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Telecommunications Reform in Malawi

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Abstract

In 1998 the Government of Malawi decided to reform its telecommunications sector. Although the reform was ambitious in some ways, it was modest when compared with the most ambitious reforms adopted elsewhere in Sub-Saharan Africa. The two main accomplishments were splitting the incumbent fixed line monopoly, the Malawi Post and Telecommunications Corporation, into two companies—Malawi Telecommunications Limited (MTL) and Malawi Post Corporation (MPC)—and issuing two new cellular licenses to two new private entrants. In addition, the Government also established a new regulator which was separate from, but heavily dependent on, the Ministry of Information and

liberalized entry in value-added and Internet services. However, the Government had neither privatized the fixed-line telecommunications operator nor introduced competition in fixed-line services by the end of 2002. Clarke, Gebreab, and Mgombelo discuss sector performance before reform, details of the reform, the political motivation for reform, and events in the five years following the reform. The reform yielded mixed results. Although cellular penetration and Internet use expanded dramatically following reform, prices increased, especially for cellular calls, and fixed-line penetration remains low by regional standards.

This paper—a product of Investment Climate, Development Research Group—is part of a larger six-country research program that looks at telecommunications reform throughout Sub-Saharan Africa. Copies of this paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Paulina Sintim-Aboagye, room MC3-300, telephone 202-473-7644, fax 202-522-1155, email address psintimaboagye@worldbank.org. Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. George Clarke may be contacted at gclarke@worldbank.org. April 2003. (58 pages)

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TELECOMMUNICATIONS REFORM IN MALAWI

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I. INTRODUCTION

Less than a decade ago, telecommunications sectors throughout Sub-Saharan Africa were dominated by state-owned monopolies. Although many countries had licensed cellular providers – who, in practice, were often the same monopoly company that provided fixed line service – competition was rare even in cellular telephony and virtually unknown in fixed line telephony. By the end of 2002, this picture had changed dramatically. Technological change, combined with changed views on the potential for competition, has resulted in many countries licensing additional cellular providers and some even allowing competition in fixed line service (e.g., in Uganda). Further, many countries have privatized formerly state-owned enterprises and established independent regulators.

Although some features of reform have been similar across countries, other aspects have differed dramatically. Documenting and studying the successes and failures related to these different reform attempts in order to identify which aspects of reform have worked, which have not, and to identify the political and institutional constraints that affect success is, therefore, an important step in designing and guiding future reforms. To this end, this study is part of a larger research program analyzing the regulatory, legal, political and institutional factors that have influenced the outcome of reform. The research program attempts to do this through detailed analyses of reforms in six countries in Sub-Saharan Africa: Côte d'Ivoire (Laffont and N'Guessan, 2002); Ghana (Haggarty *et al.*, 2003), Malawi (this paper); Senegal (Azam *et al.*, 2002), Tanzania (Haggarty *et al.*, 2002) and Uganda (Shirley *et al.*, 2002).

In comparison to the other case-study countries, the Malawian Government adopted a relatively modest reform program, several years after reform was initiated elsewhere. The incumbent operator, Malawi Posts and Telecommunications Corporation (MPTC) was split into two entities, Malawi Telecom Limited (MTL) and Malawi Posts Corporation (MPC). However, MTL continued operating as the monopoly provider of fixed-line services and, after a failed attempt at privatization, remained state-owned. In addition, a second cellular license was issued in 1998 (and a third in 2002), introducing competition in this segment of the market, which previously had been dominated by the single incumbent-owned cellular provider. Finally, the law established a new regulatory agency, which is housed outside of the incumbent operator,

which was responsible for regulation before reform. However, the Minister of Information retains considerable influence over the regulator.

The impact of the reform was quite modest by the end of 2002. Rapid growth of cellular telephony, which took place after the new cellular operator entered the market, occurred. However, fixed-line penetration did not grow as quickly as hoped and, at the end of 2002, was lower than originally targeted. Furthermore, cellular prices increased dramatically as soon as they were freed from regulation. Finally, noisy disputes between the new cellular operator and the regulator raised questions about the impartiality and independence of the regulatory regime.

The paper is organized as follows. In the next section, we discuss sector organization before reform. In Section III, we discuss the reform itself, focusing on the effect of reform on regulatory institutions and privatization and competition. In Section IV, we discuss the political factors that affected the extent and design of reform. In Section V, we describe the outcome of reform and in Section VI, we conclude.

– III. SECTOR CIRCUMSTANCES BEFORE REFORM

III.1 Sector organization.

Before sector reform in 1998/99, the state-owned operator, Malawi Posts and Telecommunications (MPTC) dominated the telecommunications sector in Malawi. The incumbent operator had a monopoly over local and long-distance fixed-line service, had the only international gateway and was a part owner of the only cellular provider and the only Internet Service Provider (ISP) in Malawi. In addition, it had a monopoly over the provision of postal services and was responsible for most communication sector regulation.

MPTC, which had previously operated as a department of the Ministry of Information, Broadcasting, Post and Telecommunications, was corporatized in January 1995. Its board consisted of a chairman, appointed by the Minister of Information, three ex-officio members from the Government, and five other members also appointed by the Minister. Board members usually served two-year terms, but the Minister could terminate their appointments for any reason at any time. The board appointed the Post Master General, the Chief Executive Officer of MPTC.

The primary reason for the government's decision to corporatize MPTC was that it had agreed to as one of the conditions of a sector loan from the African Development Bank.¹ However, at this time, it would have been very unlikely that the Government would have attempted a more ambitious sector reform. *First*, Malawi had relatively low credibility with foreign investors. For example, Malawi was ranked lower on the International Country Risk Guide, a commercial index commonly used by international investors, than any of the early reformers were (e.g., Ghana, Côte d'Ivoire, and Tanzania).² The low ranking reflected the fact that Malawi had started the democratization process only recently – after thirty years of single-party rule and very tight state control over the country, in general, and the communications sector, in particular. Second, at this time, bolder reforms, such as introducing competition or privatizing state-owned operators, were relatively rare in Africa. By 1994, of 42 countries in Sub-Saharan Africa for which data is available, only 4 had privatized state-owned operators and only 2 had introduced competition even in cellular.³ Malawi's history of tight state control made it very unlikely that Malawi would be a leader in this respect and, therefore, it is not surprising that the Government responded with a relatively modest reform.⁴

As well as corporatizing MPTC, the Government also licensed Malawi's first cellular operator in 1995. The new operator, Telekom Networks Malawi (TNM), was 40 percent owned by MPTC and 60 percent owned by Malaysia Telekom. Although this might not seem very ambitious, it is worth noting that many countries in Sub-Saharan Africa did not introduce cellular until even later. By 1995, cellular operators were providing services in 25 Sub-Saharan African

¹ Field interview with Post Master General of MPTC (October 1999).

² A higher score on the scale indicates a more favorable environment for investment, while a lower score indicates a less favorable one. Malawi scored 4.90 points on this scale in 1994 compared to 6.53 for Tanzania, 6.33 for Ghana, and 6.27 for Côte d'Ivoire.

³ The 42 Sub-Saharan African countries are the countries covered in International Telecommunication Union (1998a).

countries (including Malawi) compared to 24 where no cellular operators were operating – although several additional countries had already licensed new entrants by this time. Further, it was relatively common for the incumbent to either provide cellular services directly or for it to partially or completely own the cellular provider.⁵ Before reform, TNM paid only about Kwacha 5,000-7,000/year (US\$327-\$458 at the end of 1995 and US\$236-\$330 at the end of 1997) in license fees. Further, TNM was assigned all frequencies in the GSM900 band.

In addition to being the monopoly provider of local fixed-line, long-distance and international services and the part owner of the monopoly provider of cellular services, Malawi Post and Telecommunications Corporation (MPTC) was involved in many other subsectors. Although TV Malawi did not start broadcasting until after being separated from MPTC, it was a sub-project within MPTC before reform. In addition, MPTC owned 50 percent of MalawiNet, which was the sole full service Internet Service Provider (ISP) before reform.⁶

In addition to being the sole provider of these services, Malawi Posts and Telecommunications Corporation (MPTC) was also responsible for most regulatory functions.⁷ MPTC was responsible for the licensing operators in all areas of telecommunications (e.g., ISPs and cellular companies), spectrum frequency allocation, type approval for equipment, technical standards and numbering plans. The sector ministry appointed a majority of MPTC board

⁴ The government's policy of maintaining tight control over the media also made liberalization of telecommunications unlikely before democratization. Although less political threatening than reform of broadcasting, technological change made even telecommunications reform politically difficult since reducing the cost and increasing the availability of communications tends to reduce the government's power over information. One striking example of this in Malawi is that as pressure for democratization in Malawi increased, groups opposed to President Banda's single-party rule circulated anonymous letters criticizing the government using fax machines (Newell, 1995, p. 244). Technologies that have developed recently such as the Internet would make it even more difficult for the government to maintain its monopoly over information in the presence of reform.

⁵ For example, among the 42 countries covered in International Telecommunications Union (1998a), 27 of the 37 countries with at least one cellular operator had an operator that was either partially or fully owned by the incumbent in 1998. Data is from International Telecommunications Union (1998a) or is collected from the Economist Intelligence Unit.

⁶ Epsilon and Omega also provided an E-mail service to about 250 subscribers by 1998 and Computer Solutions had an e-mail service that had been operating intermittently since 1995. UNIMA, an e-mail server, was based at Chancellor College in Zomba. Finally, Healthnet, which was based in the United States, provided connections for health workers at the Malawi College of Medicine (Article 19, 1998, p. 13).

members, approved tariffs proposed by MPTC, and was responsible for planning major investments and making procurement decisions. In addition, the ministry was able to more generally intervene in MPTC activities and override its decisions.

Because MPTC controlled licensing, it was able to prevent entry by potential competitors in several areas where competition would have been possible. For example, Article 19 (1998, pp. 13-22) describes how MPTC prevented other ISPs from entering the Malawian market by either failing to issue licenses or failing to provide them with lines (since ISPs were forbidden from operating their own VSATs). For example, in 1987, CompuServe/AOL tried to enter the Malawian market through Société Internationale des Télécommunications Aéronautique's (SITA's) communications network. However, after MPTC's joint venture, MalawiNet, was opened, MPTC threatened to cut SITA's 9600-byte line and refused to upgrade it to the 64KB line that SITA was requesting unless SITA stopped providing CompuServe/AOL with access to its line. SITA eventually complied with MPTC's request, cutting CompuServe/AOL's service (Article 19, 1998).

Similarly, the Sustainable Development Network Programme (SDNP), which was wholly owned by the Malawian government and was provided with support for staff salaries and equipment by the United Nations Development Program (UNDP), originally applied for a license to start providing Internet Services in 1996. After MalawiNet started providing service in August 1997, MPTC informed SDNP that MalawiNet had been awarded a 60-month exclusivity period. Although the UNDP had signed an agreement with the Government in 1994, and complained to the Government about delays (Article 19, 1998, p. 20), MPTC did not issue SDNP with a license until December 1999. By this time, Parliament had passed the *1998 Communications Act* and had approved the *Communications Sector Policy Statement*, which liberalized data and Internet services (Section 2.1.6.4).

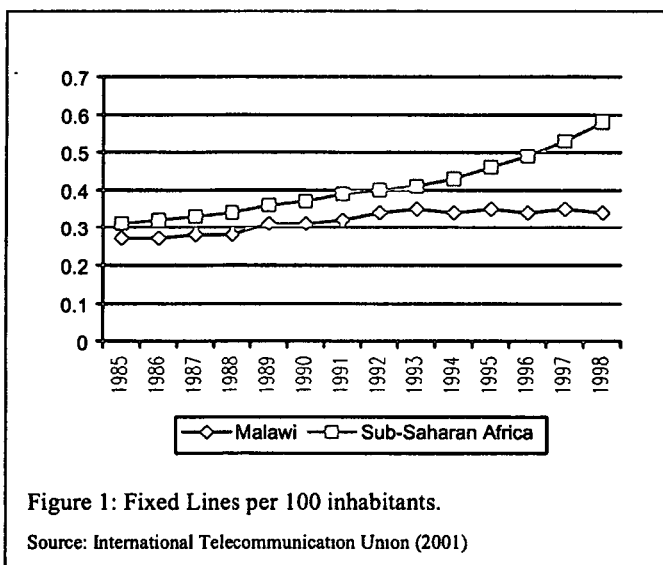
MPTC appears to have also slowed the development of other services, where it either offered services that might compete with the new entrant or when it thought that it might, at

⁷ The Ministry of Posts, Telecommunication, Information and Broadcasting and Attorney General's Office were also involved in regulation.

some future time, offer competing services. For example, although two companies applied for licenses to provide paging services, MPTC refused to issue a license to one firm and issued a license but failed to allocate spectrum space to the other (Article 19, 1998, p. 9).

In the television sector, where MPTC owned the non-operational TV Malawi, MultiChoice Malawi, which was originally owned by Lonrho but later was sold to Malawian and Zimbabwean investors, applied for a license to re-broadcast several international channels (e.g., BBC World Service and a South African Sports Channel) to paying consumers and a free channel to all consumers in 1994. After agreeing to broadcast one free channel in addition to three channels for subscribers, MMC gained the support for the Ministry of Information and applied for a license. In May 1998, the Ministry of Information gave MMC permission to start broadcasting. However, MPTC failed to issue MMC a license and, consequently, MMC started operating without a license. By allowing firms to start operating without issuing formal licenses, some entry was possible. However, since the firms' legal positions remained uncertain, this policy probably inhibited investment and promoted short time horizons.

III.2 Access.

