

Telecommunications liberalization in Jamaica

Franklin Anthony Brown

Office of Utilities Regulation, Third Floor, PCJ Resource Centre,
36 Trafalgar Road, Kingston, Jamaica

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Abstract

This paper provides an overview of the process of market liberalization and changes to the regulatory regime that followed the Agreement in September 1999 between the monopoly telephone company, Cable and Wireless Jamaica Limited, and the Government of Jamaica to dismantle the company's monopoly. Efforts by the multi-sectoral regulatory body, the Office of Utilities Regulation, in building institutional capacity and facilitating interconnection between the new entrants and the incumbent are examined. Policy outcomes of the reform measures undertaken to date show that substantial progress has been made in transforming the telecommunications landscape in Jamaica from a monopoly structure to a competitive regime. Amidst the gains, however, are problems such as the financial constraints facing other key regulatory institutions, the Fair Trading Commission and the Spectrum Management Authority, which hinder their ability to discharge their statutory regulatory duties.

The views expressed in the paper are those of the author and should not be ascribed to the organization for which he works.

Introduction

There have been two distinct periods in the recent reform of Jamaica's telecommunications sector: 1987–September 1999, and March 2000 to the present. The most significant policy developments during the first period were the granting of exclusive licences to ToJ (Telecommunications of Jamaica) Ltd in 1988, and the 1989 acquisition of the Jamaican Government's majority share ownership in ToJ by C&W (Cable & Wireless) plc. In 1998, ToJ became C&WJ (Cable & Wireless Jamaica) and at present, 71% of C&WJ is held by CALA Investments of the Cayman Islands, a subsidiary of C&W plc. The remaining 29% is held by a diverse group of local individual and institutional investors. The privatization of ToJ was driven by fiscal and foreign exchange imperatives and was a major success story, both in terms of the revenues it brought to the treasury (Wint 1996) and the subsequent expansion and modernization of the island's telecommunications network.¹

The second period, March 2000 to present, is the focus of this paper. It is characterized by changes to the regulatory arrangements and the adoption of a pro-competitive regime governing the supply of telecommunications services.

Framework of regulation and policy (1987–1999)

The C&WJ's exclusivity to basic telecommunications services lasted from 1987 to 1999. At the time of privatization, the principal legislative instruments governing the telecommunications sector were the Telephone Act, 1893, and the Radio and Telegraph Control Act, 1973. Responsibility for the management and allocation of spectrum resided with the Minister and this was done through the Post and Telegraph Department. The terms and conditions of the 1987 licences held by the company effectively determined the policy and regulatory framework for the sector. The exclusive licences were for a 25-year period² and

¹ The annual level of capital spending rose sharply during the 1990s and peaked at 130 million US dollars in 1998. The increase in capital investment was reflected in significant expansion in the island's telecommunications network with the number of fixed line subscribers growing from 81 710 in 1987 to 471 000 by 1999. The number of main lines per 100 inhabitants, a widely used measure of telephone penetration, was 18 in 1999, three times the 1993 figure, and the percentage of households connected to the fixed network jumped from 18.6 in 1993 to 35–40 by 1999.

² These licences could be renewed for an additional 25 years under the same terms and conditions.

provided for prices to be regulated by the minister under the rate-of-return method with an allowable after-tax return of 17.5%–20%. The minister had the authority to establish minimum standards of service quality and the company was mandated to consult and seek ministerial approval on a variety of regulatory and policy issues including network expansion plans. For the most part, the provisions of the licences were never strictly adhered to because of the absence of the necessary regulatory capabilities within the relevant government ministry. The 1987 agreement for sale transferred a publicly owned monopoly to private ownership without providing the institutional capacity for its effective regulation. The company, in essence, engaged in self-regulation with limited government supervision. Jamaica's experience with privatization of the telecommunications sector has been the subject of extensive criticism by academics, public commentators, and potential entrants and this was a factor in subsequent policy changes (Dunn 1991).

