalization may jeopardize its financial health. The concern, however, has to be viewed in the broader context.

First, for clarification, the proposal here for fast-tracking liberalization is not a proposal to reject privatization in favor of liberalization. Evidence is clear that both liberalization and privatization are needed to reform the sector and, ultimately, lead to better service to consumers. While there appears to be broad consensus that liberalization is the more important of the two, the sooner that both occur, the better served will be the consumer.

Second, even where liberalization occurs in advance of privatization, it need not jeopardize the financial health of the incumbent. The incumbent still enjoys the advantages of incumbency and monopoly power that have proven overwhelming

[28] http://www.dti.gov.uk/industries/telecoms/

[29] The path was supposed to help enable the incumbent to prepare itself for the realities of a competitive market. While seemingly reasonable in its approach, it has been cause for delay.

advantages even in markets such as the UK, Denmark, and the US that have moved aggressively to open markets, even well into the development of a competitive market.[30]

And as evidenced by the impact of the entry of cellular services to the sector in Southern Africa, liberalization increases the size of the pie. The result is that even as competition occurs and market share is lost, growth occurs in service delivery and revenues. Also an increase in traffic generates more retail revenue, and the generation of more incoming traffic that generates interconnection revenue.

If SADC operators behave as operators in other transition environments, we can also expect to see competition improve the performance and ability to compete of the incumbent operator. In the five years of transition since SADC first adopted a transition path, many, if not most SADC fixed-line operators appear to be struggling even in a monopoly environment.[31] This contrasts with growth and productivity gains occurring in other markets during early stages of competition.

Third, liberalization can induce other sector reforms. What we have seen in the region is a fundamental lack of political will to move forward with reforms. Efforts to open markets will fundamentally force the issue and accelerate other needed reforms.[32] Markets such as the UK that opened prior to privatization, saw other elements of reform soon follow.

Fourth, some parts of the key elements of reform can precede even liberalization. As occurred in South Africa, the threat of competition, rather than actual competition appeared to stimulate efforts of the incumbent to rebalance rates and restructure the work force. Rate imbalances, … really just high international and national calling rates, present one of the main concerns to the established revenue base of incumbent operators. An announced plan for liberalization will force the issue of rate rebalancing. Rate rebalancing need not occur on the shoulders of the local market, at least not entirely. Demand-response will help ensure that as prices for international and national long-distance calls come down, the demand will help ensure a stable flow of revenues.[33] Here again, the pie should increase in size.

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[30] And as noted earlier, sector ministries within the region typically maintain a share of regulatory responsibilities through involvement in licensing, tariffing decisions, and establishment of rules or regulations. While this fact is potentially damaging to the sector, outside investment, and competition, one would expect sector ministries in exercising this role to favor the interests of the incumbent.

[31] As measured by indicators of teledensity and fixed lines per employee, many fixed-line operators in the region have shown declines in the last decade. Michelsen, 2002. In contrast, real productivity as measured per line or per employee more than doubled during the initial decade of competition for BT from 1980 to 1990. Spiller, 1994.

[32] In a monopoly environment, the chorus for sector reform is often restricted to a limited set of entrenched interests and perspectives. Added entry into the market will likely help foster greater diversity in the range of informed views presented as additional perspectives representing commercial interests find their way into the debate. In the US, MCI was instrumental in helping to shape the reform, and in the UK it was Mercury.

[33] Demand-response to price reductions refers to, in the jargon of economists, the *elasticity of demand*. While considerable study of this issue has been conducted in developed economies of the US and the EU, there appears to be little information available in the developing world. Experience in developed

Fifth, as noted below, the value of incumbent operations appear to be declining over time, or at least attracting less attention from outside investors. This phenomenon may be due to global factors and the ever increasing threat of new technologies that undercut the value of existing and ongoing operations. Most of these technologies have the effect of bypassing, or substantially eroding revenues that would otherwise flow to the incumbent operator. The list includes VoIP, call-back services, leased-lines on private networks, and predictable consumer behavior dictating that calls originate from the less-expensive-point-of-origin.[34]

Cellular technology is also competing favorably with fixed-line networks and helps to explain the flat-to-declining growth in the number of fixed-lines in many SADC markets.[35] The expanding list of capabilities associated with the cellular technology, to include data communications, will further enhance the ability of cellular technologies to compete with fixed-line service over time. In many instances, operators are facing losses with little prospect for turnaround prior to privatization. Further delay works against the interest of government in extracting value from its investments.