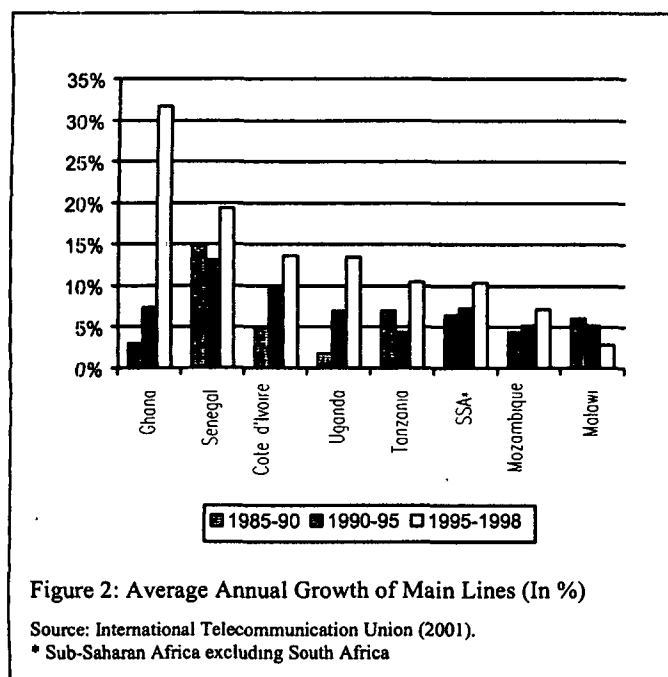


In 1985, MPTC had 0.27 lines for every 100 people, slightly lower than the average for Sub-Saharan Africa which was around 0.31 lines per 100 inhabitants. However, the difference was not large, especially given that Malawi was more rural than the average for Sub-Saharan Africa – in 1985, 90 percent of the Malawian population lived in rural areas compared to 75 percent for Sub-Saharan Africa. However, over the next decade,

Malawi's relative performance declined and by 1998, service penetration was low even by regional standards. In 1998, Malawi had 0.34 main lines per 100 inhabitants (see Figure 1),

compared to an average of 0.57 lines for Sub-Saharan Africa (SSA), 1.97 for South Asia, 5.99 for North Africa, 7.06 for East Asia and 12.14 for Latin America. Low coverage rates were further aggravated by the recurrence of services outages due to poor system maintenance. At this time, it was estimated that it could take up to six months to have a simple telephone fault repaired.

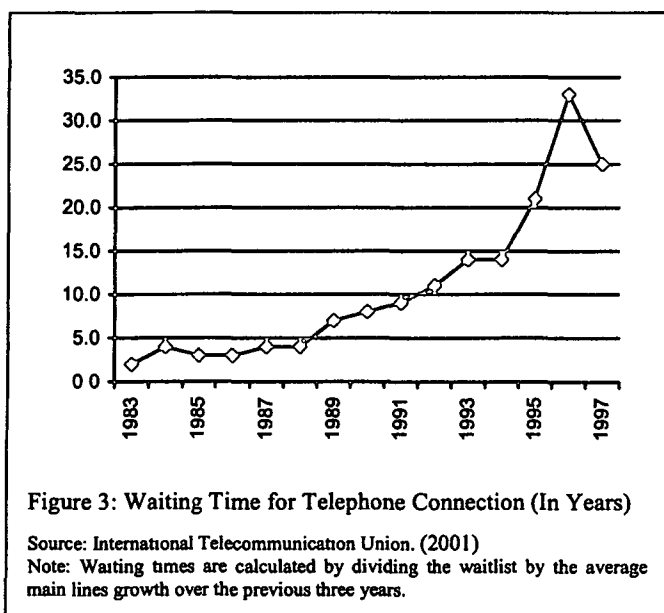
Despite the entry of Telekom Networks Malawi (TNM) in 1995, cellular penetration remained very low. By 1998, there were only 10,500 cellular subscribers in Malawi, representing about 0.1 per 100 inhabitants. In part this was the result of TNM's policy of offering only post-paid services, which precluded people who couldn't pay the required deposit and satisfy other conditions designed to ensure that they wouldn't be a credit risk from obtaining services. It also reflected the low level of interconnection capacity between the fixed line and cellular networks.



MPTC's corporatization in 1995 failed to have an appreciable impact on access. Annual growth of main lines had averaged 6.1 percent in Malawi between 1985 and 1990, compared to 6.5 percent for Sub-Saharan Africa (SSA). However, over the 1990s, growth slowed in Malawi. Following corporatization, growth of main lines fell to an annual rate of 2.9 percent in Malawi, as growth dramatically accelerated in other African countries, especially in early reformers such as Ghana (see

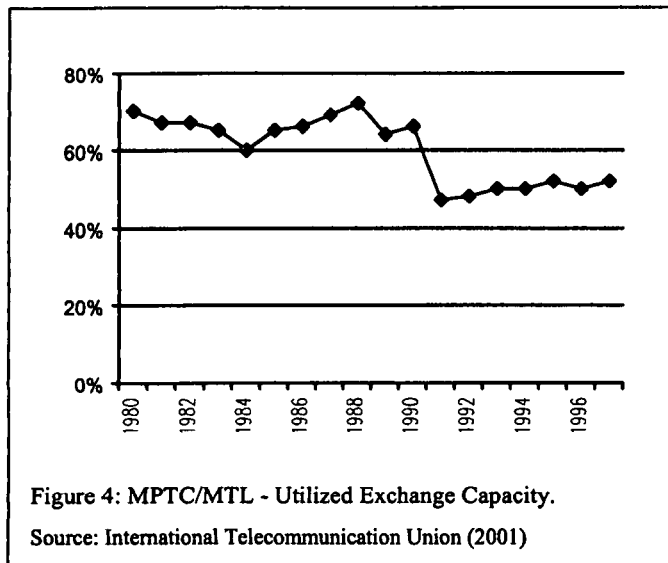
Figure 2). Although MPTC had intended to connect 40,000 additional main lines following commercialization, it only managed to achieve 8 percent of its target by the time of reform in 1998. This slow growth meant that the number of mainlines per 100 inhabitants declined by 3 percent between 1995 and 1998, compared to an increase of 35 percent in SSA as a whole (see

Figure 1). The failure of MPTC's corporatization to improve telephone access in Malawi is consistent with the observation that performance contracts and other reforms designed to improve the functioning of weak state-owned enterprises rarely succeed in developing countries (Shirley and Xu, 1998, 2001; World Bank, 1995).



The low service penetration was not due to lack of demand – MPTC consistently had long waitlists. By 1997, it would have taken MPTC about 25 years to clear its waiting list at the rate of expansion that it was managing at that time (see Figure 3). In practice, since many people do not bother to put their names on a waiting list when there is an extremely low chance of actually getting a phone, actual demand was probably

considerably higher than the waiting list suggests. For example, Pyramid Research estimated that total demand in Malawi was around 500,000 lines in 1997 (Economist Intelligence Unit, 1999b) – compared to only 36,574 operational lines.



Low access to telecommunications services was aggravated by the disparity between investment in exchange equipment and investment in the transmission network. In the late 80s, about 65 percent of the exchange capacity was utilized. However, this level fell to 50 percent by 1998, suggesting a large asymmetry between investment in the local loop and investment in exchange equipment (See Figure 4). Rampant cable theft, which forced President Bakili Muluzi

to warn vandals of severe penalties, further increased the gap between exchange equipment and transmission networks.

In addition to the low-level of coverage, there was also a huge imbalance between urban and rural areas. More than 80% of the main lines were in the largest cities, with 75% of lines in Lilongwe (the capital) and Blantyre (the largest city). Consequently, as in many countries in Sub-Saharan Africa, there were very few telephones in the rural areas where more than 78 percent of the population lived in 1998. At this time, the ratio of teledensity in the largest cities to teledensity in the rest of the country was around 124:1 in Malawi, compared to an average ratio of 5:1 in low-income countries (International Telecommunication Union, 2001).⁸

II.3 Tariffs

Before the 1998 reform, tariffs were specified in the Posts and Telecommunications Act of 1994 and the Posts and Telegraphs (Charges) (Amendment) Regulations of 1996. Even when the tariffs were initially set in 1996, they were low by regional standards. The charge for a three-

minute local call, which was about US\$0.08, was about 71 percent of the Sub-Saharan African average (see Figure 5) in 1996. However, since tariffs were set in nominal terms in local currency, prices fell rapidly over the next few years due to high inflation (see Table 1). By the end of 1998, the cost of a three-minute call had fallen to about US\$0.03, far lower than the average for Sub-Saharan Africa (US\$0.10). In 1996, when the tariffs were originally set, a three-minute long-distance call (320 KM) cost 9 Kwacha (US\$0.59 in 1996). Since long-distance tariffs were also set in nominal terms in local currency, they also declined over time in real terms, reaching US\$0.21 for a three-minute long-distance call by 1998. The cost of long-distance calls in both monetary terms and relative to the cost of local calls was low by regional standards (see Table 2).

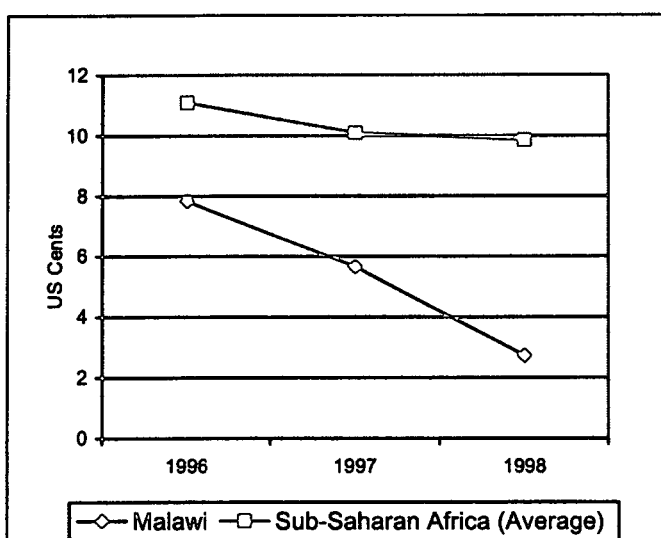


Figure 5: Cost of a Three-Minute Local Call in Malawi and Other Sub-Saharan Countries (US¢, End of Year).

Note: Tariffs and exchange rates are for end of year.

Source: Data for Sub-Saharan Africa is from International Telecommunication

In contrast, international call rates were very high, even by regional standards (see Table 2). In 1996, a three-minute call to the United States or Europe cost US\$9.00 (see Table 3). This was also especially high when compared to local call rates – a three-minute call to the United States from Malawi cost 160 times more than a three-minute local call. In comparison, the average was about 60 times more for SSA (see Table 2). Another notable difference between local and international calls was that the 1996

Act set international rates in dollars rather than Kwacha. Consequently, international rates remained high in real terms before reform, despite high inflation.

⁸ According to International Telecommunication Union (1998b), the largest cities in Malawi had 6.18 main lines per 100 inhabitants in 1998 while the rest of the country had 0.05 main lines. The average for low-income countries at this time was 5.67 main lines per 100 inhabitants in the largest cities and 1.09 main lines elsewhere.

In addition to specifying local, national long-distance and international call rates, the 1996 Amendments to the 1994 Law also set rates for calls from cellular phones to fixed lines and other cellular phones and rates for calls from fixed lines to cellular phones. In both cases, a three-minute call cost 9 Kwacha (US\$0.59 in 1996). Since cellular rates were also set in Kwacha rather than dollars, the cost declined in dollar terms between 1996 and 1998 (see Table 4). Interconnection fees were set so that revenues from calls that required interconnection were divided evenly between TNM and MPTC (i.e., each received 1.5 Kwacha per minute) (Zuze, 2001, p. 5).

In 1996, the connection charge for a fixed line phone was Kwacha 1,000 (US\$65) for business customers and Kwacha 700 (US\$46) for residential customers. In comparison, the average connection charge in SSA was US\$117 for business customers and US\$98 for residential customers (International Telecommunication Union, 2001). Since the 1996 Act specified rates in Kwacha, connection fees declined in dollar terms over time, reaching about US\$22.79 and US\$15.95 for business and residential customers respectively in 1998. At this time, the connection fee for a cellular phone from TNM was Kwacha 950 (US\$21.65). Monthly rental fees for fixed line phones were also relatively low in Malawi. In 1996, the monthly rental charge for both business and residential customers was Kwacha 80 (US\$5), lower than the average for business and residential customers in Sub-Saharan Africa (US\$13 and US\$11, respectively).

These prices suggest that MPTC operated several levels of cross-subsidies prior to reform. First, as noted above, the connection charge for business customers was higher than the connection charge for residential customers, although the difference was small by the mid-1990s. Second, before prices were reformed in 1998, MPTC's international tariffs, which were pegged to the US dollar, appeared high relative to local tariffs even by regional standards (See Table 2).

In addition to these cross-subsidies between different classes of service, MPTC used telecommunication services in general, and international call rates in particular, to subsidize postal services. In 1996, it cost Kwacha 0.60 (about US 4¢) to send a letter within Malawi compared to costs of about 8¢ in Zimbabwe and 10¢ in Uganda, Kenya and Togo. By 1999, although the nominal price remained the same, high inflation in Malawi meant that this had

fallen to about US 1.3¢. The low postal tariffs, combined with inefficient staffing, meant that MPTC ran a large deficit in postal services – in FY 1999, it was estimated that postal services received subsidies of close to Kwacha 165 million (US\$ 3.6 million).⁹ In comparison, total revenues from postal services were estimated to be only about Kwacha 70 million.

Even before the 1998 reform, it was clear that MPTC's policy of subsidizing other services through high international tariffs was not sustainable. First, although callback was not a significant problem in 1998, because incoming rates from the main international calling destinations (the UK, the US and Germany) were lower than outgoing rates, it was thought that it would become a problem in the future. The FCC's unilateral decision in 1997 to significantly reduce settlement payments by US carriers by 2002 meant that callback was likely to become a greater problem unless MPTC cut its international rates. Second, Internet telephony (as well as the ability to send faxes over the Internet and to use E-mail to replace faxes) also threatened international revenues in the medium term. Although Internet coverage in Malawi was low – in early 1998, MalawiNet, the only commercial Internet provider at that time had about 800 subscribers (Article 19, 1998, p. 14) – it was expected to grow quickly in the medium term. Further, in a country with only 36,000 telephone lines, even this low-level of coverage could threaten MPTC's revenues. Finally, given that MPTC charged US\$3.00/minute to the United States, even GMPCS (Global Mobile Personal Communications by Satellite) had the potential to undercut MPTC's international rates. As these services became increasingly available, they would threaten MPTC's ability to charge monopoly rates for international calls and, consequently, would threaten the entire system of cross-subsidies.