In the absence of a specific sector regulatory body or department for telecommunications, the FTC (Fair Trading Commission), which was established in 1993, took a keen interest in competition issues pertaining to the sector and, in particular, the conduct of C&WJ. While there was no direct challenge to C&WJ's interpretation of the exclusivity conferred by the licences C&WJ held, there were instances in which the FTC 'tested' the scope of exclusivity. The first successful challenge to C&WJ's exclusivity in basic telecommunication services was precipitated by initiatives undertaken in December 1995 by the FTC that made it possible for other entities to enter the market for, and compete in, the provision of Internet services.³ In the previous year, the market for single line customer premises equipment was opened to competition by virtue of an agreement between C&WJ and the FTC.⁴ The Commission was also successful in prohibiting 'free' voicemail advertising by the incumbent

³ A prospective provider of Internet access, InfoChannel had sought to purchase critical inputs from C&WJ and when the company objected, it sought the intervention of the FTC on the grounds that C&WJ's refusal amounted to abuse of dominance as set out in Section 19 of the Fair Competition Act, 1993. Following an investigation, the FTC concluded that C&WJ's action amounted to an abuse of dominance and mandated it to provide inputs to prospective Internet service providers so long as the requisite technical standards are met.

⁴ Agreement between the Fair Trading Commission and Telecommunications of Jamaica, 21 December 1994.

(1999). These initiatives had the effect of constraining the behaviour of the monopoly incumbent operator.

Sector policy development (1996–September 1999)

While Jamaica was among the earliest of developing countries to privatize its telecommunications sector, local policy-makers were less aggressive in pursuing a strategy of liberalization since exclusivity was the linchpin of the privatization arrangement. The first public indication of the GoJ's (Government of Jamaica's) intention to introduce competition was contained in the 1996 National Policy Framework for the sector. The 1996 Policy proposed that regulation of C&WJ should come under the newly created OUR (Office of Utilities Regulation) and competition should be introduced in mobile and value-added services but retained C&WJ's 25-year exclusivity in provision of domestic and international facilities. In that same year a National Industrial Policy was put forward by the GoJ, which emphasized telecom's intensive activities such as information processing and call centre operations as primary candidates for export growth and employment creation. Commitments made under the GATS (General Agreement on Trade in Services) further underscored the intention of the government to pursue a liberalized strategy. Jamaica was one of the first countries to become a signatory to GATS, an essential element of which is the commitment to a set of regulatory principles designed to govern how governments treat national and international telecommunications carriers. These principles set provisions for (1) access to the incumbent's network on terms and conditions that are non-discriminatory, (2) arbitration of interconnection disputes, (3) the establishment of an independent regulator, and (4) an appropriate structure for the allocation and management of spectrum resources.

Following the general elections of 1997, Phillip Paulwell, who had previously served as executive director of the FTC and head of the Trade Board, became the minister for telecommunications. Early in the tenure of his administration, Paulwell indicated that liberalization of the sector was a priority. In November 1998, the minister tabled before Parliament a new framework for competition and regulatory reform in the form of the Telecommunications Policy. The policy document essentially reaffirmed government's commitment to undertaking market, legal, and institutional reform of the sector. Another initiative by

the minister to move to a more open market in telecommunications services came in 1998, when licences were granted to a group of Internet service providers, which allowed them to erect VSATs (very small aperture terminals) for providing data transmission services. This was viewed by C&WJ as a breach of its exclusivity in the lucrative international telecommunications market and the company initiated court proceedings against the GoJ.

Agreement between C&WJ and the government

September 1999 marked a critical juncture in the reform of the island's telecommunications sector when the GoJ announced that it had negotiated an end to C&WJ's exclusivity. This made Jamaica the first of the English-speaking Caribbean islands to embark on a path of market liberalization in telecommunications. The agreement brought an end to the legal wranglings between C&WJ and the GoJ over the interpretation of the 1988 licences. More importantly, it provides for

- a timetable for full liberalization of the sector and a new licensing regime and
- the promulgation of a new Telecommunications Act with a framework for the regulation of the sector.

Liberalization timetable

The first phase of liberalization was initiated on 1 March 2000, with the promulgation of the new Telecommunications Act. During this phase (the first 18 months from the commencement date of the Act), competition was to be introduced in the provision of domestic mobile services and the supply of multi-line customer premises equipment such as PBXs (private branch exchanges). Resale, where the incumbent sells its international switched voice minutes to holders of international voice service provider licences, was also permitted. The Act specifically stipulates the discount rate, where C&WJ is the wholesaler, to be the retail price *minus* the avoidable costs (i.e. the costs avoided by the wholesaler for not supplying the service at the retail level). In keeping with the GoJ's policy of promotion of the informatics sector for export and job creation, licences could also be issued for enterprises providing telecom services solely within free trade zone operations.