Sixth, the existing approach to sector reform that requires delay to the opening of markets places the burden of creating artificial "value" on the shoulders of consumers in the sector. Exclusivity is effectively a form of hidden subsidy. It requires government to erect artificial legal barriers around services. The full burden of the subsidy is borne by consumers within the sector. In effect, consumers within the telecommunications sector are being asked to support the general fund of government by delaying service.

As noted earlier, the spiral downward may be causing harm to both taxpayers and consumers. If a subsidy is required to help carry the incumbent operator, then it should be done through general funding sources, ideally explicit subsidies from general fund sources, rather than sector-specific ones, such as exclusivity. If a sector specific subsidy still remains the only viable solution, then it is better to rely on explicit subsidies, as might be reflected in a temporary premium on interconnection rates than an implicit subsidy of indeterminate length and character and that is prone to stimulate litigation, as with exclusivity.

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economies suggests that longer distance communications have very high demand elasticities. The high imbalance of traffic between outgoing international calling and incoming traffic reflects the price differential between call out of the region and calls to the region from outside, suggests that the *long term elasticity* is likely very high and greater than one. This suggests that within a period of 18 months, operators could expect to see demand increases more than sufficient to compensate for the lost revenues from lower prices.

[34] As noted earlier, a call from the US to many countries in Southern Africa is less than 15 cents, while calls in the other direction are at least three, and sometime ten times that amount or more.

[35] Evidence that cellular service is also competing with fixed-line services is also increasingly evident in the US and Europe. Cell-to-cell calls are also often undermining national, and even international, rate structures, especially where the call remains within the same network provider.

8. Market Evolution in an Environment of Unrestricted Entry

Concern is sometimes raised that competitive markets cream skim and fail to service the less profitable markets. The same concern, however, has been raised with monopolies and duopolies. Experience seems to suggest that competitive markets simply extend their reach further into distant rural areas than do restricted markets. The evidence of cellular market development in South Africa has far exceeded expectations and now extends to roughly 92% of the population. Similar experiences exist with competitive cellular markets in neighboring countries.

In general, telecommunications markets transform in a fairly predictable fashion. The most lucrative markets receive the initial entry, usually the high margin long distance and international calling markets, and then move to the less lucrative markets. Eventually, all segments of the market that can turn a profit will receive some entry and even, perhaps, some competition. At some point, profit margins will diminish to the point where service is no longer profitable to extend service further and no entry or only some form of monopoly entry will occur. Efforts to extend service beyond will require some form of subsidy.

The capabilities of pre-existing facilities are also extending their reach into new services or technologies. The expanding capabilities of existing technology and infrastructure are allowing expansion of services into new markets and opportunity for competition in areas otherwise thought to be natural monopolies. Until recently, coaxial cable was associated solely with the delivery of entertainment, and cellular, to mobile voice communications. In each case, the existing facilities are allowing them to expanded service to include data communications, and, in the case of coax, to voice communications (an alternative form of fixed-line service).

From the standpoint of investors, lower entry requirements reduce investment risk and necessary capital-permitting entry from smaller entrepreneurs and investors. Using the same facilities to offer diverse services also appears to reduce risk, and in any event, increases the investment opportunities from investments in such facilities.

In a market environment with many small investors and businesses, one can expect an environment that fundamentally sparks service, innovation, and investment in ways that defy prediction. Entry by small investors could be further enhanced by imposing requirements for resale and unbundling that allow investors and entrepreneurs the ability to test the retail end of the market before making more significant investments in capital and facilities.

If developed regions are any indication, however, one can continue to expect the dominance of historically dominant firms for some time. In the US, Northern Europe, and UK market concentration broadly measured remains high. In the UK, BT remains dominant in all markets except for international calling.[36] In the US, AT&T and Verizon continue to dominate most of the local, long distance, and now even the cellular markets.

The competition that occurs over time, however, will occur in unexpected ways and from differing sources. Consider, for example, Figure 2 showing the new and old orders for the delivery of communications services. The "*old order*" was easy to understand from the standpoint of consumers, regulators, and legislators. Clear boundaries separated service/technologies from each other. The "*new order*," however, allows for overlapping service provision from a variety of competing technologies. The *new order* represents a feast for the consumer, but a nightmare for providers, regulators, the courts, and legislators that attempt to define technologies and services in licenses and impose, or attempt to navigate, clear boundaries of exclusivity.