III.4 Commercial Activities

MPTC did not have a proper accounting system to compile and produce conventional financial reports. Instead it kept manual cash books to record receipts and payment, preparing income and expenditure reports from these books. Before MPTC was split, it had never

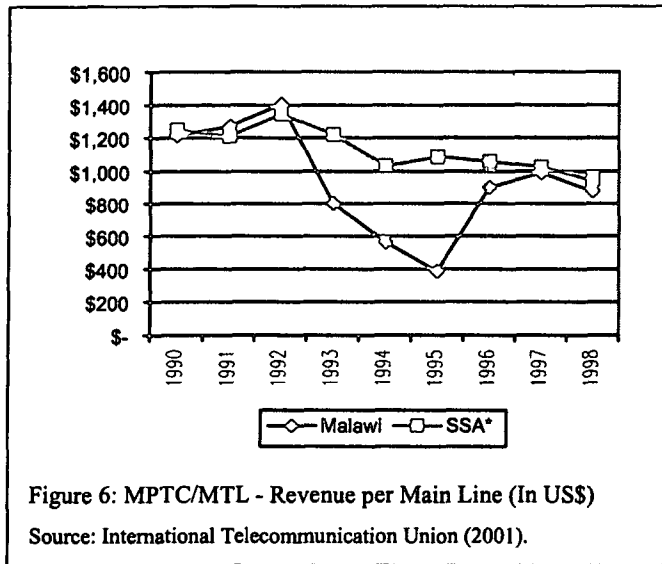
⁹ Field interview in October 1999 with the Post Master General of MPTC

produced audited financial statements.¹⁰ In 1997/98, Price Waterhouse produced a separation balance sheet to help divide assets and liabilities between Malawi Telecom Limited (MTL) and Malawi Postal Corporation (MPC). However, even with regards to these figures, Price Waterhouse noted that these figures (see Table 5) should not be considered audited or auditable, and that no audit opinion other than a total disclaimer could be expressed with regards to the data.

This said, however, several items on the separation balance sheet are interesting. First, liabilities are greater than assets, suggesting that losses over time had left the company with negative equity. Most of the losses were concentrated in the postal sector. Second, debtors owed the company a large amount, net of provisions. Based upon 1997 revenue estimates from the ITU, net of provisions, debtors owed the telecommunications part of the company about 8 months of telecommunications revenues. This is consistent with information from before commercialization, when collection rates also appear to have been very low. When MPTC was first commercialized in 1995, defaulters owed the incumbent operator more than Malawi Kwacha 63 million (equivalent of US\$ 7.21 million), of which the government owed almost 70 percent. As soon as MPTC was commercialized, it issued ultimatums to non-paying customers and disconnected those who did not respond favorably as a first move to streamline its activities. This enabled the company to recover MK17 million (equivalent of US\$ 1.95 million) from long overdue accounts in just few months.¹¹

¹⁰ According to revenue and expense data reported to ITU, MPTC's return on sales oscillated between negative 2 percent in 1995 and 60 percent in 1997. However, given the absence of audited accounts, these numbers should be treated with considerable caution.

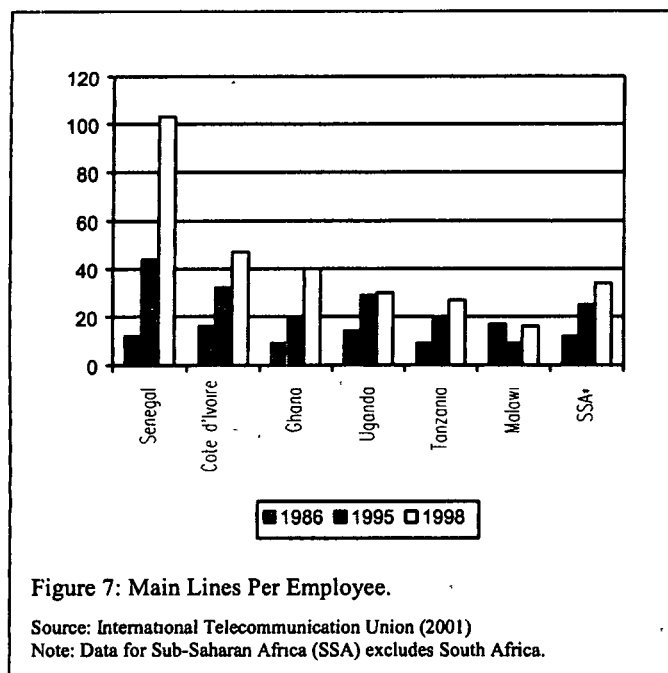
¹¹ South African Business Intelligence, #59, February 1995.



Although, as noted above, MPTC did not keep audited accounts, it did report some data to the International Telecommunication Union. Since this data is derived from unaudited accounts, it should be treated with considerable caution. Revenue per mainline, which is the direct reflection of tariff and traffic volume, fluctuated significantly (see Figure 6). Revenue per main line declined from US\$1,400 in 1992 to

US\$386 in 1995 with the depreciation of the Kwacha, which declined by 325 percent over this period. On average, Malawi's revenue per main line was about 80 percent of the average for Sub-Saharan Africa. This suggests that relatively low tariffs resulted in low revenue per main line, aggravating MPTC's poor performance. However, revenue per main line increased significantly after commercialization, increasing to US\$877 in 1998, and almost caught up with the SSA average, which had been falling over time. The rebound in revenue after commercialization was due to traffic and tariff increases and the pegging of international tariffs to US\$.

II.5 Productivity



In 1986, there were 17 main lines per employee in Malawi – higher than in any of the other case study countries or the average for Sub-Saharan Africa (12 main lines per employee) (see Figure 7). However, over the next decade, MPTC's relative performance declined and by 1995, MPTC, with 9 main lines per employee, was very inefficient by both regional and international standards. In comparison, by this time, the average number of lines per employee had more than doubled to 25 main lines

elsewhere in SSA. Furthermore, the average for SSA was very by international standards: in 1995, there were 134 main lines per employee in Latin America, 97 in East Asia, and 29 in South Asia. The number of main lines per employee, which increased to 16 by 1998, appeared to recover following corporatization. However, it remained far below the number for the other case study countries and far below the average for Sub-Saharan Africa (34 main lines per employee).¹²

III. THE 1998 COMMUNICATIONS SECTOR POLICY STATEMENT AND LAW.

In 1998, the Government of Malawi enacted the 1998 Telecommunications Law and Policy, liberalizing many areas of telecommunications. The *1998 Communications Sector Policy Statement* (Ministry of Information, 1998) is the basis for the ongoing reform process. The objectives are:

1. To increase the number of working telephone lines to not less than 150,000 by the end of year 2003.
2. To raise the quality of service to international standards.
3. To stimulate the provision of new services within Malawi.
4. To reduce the price of telecommunications services in real terms.
5. To extend access to modern telecommunications services throughout the country.
6. To open up the provision of telecommunications services to the private sector.

The policy statement explicitly stated that all non-basic services were open to competition, but envisaged a continuing monopoly in basic services for at least five years. The changes included allowing entry by a second cellular company, assigning a financial advisor to give advice about privatizing MPTC and considering future entry by a second national operator (after the end of the exclusivity period), separating postal services and telecommunications, and introducing a new regulatory agency. However, the policy was not clear about the direction that the country would be taking beyond this, particularly regarding Malawi Telecom (MTL) and the basic service market.

III.1 Regulation and Interconnection

The Policy Statement and Law set up a new regulatory agency, which was separate from the ministry and the incumbent (i.e., MPTC). The regulatory agency, Malawi Communications Regulatory Authority (MACRA), was established in 1999 with the power to regulate telecommunications, broadcasting, the use of radio frequencies, and the provision of postal services throughout Malawi. The duties of the regulator included promotion of competition, facilitation of entry, protection of the interests of consumers, and promotion of research in telecommunications. The regulator could be financed through license fees, fines collected from licensees, grants, donations, funds appropriated by Parliament or funds borrowed from third parties. Any borrowing by the regulator is subject to the approval of the Minister of Information.

¹² Although it is unclear what caused the improvement after 1995, it appears that, at least in part, it was due to retrenchment of ghost employees (i.e., ex-employees who had died, retired or did not exist but to whom checks were still issued and then cashed by other people within the company).

MACRA is headed by a seven-member board, appointed for four-year terms by the President on the recommendation of the Public Appointments Committee.¹³ The members can be removed only for specified reasons (i.e., death, bankruptcy, failing to declare conflicts of interest, physical or mental infirmity, missing three consecutive meetings and expiration of his term in office).¹⁴ The board members appointed to MACRA were primarily from the private sector.¹⁵ The Minister of Information, on the recommendation of the board, appoints the Director General and a Deputy, who are responsible for the direction and supervision of MACRA's work and staff.¹⁶ Finally, MACRA is expected to be independent in the performance of its functions.¹⁷

MACRA's operations fit into four broad areas: (i) advisory/information; (ii) regulatory/licensing; (iii) frequency management and (iv) training. In its advisory role, MACRA provides advice to users, operators and the government and collects and disseminates relevant communication related information to the public. In addition, MACRA is responsible for all licensing and regulatory activities in the telecommunications sector, although the Minister of Information may make telecommunications regulations based on the advice of MACRA. MACRA is also responsible for radio frequency planning, allocating and coordinating spectrum use, and providing communication related training to operators and others. Table 6 lists MACRA's functions in full.

MACRA was given considerable power to exercise its functions. It can revoke licenses if the licensee breaches license conditions.¹⁸ It can also void interconnection agreements (within 28 days of receiving them), may issue guidelines for interconnection agreements and may

¹³ Telecommunications Act 1998, Section 7.

¹⁴ Telecommunications Act 1998, First Schedule, Section 1.

¹⁵ According to field interviews at the end of 1999, the board members included a lawyer, an architect, a banker, a retired journalist and a retired broadcaster. There were, at that time, only two board members from the government.

¹⁶ Telecommunications Act 1998, Section 9.

¹⁷ Telecommunications Act 1998, Section 4 (3).

¹⁸ Telecommunications Act 1998, Section 22.

impose its own terms and conditions for interconnection if the parties fail to reach agreement.¹⁹ MACRA can request operators to submit relevant information and can force operators to adopt any standard accounting system.²⁰ It can penalize operators for various acts, including: (i) connecting unapproved equipment to the network; (ii) intentionally intercepting, interfering with or modifying messages sent over the telecommunications network; and (iii) disclosing the content of messages.²¹

The licenses issued to the cellular operators give MACRA additional powers. In particular, the license for TNM allows MACRA to issue tariff regulations and to impose tariff controls if MACRA suspects anti-competitive behavior, although the second provision is not in the second cellular license. Also, the regulator can fine the cellular operators if they fail to comply with any stage of the license rollout obligations (up to US\$400,000, depending on actual rollout performance with maximum fines for each stage).

Furthermore, the licensing regime specified in the 1998 Communications Act gives the regulator considerable discretionary power to unilaterally modify telecommunication licenses. In particular, Section 23 of the 1998 Communications Act reads:

“23 – (1) [MACRA] may modify any condition of a telecommunication license in accordance with the provisions of the license or, in the absence of such provision, if it is in the public interest to do so.

(2) Before modifying any condition of a telecommunications license, [MACRA] shall –

(a) Publish a notice stating the reasons for the intended modification and giving any person with an interest in the matter the opportunity to make representation; and

(b) Give due consideration to any representation regarding the proposed modification made to it by any person having an interest or holding an individual license.”

¹⁹ Telecommunications Act 1998, Section 26.

²⁰ Telecommunications Act 1998, Section 30.

²¹ Telecommunications Act 1998, Section 97.

Since MACRA is financed through license fees, fines, grants and donations received by the Authority, sales of assets and appropriations from Parliament, it appears to be largely financially independent of the Ministry. However, the Minister of Information has considerable ability to interfere with the regulator's decisions. In particular the Minister can issue written directions to MACRA on how the Authority should carry out its duties, at least when requested, and can issue new regulations.²²

The Communications Act allowed operators to enter into interconnection agreements on their own, provided that they file them with MACRA. As noted above, however, MACRA can reject any terms of interconnection agreements within twenty-eight days of being notified. If it decided to reject any terms, the parties to the agreement are given another chance to renegotiate based on MACRA's guidelines. If the parties can still not come to an agreement, MACRA can determine the terms and conditions for interconnection at the request of either party.

III.2 Competition and Privatization.

In addition to establishing MACRA as a sector regulator, the 1998 Communications Sector Policy Statement also advocated splitting MPTC into two parts and partially privatizing the new telecommunications company, Malawi Telecom Limited (MTL). The policy states that MTL should find a 'strategic partner' to help them tap into international capital markets. It was envisaged that the partner would make an initial investment, transfer technological and commercial know-how and initiate a training program. The policy also allowed for the sale of a partial interest in MTL through an initial public offering. The second major change was that the Government decided to license a second cellular operator to compete with TNM, the incumbent's subsidiary. Finally, the policy envisaged that other telecommunications services would be liberalized. In particular, although Internet Service Providers (ISPs) would need licenses, there were no restrictions on the number of licenses that would be issued.

²² Section 32 of the 1998 Communications Act reads "The Minister, on the advice of the Authority, may from time to time make regulations governing the operation of telecommunications networks, the provision of telecommunications services or the use of terminal equipment. Section 16 (1) reads "The Authority may, where necessary, seek the general direction of the Minister as to the manner in which it is to carry out its duties under this part. (2) any direction given by the Minister under subsection (1) shall be writing."

In other respects, the reforms were less ambitious. First, although the Policy advocated partial privatization of MTL through the identification of a strategic partner, the policy stopped short of advocating full privatization (i.e., the sale of a controlling stake in the enterprise). The description of a 'strategic partner' could describe arrangements ranging from between a management contract combined with a small equity holding to full privatization. During field interviews, it was clear that some disagreement about the precise meaning of a 'strategic partner' remained. Second, although the policy says that a second cellular license would be issued, it was unclear how much competition would be introduced in the cellular market. During field interviews, Celtel, the company that was awarded the second cellular license, claimed that the Government had agreed not to issue any additional cellular licenses for at least five years after it started operating.²³ Third, the incumbent operator was allowed to retain monopolies over international and fixed-line services for at least five years after the separation of postal and telecommunications services and internet service providers were required to lease lines from the incumbent operator. Fourth, MTL was not required to divest its holdings in MalawiNet or TNM. Finally, MTL was awarded a five-year exclusivity agreement, from the date of its incorporation, apparently ruling out competition in local fixed-line, long distance and international services over this period. The Policy and Act did not oblige the Government to open these sectors to competition after the five-year period was complete.

IV. POLITICAL CIRCUMSTANCES SURROUNDING REFORM

In many ways, the reform, as envisaged in the 1998 Communications Sector Policy Statement and Law, was quite ambitious. Further, it was accomplished as part of a larger reform program covering all areas of communications including politically sensitive areas such as radio and television. However, the plans were modest compared to the more ambitious reforms attempted in other case-study countries (e.g., in Ghana and Uganda). Further, the reform was enacted later than reforms in other countries in SSA, including most of the other case-study countries. In this section, we discuss what motivated reform, how the government overcame opposition, and why the planned reform was less extensive than in the other case study countries.