The second phase of the liberalization process commenced in September 2001, and will also last 18 months. During this phase, licences may be granted for domestic voice facilities and

services, for example, wireline or wireless for intra and inter-parish traffic, and the incumbent is obliged to resell domestic switched minutes. Phase II also permits CTV (cable television) operators to offer Internet access services over their facilities. The third phase of liberalization commences in March 2003. This phase will signal the full liberalization of the sector by allowing competition in international voice and data facilities. Until Phase III, new mobile and fixed line carriers must use C&WJ's facilities for international traffic. A key consideration in the delay in implementing full liberalization and the opening of the international market was to allow C&WJ to prepare for the new competitive environment by undertaking a 'rebalancing' of its domestic and international telephone rates.

Framework of regulation, competition, and policy

The key actors within the framework for policy, regulation, and competition for the telecommunications sector are the minister, the OUR, the FTC, the SMA (Spectrum Management Authority), and the Appeals Tribunal. The roles and responsibilities of the various regulatory institutions are defined by the Telecommunications Act, 2000. Figure 1 summarizes the relationships between and amongst the minister, OUR, FTC, and SMA.

Policy formulation

Delineation of the role of the minister as against the OUR with respect to sector policy is one area in which the new framework departs from the previous reform period. The formulation of

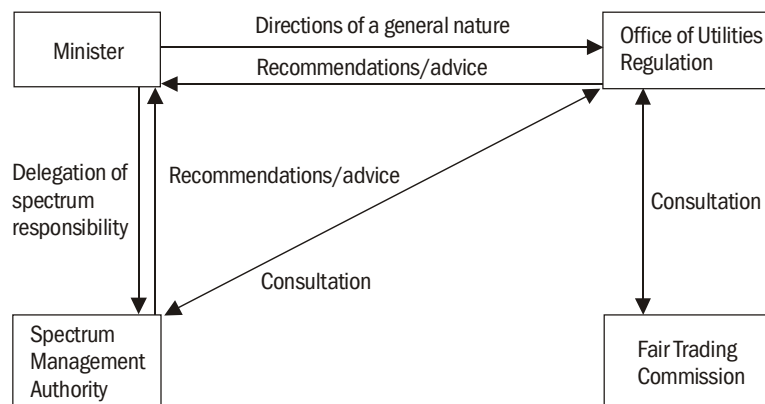


Figure 1 Institutional structure and relationship

sector policy continues to be the sole purview of the minister although the OUR has a statutory duty to advise the minister on sector policy issues. The minister may also give policy direction of a general nature to the Office. The Act also provides for the establishment of the JTAC (Jamaica Telecommunications Advisory Council), which provides policy advice to the minister. Finally, the power to grant, revoke, suspend, and renew licences is the remit of the minister.

Office of Utilities Regulation

The OUR is a multi-sector regulator established by virtue of the Office of Utilities Regulation Act, 1995, to regulate water and sewerage, public transport (by rail, road and ferry), electricity, and telecommunications. The executive power of the agency resides with the 'Office', which comprises a Director General and two Deputy Directors General. Prior to the Telecommunications Act, 2000, statutory powers to regulate the telecommunications sector resided with the responsible minister. In addition to the transfer of regulatory authority to the OUR under the new Telecommunications Act, there is also a provision in the Act for licenced carriers and service providers to contribute to the funding of the organization, a provision not existing under the former legislative arrangement. This is a critical element in the sustainability of regulatory institutions as it provides a means of financial support untethered by the budgetary constraints of the central government.

The OUR's responsibilities under the Telecommunications Act encompass a range of activities such as regulating specified services and facilities; receiving and processing licence applications; promoting interests of customers, carriers, and service providers; and promoting competition among carriers and service providers. In discharging its functions, the OUR is mandated to have regard to the principles of natural justice. The Act also grants the OUR extensive rule-making powers with regard to price caps, resolution of pre-contract disputes on interconnection and wholesale agreements with dominant carriers, indirect access, number portability, quality of service and resolution of customer complaints, number allocation and administration, certification standards for equipment, and any matters necessary or desirable for the effective performance of its functions. Rules made by the OUR are not binding, however, until they receive the affirmative resolution of the Parliament.

