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New Zealand: Testing the Limits of Nonregulation

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Of all the countries that have announced telecommunications reforms during the 1980s only New Zealand can claim to have achieved deregulation. The United States, United Kingdom, and Japan have deregulated portions of their structures, but they have also shifted regulatory burdens rather than lifting them. Cynics often claim that reregulation rather than deregulation has taken place. Not so in New Zealand.

The origins of reform in New Zealand are diverse. First, the monopoly services provider was perceived, in time, to be unsuitable and inappropriate for the domestic economy and international dynamics New Zealand has found itself dealing with in the last decades of the twentieth century. Second, these dynamics had become highly competitive. Third, strong challenges to the state monopoly were mounted by important interest groups and stakeholders—including the computer and information industries, innovative industrialists and financiers willing to break down the walls of protectionism and take competitive risks in world markets, and economists who believe a freewheeling competitive economy less burdened by social goals is best. Finally, there was a Labour Party that realized its traditional policies for advancing the well-being of New Zealanders were not working and could not work. To the surprise (and outrage) of many, it sought solutions that would work, including deregulation.

The Post Office in the twentieth century closely followed the Postal Telephone and Telegraph (PTT) model of the German Bundespost. Successive governments enlarged the social role of the Post Office by enabling and mandating that it provide a wide range of public services. The telephone, the telegraph, and the post provided social services, and banking at the Post Office was convenient, safe, and proper. No politician could successfully challenge the Post Office as the provider of the nation's basic infrastructure for trade and industry, nor its role in social integration. No one, that is, until a Labour government came to power in 1984.

The process of privatizing and selling off Telecom are discussed in Chapter

20. My concern here is with the broader sociopolitical context and what I see as some of the implications and consequences of New Zealand's liberalization.

21.1 The Challenge of Computerization

New Zealand has experienced computerization comparable to that in the United States and the major industrialized nations in Europe. There were about 140 digital computers in New Zealand, all imported, the decade after the Treasury purchased its first IBM 650 in 1960. Import licensing was already a fact of New Zealand politics, and those wishing to import computers and associated equipment had to apply to a government committee for licensing. There were over 2,000 mainframes and 13,000 personal computers in the country by 1985 (Beardon 1985). The cost of computerization to New Zealand has been higher than in many other industrialized nations because it had to use its limited foreign exchange at a time when the country was undergoing serious balance of payments problems.

21.1.1 Barriers to Increasing Productivity with Information Technology

The expectations for savings and improved productivity through computer technology were not realized as quickly or as easily during the 1980s as had been anticipated. Many firms found that they had to expand their data processing staffs, increase training, and suffer long and tedious periods of debugging. As in many other industrialized nations, software costs rose more rapidly than expected.

In a 1986 survey (Dordick 1987, pp. 94–99) the single biggest difficulty encountered in networking was given as unavailability of Post Office lines (38 percent of respondents). The Post Office did not provide alternative transmission means such as satellites, cable, or microwave, and type approval for equipment took months.

Firms also had difficulty finding qualified personnel. Almost half of the firms reported difficulty finding staff or consultants. A troublesome finding was that 62 percent of the respondents did not believe the universities could assist them in managing their information resources. Further, 79 percent did not believe researchers and consultants in the government's Department of Scientific and Industrial Research (DSIR) could assist them. While these results are similar to other industrialized nations, New Zealand appears to have suffered more because of the very rapid application of information technology in the face of very slow growth in the availability of adequate technical assistance and the inability to network distributed computers and terminals effectively.

Post Office telecommunications were among the earliest and largest users of information technology, initiating purchases of computers for billing, order taking, repair scheduling, and other operating functions in 1975, and in stored program controlled switches in the early 1980s. To increase revenues, it offered services such as videotex in the early 1980s and provided microprocessor-based

customer equipment in addition to purchasing such equipment for its own system. To provide world class services, the Post Office argued it would have to purchase this equipment overseas. The domestic industry viewed this as a threat and sought a policy to encourage development of the local industry.

Some New Zealanders were becoming concerned about dependency on multinational organizations for their best opportunities to re-establish a position in world markets. They felt if they did not develop a policy for adoption of computers, they would be dictated to at the expense of their own economic and social interests. The primary consumer of information technology, however, the Post Office, continued to go offshore. To further exacerbate matters, networking of computers among distributed locations remained difficult because the Post Office followed its own internal planning cycles and adapted only slowly to the growing demands for data communications.