²³ These claims were later repeated in the international and local press (see, for example, Economist Intelligence Unit, 2001a, p. 38)

IV.1 Factors Motivating Reform

Several factors, including the poor performance of MPTC, broad bipartisan support for reform, pressure from donors, and technological and regulatory changes that were taking place throughout the region, increased pressure for reform. In this sub-section of the paper, we discuss each of these factors in turn.

Poor Performance of Malawi Post and Telecommunications Corporation (MPTC). As in most of the other case study countries, one of the main motivations for reform was the extremely poor performance of the incumbent operator. Telephone penetration was lower (see Figure 1), coverage was growing more slowly (see Figure 2), and productivity was far worse (see Figure 7) than the averages for Sub-Saharan Africa. In addition, service quality was poor and service outages were common. By 1998, when reform was finally implemented, many observers were concerned that Malawi's poor infrastructure was impacting foreign investment and economic growth. Foreign enterprises operating in Malawi ranked inadequate infrastructure as a larger constraint on doing business in Malawi than they ranked any of 15 other policy areas in 1997.²⁴ In comparison, corruption was ranked as a larger problem than infrastructure in 15 of 22 Sub-Saharan African countries, taxes in 12 of 22 countries, and crime in 8 of 22 countries. In an additional question, firms were asked how long it took to get a public telephone line. The average estimate for Malawi was the third highest among the 22 Sub-Saharan African countries for which data was collected.²⁵

MPTC's control over the telecommunications sector and its ability to restrict competition in several potentially competitive areas where it owned the main company (i.e., in cellular and

²⁴ Data is from the 1997 WDR Private Sector Survey collected for World Bank (1997). In this survey, enterprises were asked to judge on a six-point scale how problematic several different policy areas were for doing business. The questionnaire asked about 15 areas, including regulations, price controls, corruption, inflation, crime and theft and terrorism. The Sub-Saharan African survey covered Benin, Côte d'Ivoire, Cameroon, Congo, Ghana, Guinea, Guinea-Bissau, Kenya, Madagascar, Mali, Mozambique, Mauritius, Malawi, Nigeria, Senegal, Chad, Togo, Tanzania, Uganda, South Africa, Zambia, and Zimbabwe.

²⁵ The question was "How long does it take to get a public telephone line connected?" with firms asked to respond on a 1-6 scale with 1 being less than 1 month, 5 being more than 1 year and 6 being 'difficult to say'. Responses to this question should be treated with some caution since a disproportionate number of 6's might make comparisons difficult.

Internet service) meant that MPTC had strong reason to resist liberalization. However, in practice, MPTC's inability to attract sufficient funds for investment further weakened its position. For example, although TV Malawi was officially part of the MPTC, MPTC was unable to raise the funds to start operations before reform. Similarly, MPTC's failure to significantly expand rural service meant that the predominantly rural population of Malawi was mostly unserved, giving them little reason to support MPTC. Further, significant investment was needed to upgrade Malawi's telecommunications infrastructure at the time of reform. According to estimates made by consultants reporting to the Taskforce in charge of developing sector strategy and drafting policy documents, perhaps as much as US\$300-400 million was needed if MPTC were to reach 150,000 lines by 2003. It would be difficult to achieve this level of investment without significant investment from the private sector, especially since donors required liberalization and privatization of the sector before they would provide assistance. Consequently, it appeared unlikely that MPTC would be able to improve sector performance, especially in rural areas, without significant liberalization.

Broad Bipartisan Political Support for Reform. Although in practice it did not end up being a major problem, one thing that could have potentially deterred reform was that the Government did not have a strong majority in the National Assembly. In 1994, after a long period of single party rule, Malawi held presidential and parliamentary elections. In sharp contrast to most other countries in Sub-Saharan Africa, the incumbent, Dr. Hastings Kamuzu Banda, was defeated by his opponent, Bakili Muluzi.²⁶ However, Mr. Muluzi's party, the United Democratic Front (UDF) failed to win a parliamentary majority.²⁷ Initially, this forced the UDF into a coalition government with another party, the Alliance for Democracy (AFORD). After the

²⁶ Between independence in 1964 and democratization in 1994, a single party, the Malawi Congress Party (MCP), ruled Malawi. Following the end of the cold war, internal pressure from strikes and riots and external pressure from donors convinced President Banda to consider returning the country to a multi-party system. In a referendum on June 14, 1993, 63 percent of the electorate voted for a return to democracy. Newell (1995) describes the process of democratization in Malawi

²⁷ In the May 1994 elections, the United Democratic Front (UDF) won 84 seats, the Malawi Congress Party (MCP) won 55 seats and the Alliance for Democracy (AFORD) won 33 seats. Other parties and independents won 5 seats.

coalition broke up in June 1996, the UDF managed to gain a slight majority through defections and by-elections.²⁸

The UDF's slender and unstable majority in the National Assembly meant that reform effectively had to have some support from either independent members of the National Assembly or members of the opposition. In practice, this does not appear to have been a major constraint. During field interviews, many observers involved in the process stressed that both the Government and the opposition supported telecommunications reform and, in fact, that members of the opposition originally proposed the bill.

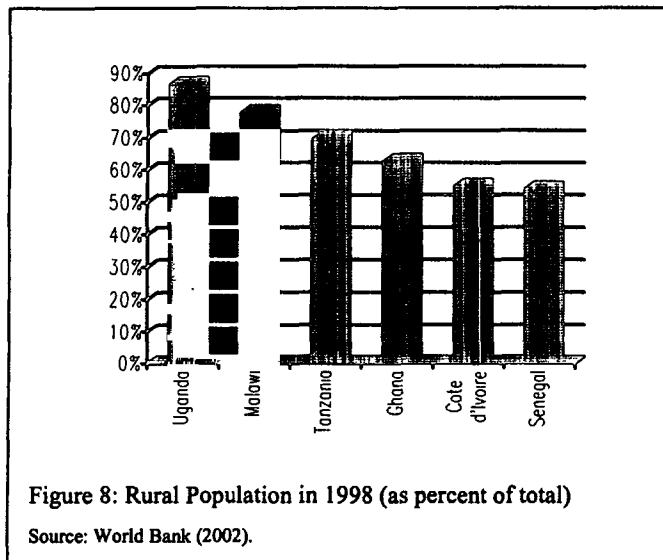
The bipartisan nature of telecommunications reform reflected the fact that the costs and benefits of reform accrued to both the government and the opposition.²⁹ This is primarily due to the strong regional voting patterns in Malawi. During both the 1994 and 1999 elections, the UDF dominated the south, which includes Blantyre, the largest city, the opposition Malawi Congress Party (MCP) won most of the center region, which includes the capital, Lilongwe, and AFORD was triumphant in the north (see Table 7 and Table 8 for election results in 1994 and 1999 elections respectively).³⁰ Although MPTC is based in Blantyre and about 45 percent of connections were there in 1998, MPTC also had a significant presence in Lilongwe, which accounted for 30 percent of connections. Although the UDF won three of five seats in the city of Lilongwe, and all the seats in Blantyre in the 1999 parliamentary election, the MCP won two

²⁸ Initially the UDF managed to keep a working majority by allowing five AFORD ministers to keep their ministerial positions in return for their continued support. However, in by-elections in May 1997, it won four of seven contests giving it 89 (of 177) seats, a slight majority. By September 1998, 2 deaths resulted in it losing this majority.

²⁹ There was far more controversy over the part of the Communications Bill concerning broadcasting and the Malawi Broadcasting Corporation (MBC). Because Malawi is primarily rural and has a high rate of illiteracy (40 percent), radio is far more important than newspapers in reaching the population. Since MBC was the only station allowed to broadcast news, and all other stations were either apolitical or reportedly controlled by Government supporters (Economist Intelligence Unit, 1998), the Government was far more concerned about this aspect of reform than it was about telecommunications reform.

³⁰ Before Independence from the United Kingdom, the administrative capital had been located in Zomba, in the southern region. However, following Independence, President Banda had moved the capital to Lilongwe, which was located close to the center of the country and was in a region dominated by the Chewa, the ethnic group to which he belonged (Kaspin, 1995, p. 604).

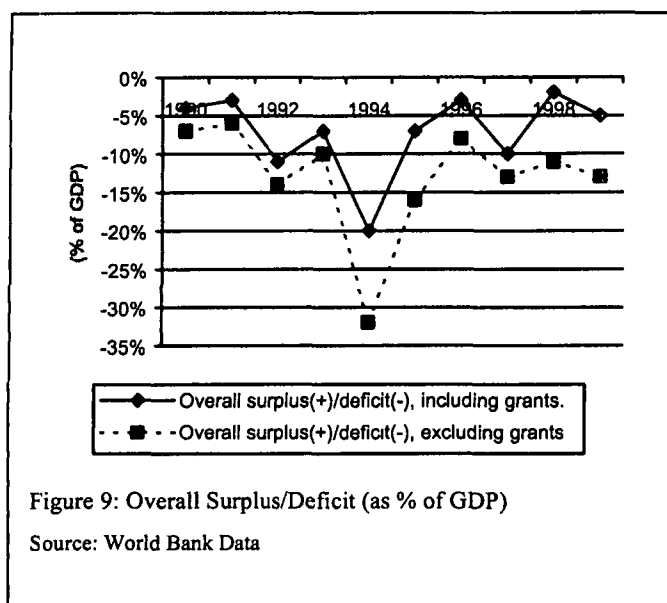
seats in Lilongwe and all of the seats in the surrounding district.³¹ Because all parties have both urban and rural constituents, the benefits of liberalization (e.g., improved service), which would initially be felt in urban areas, and the costs (e.g., job losses), affected both the Government and the opposition.



The regional distribution of votes (i.e., rather than an urban/rural split) and the large rural population in Malawi (see Figure 8) also meant that both the Government and the opposition parties depend on rural areas for support, something that had a significant impact on the design of reform. One result was that the Government retained the right to require license holders to provide service in rural areas (Law, Section

21a). This has been true even for cellular companies. For example, the licenses issued to the first two cellular companies, MTN and Celtel, required that the companies (i) expand coverage to over 50 district, trading and tourist centers; (ii) provide service 10 km on either side of 5 major trunk roads; and (iii) provide 160 community service telephones in rural areas. The licenses layout a 60-month schedule for expanding service and the companies are required to pay fines of up to US\$400,000 if they failed to meet these requirements.

³¹ One factor that might have affected the 1999 vote compared to the 1994 vote was that the civil service was located primarily in Lilongwe. The large number of civil service layoffs and the small pay increases that followed democratization might have made the UDF relatively more unpopular in the 1999 vote in Lilongwe. For example, in 1997, civil servants went on strike for seven weeks to try to get larger pay increases, although they eventually backed down. However, the reverse might have also been true, if the UDF had tried to place its supporters in the civil service. In addition, President Muluzi apparently tried to pressure civil servants to vote for the UDF. For example, the Economist Intelligence Unit (1998) reported that in a speech in southern Balaka district on June 7th 1998, President Bakili Muluzi warned that civil servants should support the ruling United Democratic Front (UDF). They report that he said 'Remain where you are and eat your neutral professionalism. My government is a political government. Unless you identify yourself with the UDF, you will get nothing from me.'



Support for reform from donors. During field interviews with many groups involved in the reform process, including members of the taskforce, non-governmental organizations, government officials and the donors themselves, almost all groups agreed that pressure from donors was one of the most important, if not the most important, factor encouraging reform. This pressure took several forms, including discussions with the Government,

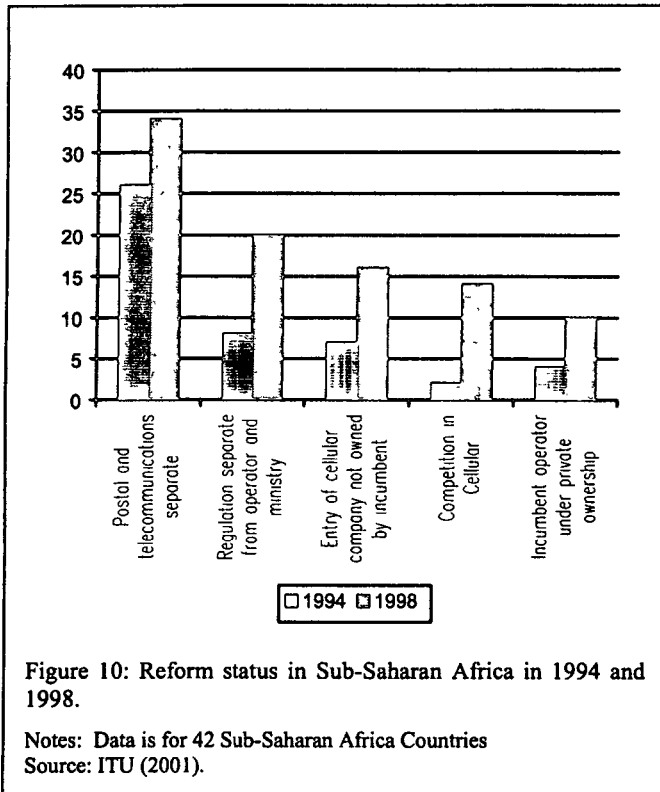
putting conditions related to sector reform in loans and grants and offering aid following reform. Malawi's high level of budget deficits, which averaged over 5 percent of GDP including grants and 12 percent of GDP excluding grants between 1995 and 1999, made the Government especially susceptible to pressure from donors (see Figure 9).³²

After the Government had passed the 1998 Communications Act, the Danish International Development Agency (DANIDA), which was the donor agency most heavily involved in sector reform, provided financial assistance to the Government to help it with the reform process. This aid was used to help establish the Malawi Communications Regulatory Authority (MACRA), to hire consultants to advise on the separation of MPTC in Malawi Telecom and Malawi Posts, and to develop rural telecommunications.

³² In addition to pushing hard for telecommunications reform, donors, including DANIDA who were providing considerable support for telecommunications reform, resisted proposals to separate broadcasting reform from telecommunications reform.

Sector Reform Elsewhere in the Region and Technological Change.

When democratization took place in 1994, few countries in Sub-Saharan Africa had significantly reformed their telecommunication sectors. Although 26 of the 42 Sub-Saharan countries for which data were available had separated postal and telecommunications services (International Telecommunication Union, 1998a), Malawi was not significantly different from other countries in most other ways. At this time, the regulator was separate from both the Ministry and the incumbent in only 8 countries in Sub-Saharan



Africa, only 4 countries had privatized their incumbent operators, only 7 countries had a cellular operator that was not at least partially owned by the incumbent and only 2 had introduced competition in cellular (see Figure 10).