Fair Trading Commission

The FTC is mandated by statute (Fair Competition Act, 1993) to promote competition and protect consumers from trade practices, which have or are likely to have the effect of lessening competition. Such practices include abuse of dominance, which may take various forms (predatory pricing, unfair cross subsidies, and discrimination in treatment between firms and business units within the same firm). Anti-competitive practices of the types identified above are prevalent in network industries such as telecommunications. This is because an incumbent telephone company such as C&WJ competes against entrants in downstream retail markets (for example, Internet service and mobile retail services) and simultaneously is a supplier of essential inputs (such as fixed termination) to mobile and other fixed network operators) to new entrants.

For some provisions of the FCA (for example, abuse of dominance and anti-competitive agreements), the Commission sits as a quasi-judicial body. In other instances (misleading advertising, double ticketing, etc.), the Commission may initiate court action against any person it considers to be breaching the provisions of the FCA.

The FCA is applicable to all economic sectors and companies except where specific exemptions are made by the government or specific authorization is granted by the FTC to an entity to continue a practice that would otherwise be deemed anti-competitive. No exemption has been made with respect to the telecommunications sector. Both the OUR and the FTC address competition issues in telecommunications. The OUR's role is *ex ante*, however, the FTC's is *ex post*. Additionally, the OUR is required by statute to refer matters of competitive significance to the FTC. It is also mandated to consult with the FTC on various matters, notably the determination of 'dominant' public voice carriers.

Spectrum Management Authority

Historically, all regulatory matters having to do with spectrum management and allocation resided with the Post and Telegraph Department. While the technical competence of the Department's staff complement was never in doubt, various weaknesses were identified with that arrangement, for instance

- limited technical and human resources devoted to the management of the spectrum,

- fees collected for the use of the spectrum were used to cross-subsidize postal rates,
- the absence of an overall national spectrum development plan taking into account existing as well as future uses of the resource,
- lack of transparency and openness in the allocation of spectrum, and
- the lack of a modern system of record keeping (including greater utilization of computers) for spectrum monitoring and allocation.

One option open to the local policy-makers was to transfer all activities relating to spectrum management and allocation to the OUR. One argument in favour of this approach is that it would reduce regulatory costs due to the spreading of administrative and utility expenses across a larger range of activities. Additionally, it would allow for greater efficiency and coordination on key regulatory issues such as licensing. On the other hand, there are those who would argue that spectrum is a natural resource, the regulation of which has very little in common with the economic regulation of network industries, and hence the need for a separate agency.

Under the Telecommunications Act, 2000, statutory authority for spectrum licensing, regulation, allocation and assignment, as is the case in several countries, remained with the minister. The Act further provides for the minister to delegate these responsibilities either in whole or in part to a newly established body, the SMA. In addition to carrying out any function delegated to it by the Minister, it also serves the role of advisor to the minister.

Appeals tribunal

The Act also provides for the establishment of an Appeals Tribunal. All three members of the Tribunal are appointed by the minister, one of whom must be a former judge of the Supreme Court or the Court of Appeal. This is a body to which parties aggrieved by decisions of the OUR may appeal. The justification for an 'appeals process' is to guard against arbitrariness by the OUR, and by extension, reduces regulatory risk. Under Jamaican law, parties aggrieved by decisions of the OUR may also seek redress in the Courts.

Assessment of policy outcomes

There seems to be general agreement among researchers that the lack of regulatory capacity within the state bureaucracy was one of the chief shortcomings of the first reform period (1988–1999) in Jamaica (Adams, Cavendish, and Mistry 1992). This section assesses the progress being made in developing the institutional capacity necessary for the effective regulation of a liberalized market. Since the success of any liberalization programme must be measured at least in part, by the entry and viability of new players, current market conditions are also examined.