As the UK's Department of Trade and Industry noted in a report from 2001:

> Differences between fixed and mobile licenses or VANs licenses is becoming more an issue for lawyers than consumers. Similarly, there is little basis for regulators or lawmakers to distinguish VoIP from circuit-based delivery. Law and regulation seldom confront this reality. (UK Department of Trade and Industry, March 2001)

The bright line that formerly separated services and technologies has long since yielded to fading shades of gray.

The examples in Figure 2 are not comprehensive, but rather illustrate the emerging fabric of technologies and services.

Of increasing interest in the convergence of services and demand is the substitution that is occurring between fixed and cellular services, both inside and outside the region. Uganda has issued licenses that do not differentiate between cellular and fixed-line services. The result has been continued heavy growth in mobile demand, but flat demand for fixed-line services. In Finland, relatively low fixed-line penetration is explained by the substitution of mobile for fixed-lines.[37]

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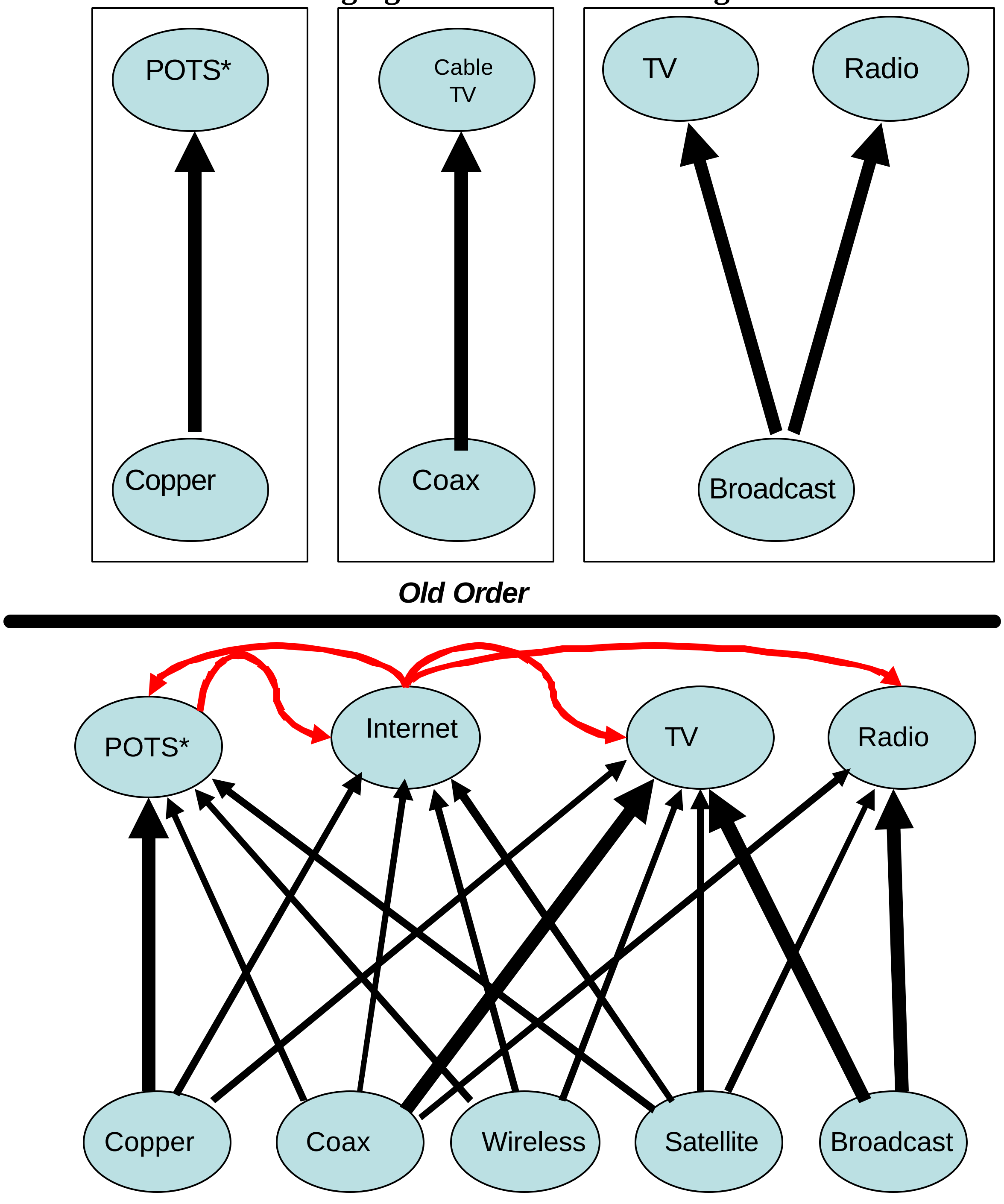
[36] OECD, 2001.
[37] Melody, 2003.