However, by 1998, Malawi had started to lag behind the leading reformers. By this time, 34 countries had separated postal services from telecommunications, 20 had separated the regulator from both the ministry and the incumbent, 10 had privatized the incumbent operator, 16 had a cellular company not even partially owned by the incumbent, and 14 had introduced competition in cellular telephony. Further, many other countries that had not yet implemented reform were in the process of doing so. In addition, it was becoming clear that MPTC lacked the resources and human capital to keep up with the rapid pace of technological change. Combined with its poor performance in other areas (i.e., the slow system expansion), this made policy-makers feel like they were being left behind in a rapidly evolving field. In turn, they were concerned that Malawi would be put at a competitive disadvantage vis-à-vis its neighbors.

As discussed previously, technological change, which resulted in the 1999 tariff reform, significantly reduced MPTC's ability to rely upon revenues from international services and, in so doing, reduced opposition to reform. Price reform made liberalization of Internet services easier by reducing the likelihood that Internet telephony, which remained inferior in quality to standard telephony, would significantly reduce MPTC's revenues. In addition, the drop in international prices reduced MPTC's ability to finance expansion of domestic and rural services from revenues from international services, making alternate sources of financing more important.

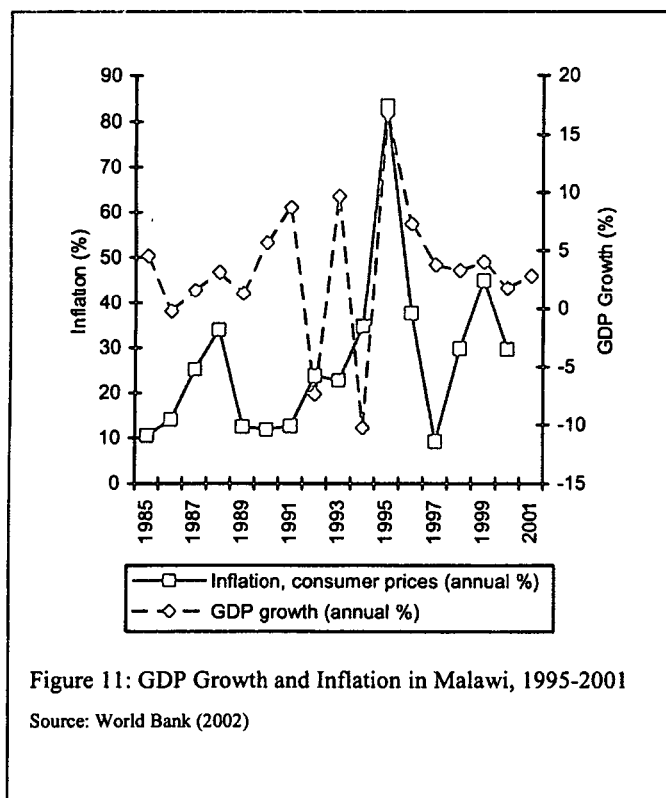
The rapid transformation of the telecommunications sector elsewhere in Africa influenced reform in Malawi in several ways. First, since bilateral and multilateral donors were involved in many reforms in other countries throughout the region, donors had started to gain valuable experience concerning the implementation and likely benefits of reform. This meant that donors were gradually becoming more concerned about the absence of reform in Malawi. In addition, the wave of liberalization also meant that policymakers could observe reform in environments that were relatively similar to Malawi. In July 1997, the Reform Task Force went to several other countries in Africa, including Ghana, Zimbabwe, Tanzania and South Africa, to assess the effect of reform on sector performance in these countries. Seeing how other countries designed their sector reforms and how this impacted performance made it easier for the Task Force to evaluate the likely benefits of reform in Malawi and to assess how political and technical difficulties could be overcome.

IV.2 Factors Working Against Reform.

Although poor performance at the sectoral level is usually necessary for reform, it has often been insufficient. For example, in this study, despite the fact that MPTC had been performing very poorly for over a decade, the government enacted only very minor reforms before 1998. Although the experience with reform throughout the region and technological change resulted in increased pressure, other factors worked against reform. In this section, we discuss some of these factors to describe possible reasons why the reform was more modest than the more ambitious reforms attempted in several of the other case study countries.³³

³³ See, for example, the case studies for Ghana (Haggarty *et al.*, 2003) and Uganda (Shirley *et al.*, 2002)

A Relatively Stable Macroeconomic Environment. Recent studies have found that sector reforms are more likely when sector problems are combined with a macro-economic crisis (see, for example, Shirley and Ménard, 2002). Although the macroeconomic environment in Malawi was difficult in some respects in the mid-1990s, Malawi was not suffering from a major macroeconomic crisis. Inflation had accelerated in 1995, reaching 83%, but had slowed considerably by 1998 (see Figure 11). Furthermore, after a decade of unstable, but generally



modest economic growth (averaging 1.7% between 1985 and 1994), growth accelerated in the mid-1990s. After rapid growth of 16 percent in 1995, it slowed to 7 percent in 1996, but remained at over 3 percent per year through 1999. In summary, although the macroeconomic environment was not entirely stable – as discussed previously, the large government deficit (see Figure 9) meant that the government relied upon donors to finance most capital expenditures – it was far from a crisis situation, reducing pressure for immediate and radical sector reform.

Weak support from domestic enterprises. Although domestic private enterprises generally felt that Malawi's poor infrastructure was an obstacle to their competitiveness, pressure from this source was considerably less important than pressure from other sources such as donors.³⁴ Although private sector entities tended to view the reform favorably, few, including those broadly involved in the communications sector, seemed to have played a very active role

³⁴ This is also in contrast to the experience in other case-study countries. For example, pressure from the private sector was one of the driving forces for reform in Senegal (Azam *et al.*, 2002, p. 19)

during the reform process (Field Interviews, October 1999). For example, the Taskforce that was formed to develop sector strategy and help draft the policy documents originally consisted only of people from the public sector (Article 19, 1998, p. 27).³⁵ Further, when members of the public were invited to submit written submissions suggesting changes to the draft policy document and Bill, few entities other than the World Bank and some government officials actually did (Article 19, 1998, p. 27).³⁶ Consequently, although private individuals and firms might have benefited significantly from reform, most were not actively lobbying for it and pressure from the private sector does not appear to have been one of the forces driving sector reform.

In part, the low level of pressure exerted by private enterprises probably reflects the relatively modest role of the private sector in the non-rural sector of the economy and the relative importance of agriculture in Malawi, which accounted for 40 percent of GDP in 1998. Before democratization in 1994, the non-rural sector of the Malawian economy was dominated by public enterprises and a few large semi-private enterprises.³⁷ For example, the massive Press Corporation Limited (PCL), which had links to President Banda prior to democratization, was thought to account for as much as 30 percent of GDP in the mid-1990s (Economist Intelligence Unit, 1996). Although progress with privatization has reduced the influence of state-owned economy, many enterprises remain publicly owned and the government retains significant

³⁵ The task force was comprised of two people from MPTC, one from the post office, one from TV Malawi, one from the Privatization Commission, the Law Commissioner, one from the Attorney General's Chambers, one from the Ministry of Finance, and one from the Ministry of Information (Article 19, 1998, p. 27).

³⁶ In part, the lack of private sector involvement may reflect the impression that suggestions from non-government entities were generally being ignored. For example, during field interviews (October 1999), one non-governmental organization noted that a group of NGOs submitted comments and recommendations to the Taskforce related to reform of radio and television rather than telecommunications. However, when their recommendations were ignored, they became frustrated with the process.

³⁷ For example, Sahn *et al.* (1990) note that 'Malawi's industrial sector is characterized by high concentration ratios that suggest both the exacerbation of inefficiencies and development of monopoly rents. For example, 8 of 21 subsectors at the three digit level ISIC classification have less than three firms.'

influence over other enterprises such as PCL.³⁸ Consequently, enterprises in the private sector did not end up being an effective voice in support of reform.

Concern about the fiscal cost of supporting postal service. As discussed in greater detail above, although telecommunications were not a 'cash cow' in Malawi, MPTC did not appear to be a major drain upon the budget either. Furthermore, although the poor quality of MPTC's accounts meant that it was impossible to draw any conclusions about its profitability, it was widely believed that profits from MPTC's telecommunications services financed large losses associated with the provision of postal services. One fear, therefore, was that if postal and telecommunications services were separated and then MTL privatized, that Malawi Posts Corporation (MPC) would become a major burden on the Government's already troubled finances.

Opposition from Management and Workers of MPTC. Although the weak support from the private sector, the lack of a macroeconomic crisis, and concerns about the cost of supporting MPC tended to discourage reform, the main sources of opposition were the management and workers of MPTC. Although overstaffing was less pronounced in 1998 than it had been in 1995, when Pyramid Research ranked MPTC as the most inefficient telephone company in Sub-Saharan Africa (Economist Intelligence Unit, 1999b), it remained a problem. One concern was that privatization might lead to a significant number of layoffs and, consequently, workers were opposed to reform. The most visible sign of opposition was vandalism of MPTC's lines and equipment. For example, in August 1999, MPTC lines in Blantyre were vandalized resulting in 10,000 customers, including the city's banks and airport, being temporarily being cutoff (Economist Intelligence Unit, 1999b). Although vandalism might have been the result of the

³⁸ Although in 1997 President Banda lost control of the Press Trust Corporation after a lengthy legal battle, control was awarded to a trust established to benefit all Malawians. In practice, this appears to have resulted in the government having a great deal of influence over the company. For example, following the appointment of a former finance minister to chair of the company over the objections of the PCL board, the Economist Intelligence Unit (2002, p. 28) wrote: "In business circles, it has been tacitly acknowledged that this exercise shows that PCL is not after all a company in the private sector, but remains a parastatal, despite being quoted on the London and Malawi Stock Exchanges."

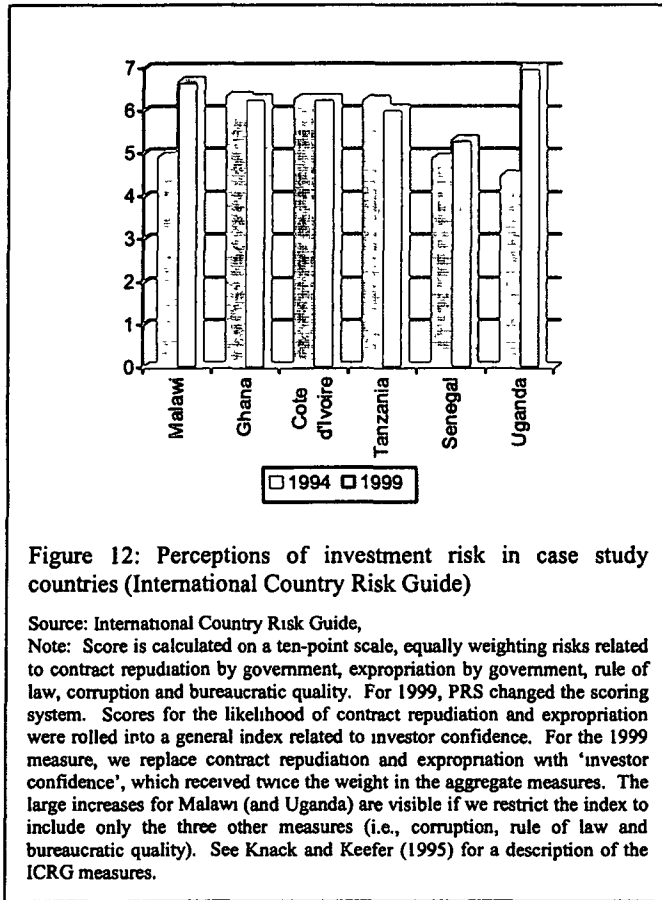
theft of copper cable in some cases, several parties suggested that workers might be responsible, especially when the vandalism involved non-copper lines (Field Interviews, 1999).³⁹

In addition to opposition from workers in the telecommunications sector, the poor performance of the postal service and the high level of subsidies from telecommunications to postal services meant that there was also opposition from postal workers. To reduce this opposition, the Government took several steps. First, all employees of MPTC whose duties related to either telecommunications or postal services were given the right to transfer to Malawi Telecom Limited (MTL) or the Malawi Post Corporation (MPC) when MPTC was split apart.⁴⁰ Second, although prices were raised to reduce MPC's deficit, the government agreed to provide subsidies to MPC following the split (World Bank, 2000). Together, these actions reduced the likelihood of significant layoffs.

³⁹ However, as noted by the Post-Master General, there was no direct evidence linking workers to the vandalism.

⁴⁰ Telecommunications Act, 1998, Section 72 and Section 84.

IV.3 Credibility of Reform Process



In addition to being politically desirable and feasible, reform must also be attractive to private sector investors if they are to invest in the sector. One aspect of this, the credibility, independence and power of the regulatory agency, is discussed in detail in Section III. As discussed above, several factors related to the formation of MACRA reduced its credibility: the regulatory agency had considerable discretionary powers; it was only modestly insulated from political pressure; and it had not yet established a track record regarding its regulatory performance.

However, other factors worked in Malawi's favor. Although Malawi

ranked lower on the International Country Risk Guide, than the early reformers in the other case studies (e.g., Ghana, Côte d'Ivoire, and Tanzania) in 1994, perceptions of risk in Malawi improved significantly following democratization. In fact, by 1999, Malawi was ranked higher (i.e., as less risky) than any of the other case study countries except Uganda (see Figure 12). One area where Malawi ranked favorably is on 'law and order tradition', which measures the ICRG's assessment of the strength and impartiality of the legal system and its assessment of popular observance of the law. Since the democratization process began in Malawi, Malawi's have courts ruled against the government in several high-profile cases. For example, before the 1999 elections, the *Electoral Commission* ruled that the presidential candidate for the two main opposition parties, the Alliance for Democracy (AFORD) and the Malawi Congress Party (MCP) could not run under a single banner. However, the courts ruled against the Electoral

Commission (Economist Intelligence Unit, 1999a). Similarly, after the National Assembly banned the MCP leader from the Assembly for one year for boycotted parliamentary sessions, the High Court of Malawi overturned the ban.⁴¹

V. IMPACT OF REFORM ON SECTOR ORGANIZATION AND PERFORMANCE

V.1 Institutional Changes

Although the 1998 Communications Sector Policy advocated the issuance of a second cellular license, the Government actually started the process of doing this before it issued the Policy. To offer a second license, the Government first had to re-negotiate the allocation of spectrum with TNM, which had been allocated the entire GSM900 band in its provisional license. Further, since the negotiations for the second license preceded the establishment of MACRA and the 1998 Communications Act, the license had to be bid under the earlier 1994 Telecommunications Act and was offered by the Ministry of Information on the recommendation of the Post Master General, the head of MPTC.