Office of Utilities Regulation

With liberalization imminent, the immediate challenge for the OUR was to seek ways and means of building institutional capacity to meet the challenge of the regulatory responsibility it now faced. To this end, substantial resources have been devoted to improving the regulatory knowledge and expertise housed in the institution. External consultants have been retained to assist with complex issues such as the evaluation of the incumbent's telecommunications plants, interconnection terms and conditions, mobile termination rates, price caps, and numbering. Resources dedicated to the new telecom responsibilities are substantial. The organization has invested heavily in staff training and expects, over time, to reduce its reliance on costly external consultants. For the financial year 2000/01, of the total financial resources devoted to staff training and consultancy, 87% was directly related to telecommunications compared with 17.8% prior to the commencement of liberalization. The projected figure for the current financial year (2001/02) is 64.8% of the training and consultancy budget.

The OUR has also benefited from technical assistance provided by the UK's DFID (Department for International Development), the CIDA (Canadian International Development Agency), and the USAID (United States Agency for International Development). The CIDA and DFID arrangements provided for in-house telecom specialists for a defined period to work alongside OUR staff on key regulatory issues. Multilateral agencies such as the IDB (Inter-American Development Bank) and the World Bank have also supported the organization. The IDB has supported staff training, the purchase of office equipment and supplies and has funded various consultancy studies on liberalization and spectrum management under the MIF

(Multilateral Investment Fund) programme. The World Bank recently funded a preliminary study on universal service.

Further evidence of the attention and efforts devoted to telecommunication issues is reflected in the number and variety of public consultation documents and determination notices issued by the OUR. These documents covered a wide variety of subjects, including price caps for the incumbent, interconnection, proposed national numbering plan, liberalization of directory inquiry services, quality of service, and accounting separation and related costing issues. Several determination notices have been issued by the OUR. Subjects covered include price cap model for the incumbent operator, interconnection of competing fixed and mobile carriers to the incumbent's network, and liberalization of directory enquiry services. Rules relating to price caps, accounting separation, assessment of RIOs (reference interconnect offers), publication of RIOs, objections to interconnection agreements by the OUR, and arbitration of pre-contract disputes for interconnection and wholesale arrangements have been written and are awaiting Parliamentary affirmation.

In preparation for the March 2003 commencement date for the introduction of facilities-based competition in international services, the OUR is now consulting on an array of issues relating to the interconnection of C&WJ network with that of competing international carriers, indirect access and carrier pre-selection, as well as the rules governing the international settlement rate regime within the context of a multi-carrier environment. The need for establishment of universal service obligations and the establishment of a universal service fund is the focus of forthcoming consultative documents.

Developing and maintaining regulatory competence is an ongoing activity but there is no doubt that considerable progress has been made in improving the skill and knowledge levels of regulatory personnel within the agency.

Fair Trading Commission

While liberalization has imposed significant additional regulatory burden on the FTC, the resources for institutional strengthening and capacity building have not kept pace with demand. Unlike the OUR, the FTC receives its funding from the central government and is, therefore, not insulated from the wider financial constraints affecting the central government.

The FTC's annual allocation has consistently fallen below what has been requested. For the period 1999 to 2003, the accumulated shortfall between the budgetary request by the agency and actual allotment by government amounted to J\$29.5 million. This has put a limit on the resources that the FTC can devote to telecom issues particularly in the areas of staff recruitment, training, and other forms of capacity building.

Compounding the problem, the FTC has been hampered in exercising its investigative and enforcement powers by a 2001 ruling of the local appellate court in the Jamaica Stock Exchange versus the FTC. The Appeals Court essentially ruled that the FCA, in allowing the Commission to act as both investigator and adjudicator, is acting contrary to the principles of natural justice and is therefore void. The FTC's ability to carry out its functions is thus limited until appropriate amendments are made to the FCA.

The regulatory framework set out in the Telecommunications Act envisaged close collaboration between the OUR and the FTC. However, no clear guidelines were provided as to how this should be done. In reality an informal arrangement has developed whereby the OUR is active in dealing with competitive issues in 'upstream markets' (for example, interconnection) and relies on the FTC to be vigilant over competitive practices in 'downstream markets' (predatory pricing for instance). This is appropriate as the FCA is a 'conduct'-based rather than a 'market structure'-based piece of legislation. In reality, however, both agencies recognize that upstream and downstream markets are often linked, that is, anticompetitive effects in the downstream market may be due to abuse of upstream dominance. This clearly demonstrates that in the transition to liberalized markets, the distinction between competition issues and regulatory issues is blurred. In addition, with dual and sometimes overlapping jurisdictional responsibilities between agencies, it requires diligence and cooperation to avoid 'turf wars' between agencies, or worse, that matters get ignored as each expects the other to deal with a particular problem.