21.1.2 Communications Advisory Council Studies

To resolve this issue, in 1976 the government established a commission to advise it—including broadcasting and other technical fields involved in modern communications. Following its initial report to the government in 1977, the cabinet agreed to establish a Communications Advisory Council (CAC) to serve the broad functions of formulating, coordinating, reviewing, and recommending long-term national telecommunications policies, monitoring their implications and insuring "balanced consideration of each telecommunication sector as an entity and in comparison with all others." CAC was established in 1977 and fully staffed in 1978. Members of the Council included representatives of the Post Office, the Post Office Employees Union, Air New Zealand, Bank of New Zealand, the manufacturing, agriculture, and horticultural sectors, and academics.

Beginning in 1980, CAC undertook a series of studies aimed at resolving issues raised by challengers of the existing telecommunications structure. The inquiries addressed barriers to efficient telecommunications that, if lifted, could allow manufacturers, financial institutions, and the information industry to operate more productivety and thereby compete more effectively in world markets. CAC recommendations were advisory rather than regulatory; regulatory functions for telecommunications remained with the postmaster-general acting on behalf of Parliament. CAC was disbanded in 1987.

21.1.2.1 Network Transparency

In 1980 CAC issued a report on data transfer networks and the introduction of packet switching. This established the basis for Post Office provision of data communications services and development of the packet network. It also dealt with one of the more important, perhaps the most important, question arising as a result of the convergence of telecommunications and computing technologies—how to establish the boundary between terminal equipment and the transmission network. CAC raised the issue of competitive services and the necessity for network transparency. (This is the ability of any piece of terminal

equipment to easily communicate with any other piece. A well-designed public switched telephone network is transparent.)

The council concluded that a packet-switched data transfer system was needed. The Post Office argued that it should retain its traditional role and thus provide the processing necessary to enable terminals and computers to communicate on the new network. It also favored adoption of Consultation Committee on Telephone and Telegraph (CCITT) standards, and suggested that a packet-switched data transfer system should include the conversion of digital to analog as well as analog to digital signals and that this be performed by the Post Office as the network services provider. In addition, the form of the data for presentation at the network interface was to be specified by the Post Office. The Post Office wanted to provide the data communications equipment but was willing for terminal equipment to be provided by its manufacturers, subject to type approval by the Post Office. CAC agreed with the Post Office's position; however, this required a precise delineation of the point of interface.

In keeping with international standards, an interface was defined that was dependent on the service provided. By adopting international standards X.25 and X.28 the Post Office proposed a moveable interface. By preventing any fixed definition, it preserved for itself the opportunity to provide equipment and software for network communications on both the terminal side and the network side. The Post Office also protected its historic role as sole provider of telecommunications services, as mandated by the government.

As the boundaries between computing and communicating blurred and the economics of new technologies opened the market to new entrants, questions were raised about whether monopoly provision of telecommunications was efficient and fair to resident consumers. Further, the very definition of telecommunications services was questioned. Whether in analog or digital form, it had become difficult to differentiate between communicating and computing in the transmission of information. As the cost of microprocessor-based equipment had fallen, firms traditionally not in the telecommunications business sought to enter that business, and telecommunications firms sought to enter the computer business. However, such moves are not easily accomplished.

In a submission to CAC in 1980, the Post Office announced its intent to provide ISDN services. It maintained that the Post Office was in the best position to provide the diversity of services and terminal equipment required. However, all equipment would need to pass a type approval procedure. There were immediate cries of distress from the computer and information industries. Post Office approval procedures were perceived as barriers by competitive providers. The matter came to a head in 1980 when CAC was asked to comment on the provision of a viewdata type service.

Because viewdata has usage patterns quite different from those for which the voice telephone network was designed, heavy use could overload the public switched telephone network. Videotex services, CAC recommended, would be delivered on the Post Office packet network, thereby denying access to competitive providers of enhanced networks.

CAC did not question the Post Office's monopoly transmission of videotex.

It did, however, break with traditional policies by allowing for a special tariff based on the cost of the information accessed as well as the duration of access. Further, CAC supported a strong private industry role in providing viewdata services and terminals. To this end, CAC recommended special import license and sales tax considerations for equipment (including television broadcast receivers for teletex), computers, and modems. The Post Office was to coordinate development of viewdata to insure adequate standards and efficient implementation.

CAC did not support monopoly, either public or private, in provision or control of database facilities, terminals, or information. It held that the Post Office could offer its own information services and equipment in competition with other providers of enhanced services on the public switched telephone network. This would conceivably require some form of oversight authority to insure that charges were fair.