An advertisement for bids for a second cellular license was put into the national and international press in March 1998. In addition to the amount to be paid for the license and radio frequencies, the bidders were asked for details on network development plans, quality services targets, public pay phone targets, schedule for network coverage, the shareholding of the bidders, and provisions for Malawian involvement. From the first round of bids, the government committee selected six bidders and proceeded to negotiate over expansion plans, license fees and other areas. The committee then ranked the candidates, reducing the list first to three candidates and then to a single candidate. The committee then reported its choice to the Minister of Information, after which the Privatization Commission entered detailed license negotiations with the winning bidder.

The fifteen-year license was awarded to Celtel Limited on December 25, 1998. Celtel is 80 percent owned by Mobile Systems International (MSI) of the United Kingdom, 10 percent

⁴¹ Pan African New Agency, "Malawian Parliament at Odds with Judiciary", September 30, 2000. As discussed below, a recent report by the International Bar Association (2002) suggested that the independence of the judiciary

owned by the Malawi Development Corporation (a Malawian parastatal holding company) and 10 percent owned by Indebank (a second Malawian parastatal). MSI has extensive cellular operations in other countries in Sub-Saharan Africa including in Uganda, Zambia, Gabon, Congo-Brazzaville, Guinea, Chad, and the Democratic Republic of Congo.

Following the negotiations with Celtel, the Commission proceeded to negotiate a similar fifteen-year license with TNM. Both companies pay the regulatory authority three license fees: a lump sum of US\$ 100,000 per annum, US\$ 4,000 per duplex channel per annum, and a levy equal to 5 percent of annual audited operating revenue.

Prior to starting operations in October 1999, Celtel negotiated an interconnection agreement with MPTC (March 1999). It reached agreement with TNM at about the time that it started operations. At the same time, TNM renegotiated its existing interconnection agreement with MPTC, setting the same interconnection rates between MPTC and TNM as had been agreed between Celtel and MPTC.⁴² These negotiations, which preceded the formation of MACRA, were completed without any involvement from the regulator. The outcome of the negotiations was broadly favorable to the cellular companies, who received US\$0.20 from MPTC for calls terminating in their networks but paid only US\$0.05 to MPTC for calls terminating in MPTC's network (Zuze, 2001, p. 5).

Although, as discussed below, the introduction of a second cellular operator resulted in a rapid expansion of cellular service, cellular tariffs and tariffs for calls from MPTC to the cellular networks increased significantly following the issuance of the second cellular license. In response to the large price increases, MACRA tried to pressure Celtel and TNM to reduce prices and interconnection fees after MACRA became fully operational.⁴³ After failing to get the companies to agree to this, MACRA declared the interconnection agreements between the companies null and void, unilaterally replacing them with a Sender-Keeps-All (SKA) arrangement. The new interconnection regime was particularly unfavorable for Celtel. First, as

had been compromised in recent years.

⁴² Based on field interviews with staff at Celtel, TNM and MPTC.

⁴³ "Malawi to Commission Third Cell-phone Network" Panafrican News Agency (September 2, 2000).

noted previously, interconnection fees were four times higher for calls originating in MPTC's network than they were for calls originating in Celtel and TNM's networks. Second, since Celtel primarily operated a pre-paid system, charging high per-minute charges but no monthly service fees (see Table 9), Celtel had a particularly large imbalance of 10 incoming calls for every outgoing call (Zuze, 2001, p. 5). In contrast, TNM primarily operated a post-paid system, charging a monthly fee in addition to per-minute charges suggesting that the imbalance was less important for TNM. Finally, although the SKA arrangement was also unfavorable for TNM, it is important to note that it was favorable for MTL, one of TNM's main shareholders. In summary, the new interconnection regime imposed by MACRA was particularly unfavorable for Celtel.

In response to MACRA's announcement, Celtel filed a lawsuit against MTL and the regulator, asking for an injunction to prevent the new regime from being enacted. This resulted in a lengthy legal battle between MACRA, MTL and Celtel, lasting into 2002. Furthermore, the imposition of the SKA arrangement also resulted in disagreements between TNM and Celtel, with the two companies suspending interconnection agreements for a period in 2001, making it difficult to call between networks (Economist Intelligence Unit, 2001a, pp. 37-38). On December 5, 2002, MACRA announced a new interconnection regime that would result in a US\$0.08 per minute interconnection charge on mobile-to-mobile and fixed line-to-mobile calls and a US\$0.05 per minute charge on mobile-to-fixed line calls. It was reported that Celtel's managing director said that he was happy with this outcome, although the chief executive of TNM was reportedly less favorable towards it.⁴⁴

The disagreement over interconnection agreements appears to have also affected other policies. In an apparent retaliatory move against the injunction filed by Celtel against the new SKA arrangement, the regulator announced that it was considering licensing a third cellular operator. One-third of the GSM 900 band remained unused after the Celtel's entry, making it possible for the regulator to issue additional licenses without having to renegotiate frequency allocations. MACRA claimed that issuing an additional license would promote competition, improve efficiency, and lower the cost of service. Neither the 1998 Communications Act nor the

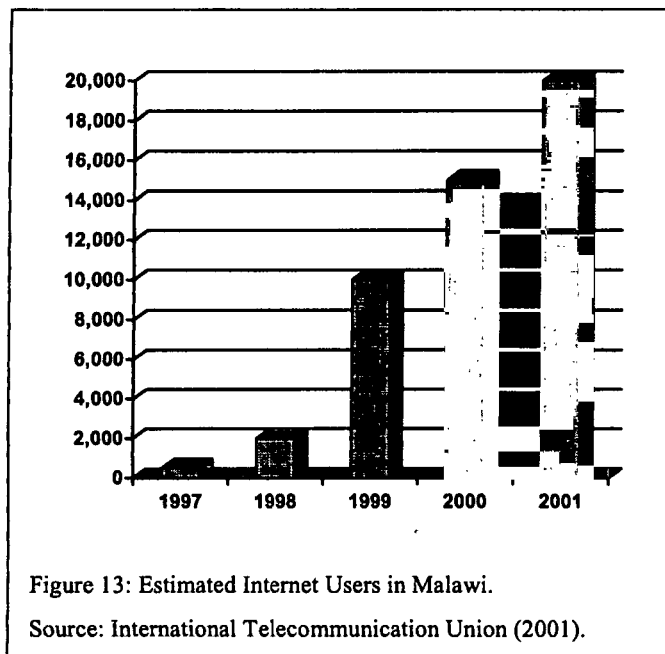
⁴⁴ "Telephone firms differ on MACRA ruling" by Ayam Maeresa, *The Nation* (December 10, 2002).

Communications Sector Policy Statement ruled out the licensing of additional cellular companies – although they also did not include any provisions explicitly advocating the issuance of additional licenses. However, the management of Celtel claimed that during license negotiations the government promised that no additional cellular licenses would be issued for sixty months after Celtel's entry (i.e., before October 2004).⁴⁵ MACRA, however, argued that the agreement was not legally binding.⁴⁶

MACRA eventually initiated the bidding process for a third fifteen-year cellular license in 2001. Bidding was closed on February 7th 2002. Three bids were received from three consortium headed by Ubambo Investment of South Africa, Globe Investment Limited of Malawi and Xantium Trading of South Africa. The license was awarded in May 2002 to the consortium headed by Ubambo Investment. The company, Malawi Mobile Limited, had not started operating by the end to 2002, but was expected to do so in early 2003.

⁴⁵ There is no mention of this in Celtel's license. During field interviews in 1999, the second operator claimed that the government had put this commitment in writing. The Pan African New Agency reports that, in a statement issued on September 8, 2000, Celtel's managing director said that the government had offered a written undertaking that only two cellular operators would be allowed to operate for five years after Celtel started operating (PANA, "Malawi's Celtel unhappy with decision to license third operator, September 11, 2000).

⁴⁶ "Malawi's Celtel unhappy with decision to license third operator" Pan-African News Agency (September 11, 2000) and "A third cellular phone license is awarded' (Economist Intelligence Unit, 2002)



ISPs (Ministry of Finance and Economic Development, 2001). The increase in the number of licenses coincided with a massive increase in the number of Internet users in Malawi, from about 500 at the end of 1997 to 20,000 by the end of 2001 (see Figure 13).⁴⁷

In addition to expanding competition in Internet and cellular services, and despite the fact that the Communications Sector Policy Statement did not require full privatization, the Government quickly initiated plans to privatize the telecommunications operations of MPTC. The first step towards doing so was splitting MPTC into two companies, Malawi Telecom Limited (MTL) and Malawi Postal Corporation (MPC). Malawi Telecom Ltd. (MTL) was corporatized on May 31, 2000. Under the 1998 Communications Sector Policy, it was given five years exclusivity in fixed-line and international services.

⁴⁷ According to Ministry of Finance and Economic Development (2001), the 10 operational ISPs had 4,400 subscribers by mid-2001. However, it is important to note that several users could use each individual subscription. For example, Ministry of Finance and Economic Development (2001) notes that several Intranets, including the Malawi Government Wide Area Network, MTL, and the Limbe Leaf Tobacco Company had only a single subscription. At that time, the Malawi Government Wide Area Network alone had 450 active users.

As noted previously, although the 1998 Communications Sector Policy had provisions for Malawi Telecom to seek a 'strategic partner' and discussed the possibility of a partial privatization, the policy does not explicitly advocate full privatization (i.e., the sale of a controlling interest in the enterprise). By early 2000, however, the Government appeared to be moving towards full privatization of MTL, agreeing to do this by June 30, 2001 as a condition of the World Bank supported Privatization and Utility Reform Project (World Bank, 2000, p. 19).

As a first step towards privatization, the Government appointed Robert Fleming Limited, an international consulting firm from Zimbabwe, as the Financial Advisor for the privatization of MTL in early 2000. Subsequently, an Information Memorandum was issued to potential investors in December 2000. About 15 potential bidders, including firms from Germany, South Africa, Holland, India and Malaysia, were short-listed to make bids for a stake in MTL. A deadline for final bids from potential bidders was set for 18 June 2001.

Although the progress in the first half of the year suggested that at least a partial privatization of MTL should be completed some time in 2001, the privatization attempt veered off-course at this point. On July 23, 2001, the Government of Malawi announced that it was suspending the entire privatization program, including the privatization of MTL. Although there was considerable confusion about the reason for the suspension of the program, it was reported that one reason was that the Government was disappointed in the bids that it had received for MTL (Economist Intelligence Unit, 2001b). After considerable pressure from donors, the Government resumed the privatization program in November 2001. Following resumption of the program, the Privatization Commission requested revised bids from the two consortia that had submitted final bids in the first round: one made up of socially-owned Press Corporation Limited (PCL) of Malawi (see footnote 38) and Econet Wireless of South Africa and a second led by Telecom Consultants India Limited.

Following the submission of second round bids on January 18, 2002, the Press Corporation/Econet consortium was designated as the preferred bidder. At this point, the Government appointed Price Waterhouse Coopers (PWC) to assess the capacity of consortium. However, after the due diligence report was undertaken, Econet decided to withdraw from the

consortium. According to press reports one of the unresolved issues at the time the Press Corporation/Econet consortium was designated preferred bidder was the issue of pricing.⁴⁸

The planned privatization of MTL had important interactions with two other sector policies: the issue of additional cellular licenses and the licensing of a second network operator. The announcement that MACRA intended to solicit bids for a third cellular license had an indirect impact on the planned privatization of MTL due to its implications concerning MTL's relationship with TNM. In particular, prior to this, it was unclear whether MTL would receive a license to operate its own cellular network, presumably divesting its part ownership of TNM, or would instead retain part ownership of TNM following privatization. The joint venture agreement allowed MTL to increase its shareholding of TNM to 51 percent, giving it majority ownership of the cellular operator. However, with the issuance of a third cellular license, it is unclear whether the first option remains open since this would imply that there would be four cellular licenses.

Although the 1998 Communications Sector Policy allowed the Government to decide whether or not to issue a license for a second national fixed line network, it explicitly gave MTL a initial five-year exclusivity period starting from the date that MTL was incorporated (i.e., until May 31, 2005) for fixed-line and international services (Ministry of Information, 1998, p. 20). However, after starting the privatization process for MTL, the Government decided to consider licensing a second network operator, possibly doing so before the five-year exclusivity period was complete. These plans, however, appear to have been put on hold until after the privatization of MTL was completed. Although the Government had given MACRA permission to issue a license to second fixed line license by early 2002, MACRA reportedly planned to do so only after completing the privatization of MTL and issuing a third cellular license.⁴⁹ Given the delays in privatizing MTL, it appears unlikely that a second operator will be operational before the end of the five-year exclusivity period.

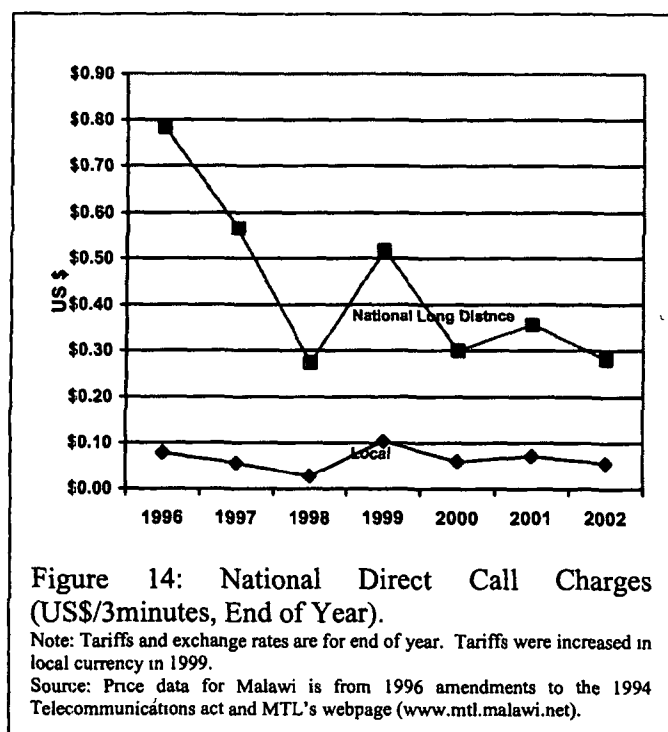
⁴⁸ See "Government Assesses MTL Investors Capacity" *The Malawi Nation* (June 3, 2002). According to a Reuters News Report from Factiva Select, the consortium bid US\$16 million for an 80 percent share, but was offered only a 30 percent stake (Malawi to Remarket State Telco After Sale Collapse by Denis Mzembe (November 25, 2002)).