Spectrum Management Authority

In an era of increasing reliance on wireless technologies, spectrum management has become more complex. The introduction of new wireless services as well as the expansion of existing services could be jeopardized if spectrum resources are not managed efficiently and effectively. This demands that stable and

adequate financial resources are available to the SMA. Although the legislators had intended the SMA to be funded by regulatory fees to be paid by users of the spectrum, the licences granted to Digicel and CDJ (Centennial Digital Jamaica) exempted both companies from contributing to the cost of running the organization. Moreover, the incumbent is exempted from paying spectrum regulatory fees during Phases I and II as a result of having contributed J\$80 million to defray the initial set-up cost of the SMA. Not surprisingly, newspaper reports have highlighted the financial problems being experienced by the SMA and the impact this has had on the agency's ability to effectively carry out its functions in managing and allocating spectrum resources.

Appeals Tribunal

Two key regulatory decisions of the OUR (the Determination Notices on Price Caps and Mobile Termination) have been appealed to the Tribunal. Although the members of the Tribunal have been appointed, the body is not yet functioning. The Act provides no guidelines for the activities of this body nor is there any direct line of accountability. In fact, the Act allows the Tribunal complete freedom to address matters under appeal. Such an arrangement draws into question the procedures that such a body should be bound by and the legitimacy of its decisions in terms of accountability. In this regard, the Tribunal has not engendered the regulatory certainty, which was envisaged by Parliament.

Mobile competition

Liberalization of the mobile market commenced with the granting of two new carrier licences for the provision of domestic mobile voice, data, and information services. These licences were awarded on the basis of auctions held in December 1999 and January 2000. The auctions were financially successful, contributing 92.5 million US dollars to the Jamaican treasury or just under 40 US dollars per capita.

Each mobile entrant uses a different technology for its mobile network: Mossel (which operates under the trade name Digicel) commenced service in April 2001 using the GSM (Global System of Mobile Communications); later that year CDJ commenced operation deploying CDMA (Code Division Multi Access); while C&WJ, who has been offering mobile services in Jamaica since 1991, employs TDMA (Time Division Multi

Access). All mobile licences are for a period of 15 years. The new entrants have a licence condition requiring a build-out of their networks to provide 90% coverage of the Island within five years of granting the licence. The mobile licences under which the C&WJ operates have no network build-out obligations.

With competition imminent, C&WJ sought to position its mobile business for the new environment. In September 1999, the company introduced 'Calling Party Pays', launched its pre-paid mobile service the following year, and reduced the price of mobile handsets, all of which made mobile services more affordable to a wider cross-section of potential customers. With these changes, by December 2000, the number of subscribers connected to the mobile network had grown to 249 842, up by 131 981 over 1999. Growth has been even more dramatic since the entry of Digicel and CDJ in the marketplace and has surpassed even the most optimistic projections. Accelerated subscribership is largely due to the immense popularity of pre-paid mobile services. As of March 2002, Digicel's share of the total subscribership (902 000) stood at 40.5%, 12.5% below that of C&WJ, with CDJ a distant third capturing a paltry 6.5% of the market share. As of August 2002, the number of mobile subscribers was estimated to be nearing a million, with a long-run forecast of potential subscribers nearing 1.7 million out of a population of 2.6 million. The number of mobile subscribers now exceeds the number of fixed-line subscribers, which was estimated to be 496 000 as of 31 March 2002.

The CDJ confined its initial network build-out to the capital city, Kingston, and surrounding environs, which limits the availability of its services and by extension, the attractiveness of its products. The Oceanic Digital Communications of the US, the minority partner in the CDJ joint venture with Centennial Corporation, recently acquired the majority interests of the CDJ and has assumed responsibility for the day-to-day management of the operation. Early signs are that the new management intends to speed up the rate of network expansion and increase product offerings.

Domestic fixed line services

Operational entry of new players in the fixed line business has not yet materialized despite the fact that 14 domestic carrier licences have been granted. It should be noted that requirements for entry into the fixed line business are minimal. Where mobile

entrants were required to pay large upfront fees for spectrum, fixed line carrier licences are only required to pay a small administrative fee (J\$25 000) for the costs of processing licence applications. And, while mobile carriers have coverage or build-out obligations no such obligations rest on fixed carriers. Thus, it could be said that an open licensing policy does not necessarily translate into committed entrants.