CAC suggested that the Post Office insure the network be as transparent as possible, and that interconnect standards be required to insure consumer satisfaction. Type approval was not to be used to limit access to Post Office equipment. Long delays in obtaining approval were common still. There was consequently a relatively small equipment market. A 1985 DSIR study of the domestic electronics industry reported that communications equipment for both radio and telecommunications accounted for only 15 percent of all electronic equipment output (which also includes computers, data processing terminals, and measurement and test equipment).

The Post Office was both provider of services and the agency insuring fairness in the marketplace. The postmaster-general was expected to make sure the Post Office did not abuse this status. It was evident to almost everyone else that this was unworkable. Although several proposals were made throughout the years 1983–1986 for establishing some alternative form of regulation and a regulatory body, they were not seriously discussed.

21.1.2.2 Competitive Transmission Alternatives

In 1984 CAC examined the issue of using satellites for communications and remote sensing and touched on cable television. The council concluded that there would be major benefits in using satellites for the domestic network, especially trunk routes, network expansion, and replacement of terrestrial equipment at the end of its economic life. Further, satellites could provide services in areas inaccessible to the terrestrial network and be used to establish emergency communications. They could also be used for broadcast television. The council concluded, however, that a domestic satellite was not warranted in view of existing terrestrial services and Intelsat. It noted that, with appropriate negotiations, New Zealand could utilize Australia's AUSSAT II after its launch in the early 1990s.

CAC recommended that the government accept proposals for future satellite use and that the Post Office should provide all satellite transmission services, including television distribution. However, the Post Office would have the obligation of allowing access for small and even part-time applications.

CAC examined coaxial cable primarily as an alternative distribution system for television, but also recognized cable can be an important transmission technology for business services. It noted that fiberoptics cable would ultimately provide more economical broadband local telecommunications than twisted pair copper cable. The council concluded that it would waste national resources to have two separate networks with broadband capabilities and that the greatest economies and benefits would be achieved by integration through a single network. It therefore recommended that the Post Office construct and own any cable television network in the short term. It argued for an integrated transmission network for both telecommunication and video transmission to be provided by the Post Office, essentially supporting the Post Office's plan for ISDN.

21.2 The New Zealand Political Economy

The rapid worldwide economic growth that followed World War II especially benefited New Zealand. Strong demand for wool products helped produce a boom, and New Zealanders enjoyed one of the highest living standards in the world. Automobiles and telephones per thousand, common measures of living standards, approaching U.S. levels. GDP grew steadily at about 4 percent per year through 1973. In the words of Sinclair, "This prosperity was the all-pervasive fact in New Zealand life for the first two postwar decades; it was the dominant influence on social attitudes and on politics alike" (1984, p. 288). This was also the period during which the New Zealand welfare economy essentially achieved its goal of an egalitarian state, even though the "conservative" National Party was in power for all but three years of the 1949–1972 period.

Throughout its history New Zealand had sought to achieve a middle class standard of living without the inequities of the British colonial-era class system so many of its inhabitants had wished to leave behind. Income distribution during the 1950s and into the early 1960s showed relatively few people in the lowest income brackets and, similarly, relatively few people at the highest level. In addition, New Zealand was unique among industrialized nations in that land ownership was widely distributed and largely occurred on an owner-occupied basis. New Zealand provided womb to the grave health and welfare services, including attractive pensions.

Labour, under Norman Kirk, came to power in 1972 and set out to expand social welfare programs. Kirk was an international and social idealist whose professed goals were to re-establish the nation's position in the world, to fight what he saw as anti-Maori racism in the country, and to continue toward the goal of a social democratic egalitarian nation. New Zealanders valued their social security programs; these were among their "most treasured possessions, one of the last things they would give up" (Sinclair 1984, p. 271); however, they were losing them anyway, as the system deteriorated. Quality health services became scarcer as doctors and nurses left for higher paying positions in Australia, Canada, and the United States. The pension program was also short

of money. Kirk was not helped when the United Kingdom joined the common market in 1973. When oil prices quadrupled shortly thereafter, New Zealand's boom collapsed.

While there was a considerable diversification of export products and trading partners, the terms of trade dropped 46 percent between June 1973 and March 1974, the steepest decline since the depression of 1938. Trade surpluses turned to deficits in 1973. The current account deficit mushroomed to $NZ1.3 billion (U.S.$1.8 billion) in 1974, almost 15 percent of GNP. By 1975 external debt stood at $NZ863 million. It had almost tripled by 1978, reaching $NZ2,447 million.