⁴⁹ See "MACRA under Fire" *The Malawi Nation* (February 16, 2002).

Another area of concern is whether MACRA will manage to operate independently from short-term political pressures. As discussed earlier, some provisions appear to give MACRA some degree of independence. For example, it does not rely upon the government for any part of its revenues – which come entirely from license fees (and some initial support from donors). However, other provisions appear to give the Government considerable influence over MACRA's decision-making powers. For example, the Minister of Information is able to issue written instructions to the regulator, a power that he has been used even in the early years of MACRA's operations.

Furthermore, the government appears to interfere with MACRA in ways that do not seem consistent with the spirit of the 1998 Telecommunications Act. For example, the Government has interfered with MACRA's board on several occasions. The first Board was appointed in May 1999, during the preparations for the 1999 elections. However, following the elections, the board was dismissed, along with the boards of all parastatals. Although the dismissal was not due to any specific actions by MACRA, it does not appear that the dismissal was consistent with the allowable reasons for dismissing board members specified in the 1998 Telecommunications Act. A new board, primarily made up of private sector participants, was appointed in August 1999. However, this board was also dismissed the following year. The Government's willingness to dismiss boards, seemingly in ways not fully consistent with the 1998 Telecommunications Act, suggests that the Government will continue to have considerable influence over MACRA's board in the near term.

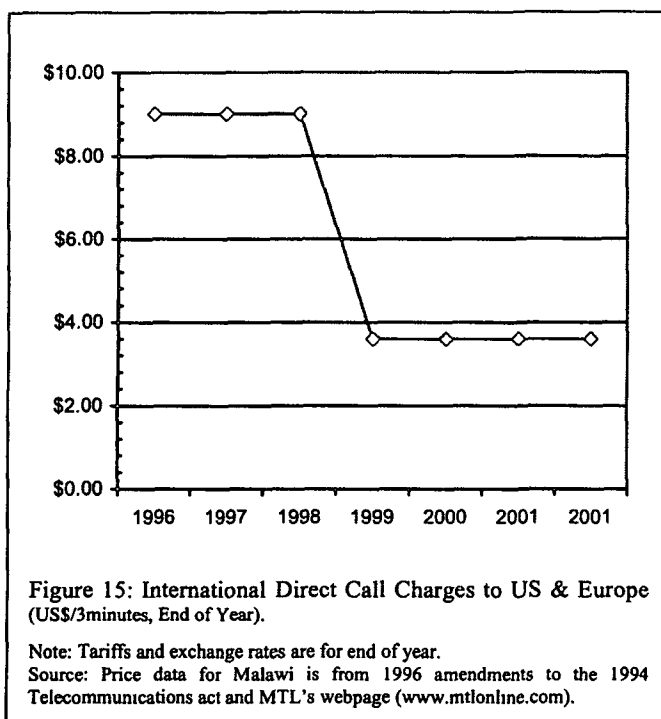
V.2 Prices



Kwacha (US\$0.52 at end-1999). However, prices for local and long-distance calls were set in Kwacha and since they were not adjusted after 1999, rapid inflation in Malawi (relative to inflation in the US) has resulted in a drop in tariffs in real terms. By 2000, they had reached levels in US\$ similar to the levels that they had been at before re-balancing. Prices for long-distance and local calls were adjusted downwards by an additional 6.25 percent in 2002.

At the same time that call prices were adjusted, connection charges were increased and the difference in fees between business and residential customers was eliminated. For residential customers connection charges were increased from by 72 percent, from K700 to K1200 and for business customers they were increased by 20 percent. The monthly rental charge, which had already been re-balanced in the early 90s, was also raised by 20 percent to Kwacha 100 (US\$2.15 at end-1999). Once again, inflation quickly eroded these increases. In fact, by the end of 2001 the monthly subscription rate was lower in real terms than it had been at the end of 1998 (see Table 4 and Table 10).

Although tariff re-balancing was not identified as a goal in the 1998 Communications Policy Statement, MPTC re-balanced international and domestic tariffs in September 1999. Prices were increased for local and long-distance calls (see Figure 14) and decreased for international calls (see Figure 15). The nominal price for a three-minute local call was increased from 1.2 Kwacha (US\$0.03 at end-1998) to 4.8 Kwacha (US\$0.10 at end-1999) and the nominal price for a long distance call was increased from 12 Kwacha (US\$0.27 at end-1998) to 24



In contrast to connection fees and local and national long-distance calls, international tariffs were reduced. Per minute charges for calls to Europe and the Americas were reduced by 60 percent from US\$3.00 per minute to US\$1.20 (see Figure 15) and calls to COMESA countries were reduced from US\$1.00 per minute to US\$0.50 per minute (see Table 3). Because international tariffs are denominated in dollars rather than Kwacha, they have not declined as significantly in real terms as local calls have. The re-balancing

significantly lowered the ratio of international to local tariffs, which fell from 159:1 to 35:1 and the ratio of international to domestic long-distance tariffs from 27:1 to 5:1 at the end of 1999. As discussed previously in section II.3, this comprehensive tariff re-balancing decision seems to have been partly caused by competitive pressures from Internet telephony, potential future call backs, and potential GMPCS telephony.

The introduction of competition in cellular telephony did not result in reduced prices for calls from cellular phones. Prior to reform, a three-minute call from a TNM cellular phone to a fixed line phone cost about US\$0.21 (see Table 4). However, when Celtel entered the Malawian market, it set its pre-paid prices considerably higher than the TNM's prices. Further, because Celtel set its prices in US dollars rather than Malawi Kwacha, prices remained high in dollar terms despite the high level of inflation in the late 1990s and early 2000s (see Table 1 for inflation rates in Malawi over this period). A three-minute call from Celtel's network to a fixed line phone on MTL's network cost US\$1.05 during peak hours (7AM to 6PM), US\$0.90 during off-peak hours (6PM to 10PM), and US\$0.60 during discount hours (10PM to 7AM). Although Celtel did not have a monthly subscription fee for its pre-paid service, the monthly subscription fee for TNM was relatively modest before reform (about US\$6.84 per month in 1998). The

connection fee (US\$30.00) was also similar to the lowest connection fee for a post-paid TNM phone (US\$21.65 in 1998). In June 1992, a month before the third cellular license was awarded, Celtel cut its per minute tariffs by up to 43 percent (see Table 2). However, Celtel's prices remained higher in dollar terms even after these cuts than TNM's prices had been prior to reform.

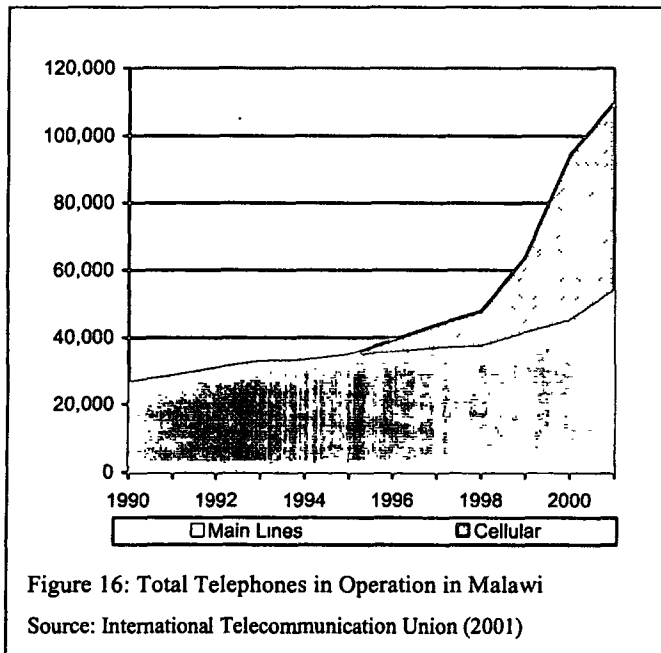
As discussed previously, prior to reform, TNM's prices were set under the 1996 amendments to the Post and Telecommunications Act of 1994. Since the 1996 Act set prices in Malawi Kwacha, prices declined significantly in dollar terms between 1996 and 1998 (from US\$0.59 in 1996 to US\$0.21 in 1998) due to high inflation, which resulted in the devaluation of the Kwacha over this period.

In contrast to the 1996 Amendments, the 1998 Telecommunications Act did not set prices. Consequently, although Celtel and TNM's licenses, which were issued in 1999, allowed the regulator to issue tariff regulations and required companies to notify the regulator when setting tariffs, TNM had much greater flexibility to set rates following the reform. TNM took advantage of this change to revise its tariff structure. For its post-paid service, it increased tariffs so that a 3-minute call to its own network or the network of MTL would cost US\$0.45 and a three-minute call to Celtel's network would cost US\$0.75 (see Table 9). It also adjusted its other charges, reducing connection fees from Kwacha 900 (US\$21.65 in 1998) to Kwacha 450 (US\$5.60 in 2001). The monthly subscription rate remained at Kwacha 300 (US\$6.84 in 1998 and US\$4.46 in 2001). For its pre-paid service, which it introduced after Celtel entered the market with its pre-paid service, a three-minute call to its own network or the network of MTL cost US\$0.45 while a call to Celtel's network cost US\$0.75.

V.3 Access

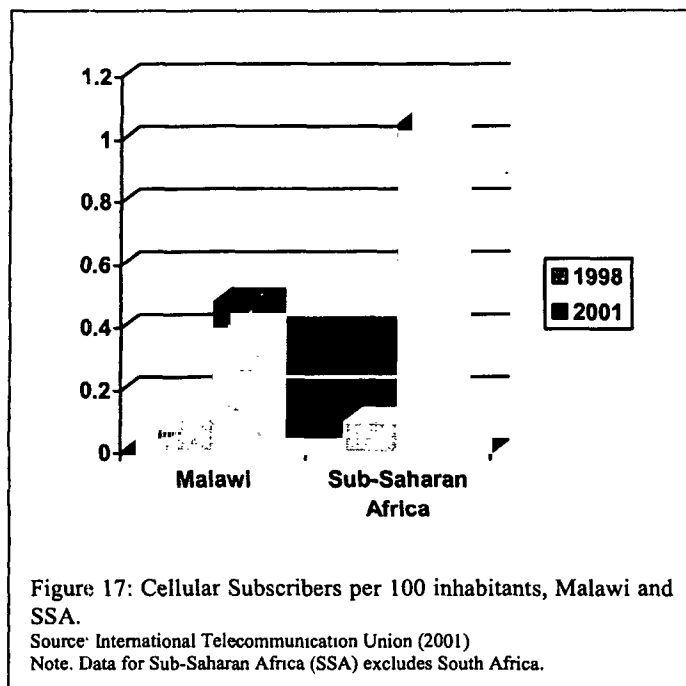
One of the key goals of reform was to increase coverage. The 1998 Communications Sector Policy specified a goal of increasing the number of telephone lines from 35,000 in 1998 to 150,000 by 2003. This goal was later revised to 180,000 in Malawi Telecom's license, which was issued in June 2000. To help Malawi achieve these expansion goals, the World Bank approved the Privatization and Utility Reform Project, which was intended to provide resources for preparing state-owned enterprises, including Malawi Telecom, for privatization. In addition

to requiring the divestiture of a controlling interest in Malawi Telecom by June 2001, the project also had an additional requirement that MTL would increase the number of working telephone lines to 150,000 by the end of 2004 (World Bank, 2000).



Although Malawi Telecom, with financial support from several donor agencies including DANIDA, successfully increased the number of fixed lines from 37,000 in 1998 to over 54,000 by the end of 2001 (see Figure 16), the actual rate of expansion has been slower than envisaged in the 1998 Communications Sector Policy. Combined with the slower than intended progress with privatization, this suggests that Malawi Telecom

might not meet the ambitious goals specified in the 1998 Communications Sector Policy Statement and the 2000 Privatization and Utility Reform project.



Despite the large increase in cellular prices following the entrance of Celtel, cellular coverage has increased greatly in Malawi over the past three years. At the end of 1998, before Celtel entered the market, there were only about 7,000 cellular customers in Malawi. By the end of 2001, there were close to 60,000 customers. This expansion was not just due to expansion at Celtel – over half of cellular customers at the end of 2001 subscribed to TNM’s service. Despite this expansion, it is important to note that growth in cellular

subscribers in Malawi has lagged behind growth in other countries in SSA. In 1998, the number of cellular subscribers per 100 inhabitants in Malawi was close to the average for SSA (see Figure 17). By 2001, despite the growth in Malawi, Malawi was lagging far behind the average.

There are several plausible reasons for the large increase in subscribers that occurred despite the large tariff increase. One reason might be that Celtel introduced several services that made cellular service more attractive to potential users. In particular, Celtel’s introduction of pre-paid service, in addition to being more attractive to some users, allowed potential customers to subscribe to cellular service without having to meet the stringent conditions (e.g., related to credit) that post-paid customers needed to meet to qualify and does not require them to pay a deposit.⁵⁰ However, the introduction of pre-paid service does not appear to be the only reason for the expansion – about 30 percent of Celtel’s customers and 70 percent of TNM’s customers subscribed to post-paid services at the end of 2001 (EMC, 2002, pp. 25-26). Another possible explanation might be that the introduction of competition might have encouraged TNM to invest

⁵⁰ In 1998, TNM required a Kwacha 1500 deposit (about US\$34).

more quickly than it would have otherwise to avoid losing market share. Finally, it seems plausible that the low Kwacha prices specified in the 1996 Amendments to the 1994 Act might have placed supply-side constraints on system expansion. Under the low prices set in the 1995 Amendments, TNM might have had little incentive to invest in new technologies (e.g., to offer pre-paid service) and facilities, resulting in supply side constraints on service. By allowing the cellular providers to charge higher rates, the reform might have removed these constraints, resulting in the expansion of service to areas and consumers who would not have been profitable prior to reform.

It seems likely that cellular service will continue to expand in the near future. The introduction of the third provider should increase competition, giving the providers greater incentive to quickly expand service. Further, it is likely to result in lower prices – as noted previously Celtel reduced its per minute charges by up to 43 percent following the award of the third license – increasing demand for cellular service as it became affordable to a greater number of people.