It may, however, be too early to predict whether and in what form competition will develop in the fixed line market. The current level of domestic prices for fixed services may provide little incentive for new entrants. Although demand for C&WJ's fixed line service continues to outstrip supply, as evidenced by a waiting list that consistently averages over 200 000, prices for local services, especially access, are considered to be below economic costs. In Jamaica, domestic access prices have been subsidized by more profitable services, particularly international traffic. However, international pressures for reducing rates for international traffic and the advent of full liberalization are lessening C&WJ's ability to rely on international revenues and increasing pressure for raising local access rates to their true economic costs. Undertaking this form of 'rebalancing' of rates, i.e. decreasing international and increasing local access charges may, in effect, provide the necessary incentive for C&WJ, as well as new entrants, to invest in the expansion of facilities and innovation of services for the fixed line market. In developing such a rebalancing strategy, consideration needs to be given to protecting residential customers who might have affordability difficulties as a result of increased basic access and usage rates.

Resale of domestic and international switched voice minutes

Forty-seven international voice service provider licences have been granted to date and of these, eleven have signed contracts with C&WJ, and seven have actually commenced service. With regard to the resale of C&WJ's domestic switched minutes, the total number of licences granted to date is twenty-six, and of this, eight have signed contracts with C&WJ, five of which are at present offering prepaid service to the general public. While resale in some jurisdictions has served as a precursor to full facility-based entry and forms of arbitrage, in Jamaica the form of resale engaged in by new entrants is geared towards the prepaid retail market. Again, it may be too early to conclude whether the

type of limited resale engaged in Jamaica is due to the legislated methodology or the type of entrant or a combination of both.

Internet access using the facilities of cable television operators

Cable television licences are issued by the Broadcasting Commission. These licences restrict the provision of services to defined geographic zones. The Internet service provider licences issued under the Telecommunications Act to CTV operators, with the exception of one, are also restricted geographically. While ten CTV operators have been issued with licences to provide access to the Internet using their CTV facilities, to date, only one company has commenced service. The geographic restriction may be a barrier to entry making it difficult for operators to achieve economies of scale in their networks. A further restriction on CTV providers of Internet services is the licence condition, which bars them from reselling capacity to Internet service providers who are not holders of CTV licences.

The net effect of these restrictions is the reinforcement of C&WJ's dominance in the supply of Internet services, especially broadband, where CTV operators could be technological competitors.

Interconnection in the competitive environment

Provisions for telecom network operators to be able to 'interconnect' is a necessary condition for competition. Interconnection enables customers to make and receive calls regardless of the network of the originating caller or that of the recipient. Interconnection arrangements involve complex engineering, economic and finance issues and for this reason interconnection matters present a challenge for regulators in all jurisdictions.

The Telecommunications Act requires the incumbent, C&WJ, to submit to the OUR an RIO (reference interconnect offer), which sets out the terms and conditions for interconnection with other public voice carriers. The legal provisions governing interconnection are contained in Part V of the Act. Dominant as well as non-dominant public voice carriers must provide interconnection on request. The RIO provides the preliminary basis for arriving at an agreement between carriers on the terms of interconnection. The OUR may assess RIOs, where the interconnecting provider is dominant, to ensure that they are in keeping with the principles and the stipulations set out in the legislation.

Where the interconnection seeker and the interconnection provider fail to agree on the terms and conditions of a proposed interconnection agreement (and the transaction involves a dominant carrier), the Office has a responsibility to arbitrate if requested by either of the parties.

The C&WJ submitted its first RIO to the OUR on 30 March 2000, albeit under confidential marking. The OUR took the position that the submission of the RIO under confidential markings would remove the document from public view, and thus relegate regulatory scrutiny of the RIO to a matter for private discussion between the OUR and the company. In keeping with the GoJ's commitment under the GATS, and the principle, '.....that a major supplier will make publicly available either its interconnection agreements or a reference interconnection offer', the OUR has pushed for making documents and the process of review a matter of public scrutiny.