To a considerable degree this debt was the result of an extraordinary trade imbalance brought on by protectionist import licensing, which had begun in 1938 during the first Labour government when New Zealand had almost exhausted its foreign currency reserves. Import controls continued during World War II and remained a major instrument of economic policy. While this coincided with the prosperity experienced from the 1950s through the early 1970s, it also contributed to a lack of incentive to innovate. Consequently during a period when foreign companies were modernizing or building new facilities, incorporating new information and telecommunications technologies, protected New Zealand manufacturers were content to continue along less innovative paths.

New Zealand lost its major export market when the United Kingdom was admitted to the European Economic Community (EEC) despite arrangements that had been negotiated to give it access to the British market for reduced exports of butter and cheese up to 1977. New Zealand was already making efforts to diversify products and markets and was not caught entirely at a disadvantage. Export sales lost to the United Kingdom were replaced by increased sales to other world markets.

In 1974 Kirk died and Labour was swept away by a National Party landslide in the 1975 elections, making Robert D. Muldoon prime minister.

In the mid- and late 1970s annual inflation averaged over 10 percent and generally was above the rates in other industrial nations. The standard of living declined as real income per capita fell by over 11 percent from 1973 to 1977. To make matters worse, many of the skilled workers needed to extricate the nation from its economic difficulties emigrated.

Because the economic climate had not encouraged innovation, there were few attractive, highly valued export products except in agriculture. To compete with less-developed countries New Zealand's farmers had to reduce their selling prices, a difficult task in a climate of high taxes and rising living costs. While productivity in agriculture is among the highest of any sector, and despite the fact farmers and horticulturists had developed new products such as the kiwi (derived from a plant introduced from China about 1906), this was not sufficient to lift the country out of its depression. No government policies had been directed toward increasing competitiveness through improvements in productivity across other sectors. Manufacturers had gotten use to being protected by high import tariffs, so they did not recognize that they had serious quality

problems and were unprepared to search for those niche markets in which New Zealand could compete.

Muldoon muddled along, and was able to win re-election in 1978 and 1981 despite continued trade deficits, inflation, and unemployment. In the late 1970s New Zealand believed it was being increasingly isolated by its traditional allies. During the Vietnam War the United States had sought support in the South Pacific but now no longer needed it to the same extent. The United Kingdom also lost interest in the region as it moved out of Singapore, Malaysia, and the Mideast, and focused on Europe. Politically and economically, New Zealand was adrift. After nine years of things not getting better, voters again turned to Labour.

21.2.1 Economic Reforms

Labour came to power in 1984 under David Lange on a platform of drastic reforms aimed at creating a more dynamic economy and a "fairer" distribution of income and wealth. "The tangled mess of economic policies we inherited had inhibited economic initiative and growth. It had created an environment of controls which left the more privileged in our society largely unaffected while penalizing the less well off," stated Finance Minister Roger Douglas. He promised his free-market oriented reforms, soon dubbed Rogernomics, would deliver higher quality services without the current high tax burden that helped weaken the economy.

In a radical departure from traditional economic management, in July 1984 the new government—in an attempt to make New Zealand products more attractive overseas—devalued the New Zealand dollar about 20 percent against the U.S. dollar, and announced on Christmas Eve that it would be allowed to float. Other dramatic shifts in the economy were initiated, including major tax revisions, increased competition, and less regulation for the banking sector, the airline system, electric utilities, and the state-owned coal mines.

Reforming the status of the many state organizations, including the Post Office, would make these organizations more accountable to Parliament and the taxpayer, Douglas asserted, and new policies on publicly supplied goods and services would make the government more responsive to the needs of those using the goods and services. The government expected business to adapt to the new economic environment, and was prepared to do so itself.

Pointing to the massive amounts of taxpayer money poured into government departments such as the Airways System, Lands and Survey Department, Forest Service, and the Post Office, Douglas argued these activities could and should be made to perform more efficiently in order to restore sustainable economic growth. In many of these enterprises roles were unclear and conflicting objectives abounded; there were burdensome controls, lack of commercial freedom, and inadequate incentive structures. Commercializing them could provide clearer objectives and incentives for growth. A vital ingredient in the commer-

cializing process was reform of the regulatory environment in order to permit real competition between state and private enterprises.