Figure 2
Converging Services and Technologies



New Order

*POTS = Plain Old Telephone Service

Adapted slides from David Clark, “The Architecture of the Internet and its implications.”

9. Addressing Rural Access and Underserved Areas

No discussion of sector reform in Southern Africa would be complete without addressing rural access and the underserved. The proposals presented here provide a foundation for programs to help ensure that rural and poor gain access to affordable communications. Where markets cannot or do not provide service, ensuring affordable access for low income populations will require some form of subsidy.

A full discussion of subsidies and approaches to rural access is beyond the scope of this paper. However, the broader features of such initiatives are presented here. Perhaps most relevant to the current discussion are features of subsidy approaches that avoid damage to the development of markets. Some forms of subsidy can complement, and may stimulate the development of markets.

Even where subsidies are not relied upon, liberalization provides the foundation for rural access. Already liberalization, or partial liberalization, of cellular networks has extended communications in Africa well beyond the limits of what was previously thought possible. Other wireless technologies seem to provide potential to extend the reaches and affordability of service still further.

Most damaging to the development of markets are subsidies that are fundamentally hidden in nature, are provider specific, and may be difficult to effectively police. They may also be prone to unexpected results. And with the addition of each new entrant may come additional licensing commitments that, in effect, may create a lumpy playing field as each new entrant faces unique obligations.[38]

Also damaging are unstable funding sources. In order for subsidies to have the desired effect, investors require stable sources of funds, or to have subsidies front-loaded. This concern accounts for the establishment of separate funds that are essentially self-funded from within the sector.

Mechanisms that complement the development of competitive markets are those that are explicit, predictable, provider and technology neutral. A well designed universal service fund with regulatory oversight can score well here. Transparency, oversight and accountable fund administration are also critical to an effective form of subsidy.

Subsidy mechanisms also exist that may stimulate entry and competition. The South American style negative subsidy auctions helped to stimulate interest and entry into many markets. Such mechanisms, could, for example be employed in identifying candidates

[38] Another concern, although one that may be more benign for purposes of this discussion, is that build-out and service obligations included in licenses may be largely irrelevant because that market and demand are already sufficient to warrant the network expansion. Various cellular licenses in the SADC region have experienced demand that appears to justify rural expansion not considered economic prior to licensing. In the end, the license obligations were probably irrelevant and not associated with any form of subsidy.

for licenses in under-serviced areas, as is contemplated in Malawi and South Africa. (Ideally such licenses would be issued without any assurance of exclusivity.)

In the short term, it appears likely that wireless, primarily cellular, will continue to have the greatest impact in extending the reach of voice communications in the region. Fixed-wireless and limited-mobility wireless technologies may also offer great potential. This has been largely the success of liberalizing a distinct segment of the market relatively earlier. Cellular services can and are substituting for fixed-line services. The achievements of cellular and wireless technologies in extending the reaches of the network can probably be extended by through effective and targeted subsidies.

10. Regional Harmonization and Market Integration

Perhaps the greatest challenge and opportunity for the SADC region (and beyond) is for regional development of communications markets so that consumers can benefit from economies of scope and scale throughout a regionally integrated SADC market. This was recognized as far back as 1996 by the SADC members States in establishing a regional sector Protocol that established among other things, regional cooperation and regional policy harmonization.[39] Low per capita GDP and small dispersed populations in the region require strategies for allowing SADC members the same access to advanced communications services and lower prices that can only effectively be realized by regionalizing the SADC market so that investor view the region not as 14 distinct markets, but rather as a single market. Any provision of the existing policy and legal framework focusing on national and local ownership to the exclusion of outside investors, forces the fragmentation of the SADC market.

The proposal for fast-tracking reform is fundamentally aimed at reducing barriers to entry not only from within member countries, but from within the region and beyond. Infrastructure already exists (or should exist) within the region capable of delivering high speed data communications throughout the region, yet facilities go unused or underutilized because legal restrictions are preventing interconnection of private networks with public networks. The SADC region could, in the space of a very short period establish high speed data connections throughout most of the region, simply by changing laws and permitting technology and the investment community to deliver the service.