The OUR faced two choices in how to respond to the RIO submitted by C&WJ. It could assess and approve the RIO either in whole or in part, or it could leave it up to the parties to negotiate and, in the event that negotiations failed, only then intervene. Of the two options, the OUR opted for the former on the grounds that the incumbent had very little incentive to conclude an interconnect agreement and thus could delay entry of mobile competitors. In assessing the RIO, the OUR indicated that its principal objective was to design a process of public consultation that was transparent and to deliver a workable outcome that was fair and equitable. To undertake this task, the OUR contracted the service of outside consultants to work in conjunction with OUR staff to investigate C&WJ's system of accounts and technical assessment of the RIO, and commissioned a study to ascertain the cost of capital to be used for setting interconnect charges. In December 2000, the Office issued its first consultative document on the RIO, setting out preliminary views on a wide range of pricing and technical issues relating to the parameters for interconnection of C&WJ's networks with that of the new mobile entrants. Written responses were provided by interested parties and all parties were given the opportunity to respond to submissions made by others. The process of written consultation was buttressed by an industry forum on RIO matters in which invitations were extended to all interested parties. Invitees to the industry forum were given the opportunity to make presentations on any issue they considered critical. Other

regulatory agencies were invited to share their experiences and knowledge on various issues. Participants included Oftel of the UK, the FCC (Federal Communications Commission), the Texas Public Utilities Commission, industry and academic experts, and consultants.

The forum was a useful platform for the exchange of ideas and allowed the OUR to test the veracity of the arguments advanced by interested parties. The exercise influenced the deliberations on the RIO and the OUR experience suggests that such a forum may be a useful means of examining controversial regulatory issues. More importantly, the pro-active stance adopted by the OUR with regard to interconnection facilitated the speedy entry of mobile players into the market.

Conclusion

Jamaica was the first of the English-speaking Caribbean Islands to embark on market liberalization and regulatory reforms in its telecommunications sector. The most significant outcome of the reform process is that the mobile market has been transformed from a monopoly to an oligopolistic structure with three players currently offering services. In keeping with international experience, the entry of new mobile operators has brought about increased investment, has contributed to modernizing the island's telecommunications infrastructure, has spurred rapid build-out of mobile networks by C&WJ and Digicel, and caused an exponential growth in mobile subscribership. Provisions for resale of C&WJ's domestic and international switched voice minutes, which has taken the form of prepaid calling cards, has provided a limited form of competition but one that has made it possible for small local entrepreneurs to enter the market.

Essential to the development of a competitive market structure is the ability of new entrants to access the incumbent's network on terms and conditions that are non-discriminatory and fair. The pro-active and transparent approach adopted by the OUR in establishing interconnection between the incumbent's fixed and mobile network with that of Digicel and CDJ is a major factor underpinning the performance of the mobile sector.

Competition in the domestic fixed line market is not yet a reality despite the granting of several licences to prospective entrants. Competition in this market segment may be stymied by the current tariff structure, which makes it financially unattractive for new entrants. A more aggressive tariff rebalancing

strategy might be needed to alter the pricing signals sufficiently to encourage network expansion by the incumbent and competing players using either wireline or wireless technologies. CTV operators are logical technological competitors for provision of Internet access but certain market characteristics and licensing restrictions may be hampering new entry in this segment. In any case, it may be too early to conclude whether correction will come with time or require regulatory remedy.

An essential element of the reform programme was the enactment of a new Telecommunications Act, and the transfer of regulatory responsibility from the political directorate to a multi-sector regulatory body, the OUR. The new regulator was endowed with a mandate to facilitate market entry and foster the development of a competitive environment for the provision of telecommunications services. The legislation provides a mechanism for funding the OUR, thereby securing the financial independence of the agency, correcting at least one shortcoming from the earlier reform period. A key element in enabling regulatory reform has been the development of a cadre of professionals capable of dealing with complex issues relating to the OUR's regulatory functions. Experience demonstrates that the OUR has made substantial progress in developing institutional capacity to meet the challenges that are characteristic of a newly liberalized environment.

Although a separate body was created for the management of the spectrum, lack of funding has impeded the agency's ability to effectively discharge its responsibilities. Financial constraints and a Court ruling of 2001 have also impeded the FTC's exercise of responsibility to investigate anti-competitive practices and vigorously enforce provisions of the Fair Competition Act.

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