21.3 The Post Office in 1985

The Post Office Act of 1959 firmly established the Post Office as a department of state responsible under the direction of the postmaster-general for the administration of the Act and regulations pursuant to it. Through the addition of further functions dictated by changing communications technology and economic factors, the Post Office was organized under a head and district office structure. In 1985 the Post Office was the largest organization in New Zealand and carried out a central role in providing communications services domestically and internationally. Its operations were distributed among three functions: banking, postal, and telecommunications services.

Post Office operations were carried out by twenty-two postal districts and were controlled by a chief postmaster. The exception was telecommunications engineering activities, which were divided into seventeen engineering districts under the control of district and regional engineers.

Over the years the Post Office Employees Union became the largest and perhaps most powerful union in the nation. The largest number of its members were in the Telecom operation. Post Office personnel policies reflected long-standing attitudes and agreements between management and the union. Indeed, these had evolved into traditions that were difficult to change. Similar wage rates were established across the three operations. Rewards for higher level skills were difficult to obtain, and advancement was were severely limited by promotional criteria that gave more weight to seniority than skills and labor market conditions. It was not at all unusual to find two employees starting work on the same day, one in the Savings Bank and one in Telecom, receiving equal rates of pay even though, as one worker put it, ''the Savings Bank fellow was still using a pencil and paper while I learned to use a personal computer and test optical fiber networks.'' As a result, telecommunications employees were being attracted to less secure but higher paying jobs in the information industries. Despite this slow but nevertheless significant exit of skilled workers, the union made it difficult to recruit staff specialists from outside the Post Office.

There was also a long-standing joint consultative process between management and the union that was charged with resolving disputes and obtaining agreements on the introduction of new technologies. It resulted in long delays not only for the introduction of new technologies needed for improved services to customers but also for the introduction of office technologies and modern procedures in the Post Office itself. The union and middle managers were both concerned that no jobs be lost or downgraded, and if there was to be little productivity gain, senior management had little incentive to push.

Post Office telecommunications were vertically integrated. When available, equipment was purchased from local suppliers; however, it was usually purchased from foreign sources. The Post Office primarily got new technology in

the form of imported equipment, although some software was procured domestically. To a much lesser degree than overseas suppliers, the DSIR, a government department, and the domestic electronic manufacturing industry, were also sources of R&D. Close working relationships between the Post Office and its foreign suppliers enabled it to integrate its network operations and facilities.

21.3.1 The New Zealand Computer Society Position

Driven largely by the structural changes taking place in the United Kingdom, United States, and Japan that freed computer users from what they felt was the "tyranny of the telephone company," the New Zealand Computer Society (NZCS) undertook a comprehensive review of telecommunications in New Zealand in 1985. NZCS represents independent software developers, software and computer engineers in major financial institutions, firms that utilized computer assisted design and manufacturing (CAD and CAM), and computer and terminal equipment manufacturers and importers. Parallel to this effort, and encouraged by NZCS, a Telecommunications Users Group was organized. Impetus for formation came from the major computer suppliers: IBM, Unisys, Burroughs and NEC, and almost all of Telecom's major business and industry customers became members. The NZCS position paper was reviewed at its first meeting in 1986.

NZCS concluded that "with the convergence of technologies and the rapid growth in acceptance of computers, the existing policies of the New Zealand Post Office will require change in order to better suit the changing and emerging needs of new classes of users." Further, NZCS flatly stated that the regulatory and monopoly powers given the Post Office could inhibit valid and effective application of computer-related technologies. Although NZCS argued for a wide range of reforms, it did not seek to stop the Post Office from competing with private enterprise and recognized the Post Office's duty to serve the national interest. How and on what terms competition was to be achieved were the questions the society posed.

The NZCS paper raised the issue of the appropriate interface point for terminals that provide value added services and suggested a well defined point be located as far as possible into the network. On the customer premises side, NZCS argued in favor of free and open competition in provision of terminals and software designed to facilitate computer-to-computer communications. This was to preclude the Post Office from involvement in setting of specifications for network protocols, which NZCS felt should be left to terminal, computer, and other equipment manufacturers and software designers.

Other recommendations were that users have more freedom of choice in equipment and protocols required to interconnect equipment, and that they be permitted to interconnect in geographically dispersed offices as well as with suppliers and consultants with whom they do business. Further, users should be allowed to encrypt and be permitted to provide value added services on their own communications and on the public switched network with payment of access fees to the Post Office.

The paper went on to argue that the Post Office should continue to provide a full range of high-level transmission services and should not compete unfairly with independent providers of value added services, customer premises equipment, and specialized transmission services. Finally, NZCS recommended that the government insure equity in the provision of basic services and that its decisions concerning rates and service levels be open to public discussion.