International agreements could be encouraged and forged on a multi-lateral or bilateral basis.[40] Unilateral efforts, however, would permit unrestricted access to international traffic in the shortest period. And for the reasons stated throughout this paper, unilateral

[39] SADC, 1996.
[40] Multilateral agreements, while potentially promising over time, also present risk of further delay if pursued to the exclusion of other avenues.

efforts should be pursued independent of international agreements to open the market for international communications, especially to neighbors within the SADC community.[41]

Another important impediment to the development of a regional market, however, is the establishment of local ownership requirements. Many laws or proposals in the region impose limits on ownership among foreign operators and investors. The practical effect of such restrictions is to create added barriers to entry by potential regional operators offering.

Well over 80% of the fixed and mobile lines within the 14 Country SADC region exist within South Africa. Consumers in the SADC region can benefit from a relatively large anchor demand in South Africa because it will likely attract the interest of global providers, or even solid regional competitors, to deliver or extend the services and high speed backbone networks. It also presents an opportunity for easy access to a large and stable market within the region. Proposals for fast tracking-reforms will fundamentally accelerate the development of a regional market and with it opportunities for both consumers and providers alike.

11. Conclusion

There is a strong theoretical and a well established empirical case for supporting the key elements of sector reform, including privatization, liberalization, and establishment of a sector regulator. Disentangling the relative contribution of each through empirical work is a greater challenge. It may be important to do so, however, as one stage of reform may affect the timing of another. The current framework that depends first on privatization and managed liberalization appear to be adding to the slow pace of meaningful reform in the region.

While the SADC region has adopted the key elements of reform, it has been slow to privatize and slower to liberalize the fixed-line network. This is of particular concern because competition, which comes later in the SADC reform path, appears to be the most important means of securing better communications services in the region.

The *evidence* presented here strengthens the case for advancing a policy of unrestricted entry in the sequence of sector reforms. By any standard, developed market economies have faired well under competition. Even developing markets have faired well under an aggressive reform path that includes competition. Evidence from South America suggests that liberalization has the greatest impact on growth in fixed-line services, especially when combined with privatization and supporting regulation.

The *theory* presented here suggests that policies of restricted entry and managed competition create bottlenecks to service provision, limit the range and reach of service to consumers, and inevitably create legal barriers to entry that will frustrate the courts and

[41] A secondary benefit here would be in facilitating the development of regional peering points for ISPs that is sorely lacking in SADC and accounts for, in part, the often poor quality and high costs of internet services within the region.

regulators, scare cautious investors, and further reduce opportunities for service delivery and innovation in Southern Africa. Policies of limited entry and managed competition inhibit investment and development in sectors of the economy that depend heavily on communications infrastructure.

The region has already embraced a formal policy to liberalize communications markets in the region. Rather than continue along the current path, the pace and scope of liberalization should be revisited and accelerated. The proposal here is for unrestricted entry in all markets except where resource constraints (e.g., available spectrum) do not permit. Other key features of reform include the following:

- Rebalance rates/lower long-distance and international calling rates;
- Fully privatize and commercialize and ensure decision-making independent of government;
- Establish *fully independent* regulators with the charge and authority to curb abuses by dominant operators;
- Establish a policy of unrestricted licensing through general authorizations;
- Establish rural access/universal access support mechanisms that complement and support broader efforts to liberalize the marketplace.
    - Establish competitively neutral explicit subsidy funding mechanisms;
    - Rely on funding mechanisms that properly target the intended beneficiaries;
    - Use auctions and negative subsidies to facilitate development of under serviced areas.

Creating a fully integrated regional market for communications services in SADC may be one of the most important outcomes from fast-tracking reforms. Fully opening international communications services through multiple licenses or general authorizations would facilitate the development of a regional market for all communications services, with opportunities for better and cheaper services from associated scale and scope economies over a short period.

As evidenced by the partial liberalization of cellular markets, emerging technologies (largely wireless) in Southern Africa, have considerable market potential to spark innovative use of those technologies if restrictions to their use in a competitive setting are lifted. Even while liberalization will help reach farther and significantly reduce the need for subsidies, liberalization and competition will not provide service everywhere. Where subsidies are required, they should best be introduced in ways that can work well in the emerging competitive environment.

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