VI. CONCLUSIONS

When compared to the other case study countries, Malawi adopted a relatively conservative approach towards reform. The two main accomplishments were splitting the former state-owned monopoly in postal services and telecommunications (MPTC) into a telecommunications enterprise (MTL) and a postal monopoly (MPC) and issuing two additional cellular licenses. In addition, the Government also set up a new regulatory agency separate from both the incumbent operator and the Ministry of Information and liberalized entry in value-added and Internet services. However, more ambitious reforms, such as privatizing MTL, allowing entry by a second national network operator or licensing regional fixed line operators, had not been completed by 2003 – five years after the reform process started.

In part, the modest reform reflects the modest internal support for sector reform in Malawi. Several factors reduced demand for significant changes in sector organization. First, in the absence of a macroeconomic crisis, reform did not appear to be urgent. Second, managers and workers at the incumbent operator, which was overstaffed and inefficient, were opposed to reform. Third, the telecommunications operator was supporting postal services, which was

losing considerable amounts of money before reform. Consequently, the government was concerned that privatization of telecommunications would leave it the unprofitable postal corporation, which could prove to be a significant drain on government finances. Finally, there was only modest support for reform from the private sector. Because the Malawian economy is predominantly rural, support for telecommunications reform was relatively muted.⁵¹ Furthermore, support from the non-rural private sector was also modest – the Government, state-owned enterprises, and the socially owned Press Corporation Limited (PCL) dominated much of the non-rural economy. Consequently, according to most observers, donors (especially DANIDA and the World Bank) were probably the most important group lobbying for sector reform. Although donor pressure alone is unlikely to define a reform agenda, pressure from donors can provide reformers with needed support.

The modest reform resulted in modest gains. Although the introduction of competition in cellular telephony resulted in growth, it was not as rapid as it was in countries that reformed more aggressively. Furthermore, cellular prices increased dramatically as soon as they were freed. Finally, although the fixed-line system expanded, penetration grew more slowly than was originally hoped, despite aid from donors that helped finance system expansion.

There have also been some problems associated with the credibility of the regulator. A first problem is that the 1998 Communications Act gives the Minister of Information considerable power over the regulator. Given that the regulator has wide-ranging powers that allow it to modify licenses, void interconnection agreements, and interfere in the sector in several other ways, the lack of independence appears to be a concern. In addition to concern about the effect that the 1998 Act might have on regulatory independence, there is also evidence that the Government is able to apply pressure in other ways. Most importantly, the regulator's board has been replaced twice since MACRA was formed – something that does not appear consistent with provisions of the 1998 Communications Act.

⁵¹ Clarke and Wallsten (2002) provide data on rural telecommunications throughout Africa. Even by the late-1990s, fewer than 1 percent of rural households had a telephone in 14 of 15 countries in Africa for which data were available.

The regulator's public disagreements with Celtel, which have been played out in both the Malawian court system and the local and international press, have also damaged its credibility with potential investors. This was especially damaging since at the time of the disagreements, Celtel was the only majority privately owned telecommunications operator in Malawi. Consequently, even though the regulator's actions might have been reasonable and appear to have successfully reduced prices in the cellular market, they have probably reduced the regulator's credibility. It is likely that this deterred potential investors from taking an interest in MTL when MTL was up for privatization,

In part these problems reflect the ordering of reforms. Because the Government auctioned the second license before the regulator was operational, the regulator provided no input when MTL and the cellular companies made the disputed interconnection agreements or regarding the Government's commitment not to issue a third cellular license. If the regulator had been operational, these disagreements may have been avoided in the first place. However, given the questions about the independence of the regulator and the Government's potential ability to involve itself regulatory decisions, it is difficult to conclude that these problems would have been completely avoided even if this had been the case.

Although the Government reported that it intended to put MTL back up for sale after the collapse of the first attempt, privatization will probably be difficult in the near term. First, the global economy appears less favorable with respect to investment in telecommunications in 2003 than it did in 1998 and international telecommunications companies have considerably less cash. Second, Malawi's credibility with outside investors has probably fallen in recent years. In addition to the sector-related problems that have reduced the regulator's credibility, Malawi has had wider problems with governance and corruption. For example, there have been several high profile corruption cases and a recent report by the International Bar Association questioned the independence of the judiciary and the public prosecutor and noted concerns that freedom of expression and association has been curtailed (International Bar Association, 2002). As a result of these recent changes, Malawi ranked lower on the International Country Risk Guide in 2002 than it did in 1999 (with its score falling from 6.7/10 to 5.5/10 – see footnote to Figure 12 for details on calculation). This will probably reduce the price that investors will be willing to pay for MTL, making privatization more difficult.

Two other changes might also reduce pressure for reform. First, after DANIDA suspended support to the Malawian Government in 2002 and other donors refocused their efforts on measures more directly linked to poverty reduction, donor pressure is unlikely to be as great in the near future as it was in the past. Second, the rapid expansion of cellular telephony has improved MTL's financial performance and raised expectation regarding its valuation. This makes privatization more difficult, since it will probably make Government decision makers less eager to strike a deal with potential investors. As noted previously, several reports suggested that one reason for the first failed attempt at privatization was that the government felt that the investors offered too little for the company.

Although this suggests reason for concern, these delays might not end up being damaging in the medium term. By the time MTL is eventually privatized, the regulator will have had time to build up a more solid regulatory record – something that should improve the country's credibility with potential investors. This, in turn, should improve the price paid and the conditions of the privatization contract.

Based upon the experience in Uganda and Ghana, it might make sense to license a second network operator sooner rather than later. In Uganda, where the second network operator was licensed before the incumbent firm was privatized, the second network operator had time to build a customer base before it found itself competing with an aggressive, privatized operator with a large installed base of customers. This allowed a competitive framework to develop (Haggarty *et al.*, 2003). In contrast, in Ghana, the incumbent was privatized first, allowing it to put much greater pressure on the new operator before it could establish itself (Shirley *et al.*, 2002).

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VIII. TABLES

Table 1: Inflation and GDP growth in Malawi, 1994-2001 (annual %).

	1994	1995	1996	1997	1998	1999	2000	2001
GDP growth	-10.2	16.7	7.3	3.8	3.3	4.0	1.8	2.8
GDP per capita growth	-11.7	14.9	4.7	1.4	1.0	1.8	-0.3	0.7
Inflation, consumer prices	34.6	83.3	37.6	9.1	29.7	44.9	29.5	
Inflation, GDP deflator	26.2	81.2	58.9	7.8	25.4	42.2	25.1	26.1

Source: World Bank (2002).

Table 2: Tariff Comparison of Selected African Countries (US\$ per 3 Minutes, 1997).

	International to USA	National Long Distance (320KM)	Local Call	International as % of NLD	International as % of Local	NLD as % of Local
Ghana	3.12	1.08	0.06	289	5,200	1,800
South Africa	2.85	0.75	0.08	380	3,563	938
Zimbabwe	4.83	0.45	0.20	1,073	2,415	225
Botswana	5.16	0.78	0.06	662	8,600	1,300
Namibia	6.36	0.57	0.05	1,116	12,720	1,140
Senegal	6.63	0.48	0.10	1,381	6,630	480
Uganda	6.90	1.71	0.20	404	3,450	855
Kenya	7.50	1.32	0.05	568	15,000	2,640
Malawi	9.00	0.42	0.06	2,123	15,929	750
Zambia	9.60	0.51	0.08	1,882	12,000	638
CAR	9.81	8.07	0.19	122	5,163	4,247
Cameroon	9.90	1.20	0.10	825	9,900	1,200
Tanzania	10.80	0.72	0.30	1,500	3,600	240
Average	7.11	1.38	0.12	515	6,057	1,177

Source: Communications Technology Handbook, 1998; and Malawi Telecom Ltd.

Table 3: Per Minute International Call Rates for MPTC, 1996-2002.

		1996-1998	1998-2002
United States, Canada	Standard Rate	\$3.00	\$1.20
	Cheap Rate	\$2.75	\$1.00
Europe	Standard Rate	\$3.00	\$1.20
	Cheap Rate	\$2.75	\$1.00
COMESA	Standard Rate	\$1.00	\$0.50
	Cheap Rate	\$0.90	\$0.40

Source: Posts and Telecommunications Act, 1994 and MPTC

Table 4: Prices for MPTC and TNM Before the 1998 Reform

	Malawi Post and Telecom (Fixed)	TNM Malawi (Mobile)
Connection Fee		
Business	\$22.79	\$21.65
Residential	\$15.95	\$21.65
Monthly Subscription		
Business	\$1.82	\$6.84
Residential	\$1.82	\$6.84
Three Minute Local Phone Call		
To Fixed Line (MPTC)	\$0.03	\$0.21
To Mobile (TNM)	\$0.21	\$0.21

Source: Posts and Telecommunications Act, 1994 and TNM Flyers.

Table 5: MPTC Balance Statement, FY 1998.

Asset	Post	Telecom	Consolidated
Current Asset	76,607,182	1,184,107,669	1,259,714,851
Cash on hand	25,840,925	23,613,547	49,454,472
Debtors	38,561,217	416,345,622	454,906,839
Stores	11,205,040	27,127,172	38,332,212
Interdivisional Balance	0	717,021,328	717,021,328
Fixed Asset	105,271,926	1,058,129,252	1,163,401,178
Investments	0	28,568,473	28,568,473
Total Asset	181,879,108	2,270,805,934	2,452,684,502
Liability & Capital			
Current Liabilities	1,019,087,899	475,992,818	1,495,080,717
Trade Creditors	14,566,525	107,697,821	122,264,346
Other Creditors	32,208,314	228,256,436	260,464,750
Current Portion of LTD	0	140,038,561	140,038,561
Amounts due to Malawi Savings Bank	255,291,732	0	255,291,732
Interdivisional Balance	717,021,328	0	717,021,328
Long Term Debt (LTD)	0	1,636,276,510	1,636,276,510
Accumulated P (L) Net of Starting Capital	(838,208,791)	158,536,066	(679,672,725)
Total Liability & Capital	181,879,108	2,270,805,394	2,452,684,502

Source: MPTC Account Separation Report, by Price Water House. As of March 31, 1998

Table 6 : The Functions of the Regulatory Authority

1.	To keep under review the carrying on within and outside Malawi of activities connected with communications.
2.	To collect and to publish information with respect to commercial activities connected with communications.
3.	To provide advice to users and providers of communication.
4.	To sponsor the provision of, and where necessary to provide training in activities related to the provision of communication services.
5.	To give information, advice and assistance to the Minister with respect to any matter which concerns the provision of communication services.
6.	To investigate any matter which is related to the provision of communications services or to the use of radio frequencies and which is the subject of a representation to the Authority.
7.	To regulate the provision of telecommunications services through licensing, providing advice to the Minister, and monitoring the activities of licensees for compliance.
8.	To draw up numbering plans for public communication networks.
9.	To ensure the adoption of international standards.
10.	To establish a type approval regime for terminal equipment.
11.	To regulate broadcasting services through licensing, providing advice to the Minister, and monitoring the activities of licensees for compliance,
12.	To plan the use of radio frequencies and make frequency allocations.
13.	To carryout and co-ordinate frequency assignments.
14.	To monitor radio emissions and deter interference with authorized radio communications.
15.	To regulate postal services through licensing, providing advice to the Minister, and monitoring the activities of licensees for compliance.

Source: 1998 Telecommunications Act.

Table 7: Regional distribution of votes in 1994 presidential elections

Regional Distribution	United Democratic Front (Mr. B. Muluzi)	Malawi Congress Party (Dr. H. K. Banda)	Alliance for Democracy (Mr. C. Chihana)
North	4.5%	7.2%	86.6%
Center	27.1%	62.7%	7.3%
South	76.6%	15.8%	5.1%

Note: Totals do not sum to 100% since votes for the Malawi Democratic Party and null and void ballots are excluded

Source: SINDP website (www.sndp.org.mw).

Table 8: Regional distribution of votes in 1999 presidential elections

Regional Distribution	United Democratic Front (Mr. B. Muluzi)	Malawi Congress Party/ Alliance for Democracy (Mr. G Chakuamba)
North	9.3%	87.3%
Center	34.5%	61.1%
South	77.1%	18.1%

Note: Totals do not sum to 100% since votes for candidates of three smaller parties and null and void ballots are excluded

Source: SINDP website (www.sndp.org.mw).

Table 9: Post-Reform Prices for Cellular Service (in US\$).

		TNM		Celtel (1999 - 2002)	Celtel (After July 2002)	
		Pre-Paid	Post-Paid	Pre-Paid	Pre-Paid	Post-Paid
Monthly Subscription		\$0.00	\$4.46	\$0.00	\$0.00	\$15.00
Three-Minute Phone Call						
To MTL	Peak	\$0.69	\$0.45	\$1.35	\$0.87	\$0.60
	Off-Peak	\$0.69	\$0.45	\$0.90	\$0.60	\$0.45
	Discount	\$0.69	\$0.45	\$0.60	\$0.45	\$0.45
To MTN	Peak	\$0.69	\$0.45	\$1.35	\$0.87	\$0.72
	Off-Peak	\$0.69	\$0.45	\$0.90	\$0.60	\$0.45
	Discount	\$0.69	\$0.45	\$0.60	\$0.45	\$0.45
To Celtel	Peak	\$0.75	\$0.75	\$1.05	\$0.60	\$0.45
	Off-Peak	\$0.75	\$0.75	\$0.75	\$0.45	\$0.45
	Discount	\$0.75	\$0.75	\$0.45	\$0.45	\$0.45

Source: Celtel (www.mw.celtel.com) and TNM (www.telekommalawi.com) websites and brochures.

Note: Prices are set in US\$ for all services except for post-paid subscription fee for TNM. Fee is set at K300 for a Simcard and K150. Dollar amount is calculated using end of 2001 exchange rate. Peak is 7AM to 7PM, Off-Peak is 7PM to 10PM and Discount is 10PM-7AM.

Table 10: Post-Reform Prices for Malawi Telecom Limited (MTL)

		Kwacha	US\$ (End-2001)
Monthly Subscription		100	\$1.49
Three-Minute Phone Call			
Local	<i>Peak</i>	4.8	\$0.07
	<i>Off-Peak</i>	3.2	\$0.05
Inter-Regional	<i>Peak</i>	12	\$0.18
	<i>Off-Peak</i>	8	\$0.12
National	<i>Peak</i>	24	\$0.36
	<i>Off-Peak</i>	16	\$0.24
To Cellular	<i>Any Time</i>	16	\$0.24

Source: MTL website (www.mtlonline.com).

Note: Prices are set in Malawi Kwacha. Prices in US\$ are for the end of 2001. Prices for phone calls were adjusted downwards by 6.25 percent in 2002.

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