Many top executives of the Post Office criticized the NZCS paper. Favorable references to liberalization in the United States came under particularly vehement attack because of a purported lack of concern for universal service and other social values. In fact, NZCS had accepted that the New Zealand policy of wide free-calling areas and rural areas served by party lines had become part of the New Zealand way of life. Where subsidies occurred for social reasons, NZCS held that they should be made explicit and that there should be public representation in such decisions.

21.4 Rogernomics and Public Sector Reform

The New Zealand Planning Council had begun to examine the public sector in 1983. Their reports questioned the monopoly status of its enterprises, so there was already a broad feeling that it was time to re-examine original assumptions and earlier decisions when Labour took up the call.

The Council noted that despite widespread desire to maintain strong government monopolies, restructuring in the public sector had been underway for some time. Government corporations with some private board members that operated in a commercial fashion already existed. For example, New Zealand Railways had been corporatized in 1979; Air New Zealand was competing internationally and domestically; and the Hotel Corporation of New Zealand had aggressively competed with privately owned hotels to become a leader in upgrading the tourist industry—all before the Planning Council began to examine the public sector in 1983. The climate for a radical revision of the government enterprise structure was already established—such as asking why the government had to be aggressively competing in the hotel business.

Four options for competition in telecommunications were available to the government before deregulation began.

1. Remove the legislative barriers to competition in all network services and permit a free market subject to the constraints of the Commerce Act
2. Permit a free market in all network services based on interconnection arrangements favoring new entrants for an initial period, much as the FCC dealt with new entrants in the U.S. long-distance market
3. Allow Telecom to retain its monopoly of all facilities, but permit the resale of leased lines in competition with Telecom and permit attachment of switching and other electronics to these lines so competitors can build public networks using Telecom's main facilities; bypass and free

encouraging the development of competition remains to be seen. Litigants might find it difficult to prove Telecom (or any other firm) has acted anticompetitively. The threat of litigation, however, and the consequences of losing might inhibit Telecom from acting in a manner that could bring suits—which is what is intended. A potential entrant might seek a preemptive injunction against Telecom; then, if the injunction is granted, and Telecom ignores it, Telecom is exposed to the risk of unlimited fines and damages.

21.4.2 The State-Owned Enterprises Act 1986

The SOE Act provided for the creation of nine new state-owned enterprises (SOEs) (including the three from the Post Office) from six government departments on April 1, 1987. Each SOE was to be established as a limited liability company under the Companies Act 1955, with capitalization based on an agreed valuation of the assets, and an appropriate debt to equity ratio. A board of directors would be appointed by the government and the shares would be held by two cabinet ministers. The Act set the following objectives for each SOE:

1. To operate a successful business, but being as profitable and efficient as comparable private sector businesses.
2. To be a good employer.
3. To exercise a sense of social responsibility.

The Act imposed an accountability framework on each SOE to the ministers, and on the ministers to Parliament. The board and the shareholding ministers must establish a statement of corporate intent each year that specifies the information to be disclosed by the corporation—including its objectives, nature and scope of activities—and financial performance targets for the current and next two years. In addition, SOEs remain subject to auditing by the controller and auditor-general, the requirements of the Ombudsmen Act 1975, and the Official Information Act 1982.

SOEs such as the newly formed Telecom should enjoy "competitive neutrality" (e.g., as far as possible, they should be subject to the same regulatory and tax regime as comparable companies in the private sector). Some specific exceptions from competitive neutrality were permitted for Telecom. The most important is the monopoly right to operate a telecommunications network, as provided by the Post Office Act of 1959. This right was transferred to Telecom for the period April 1 to December 31, 1987. Telecom's monopoly was not universal, as a number of private networks existed—including ones for banks, insurance companies, department stores, libraries, and Fletcher Challenge (one of the country's largest conglomerates).

These networks were legislatively permitted because many of the organizations concerned were Crown corporations and thus not bound by the Post Office Act; their lines are situated on their own land or were negotiated as private licensed lines with the Post Office.

21.4.3 The Path to Deregulation

The Telecommunications Act (July) 1987 effected most of the Mason–Morris recommendations. Postal services, telecommunications, and banking each became independent entities. Regulatory activities such as spectrum management was assigned to the Radio Regulatory Service, which was transferred from the Post Office to the Department of Trade and Industry. Finance Minister Roger Douglas noted that there was a tremendous demand for a skilled telecommunications staff and that they were being bid away by the private sector. A Post Office with commercial objectives and services in a competitive market would remedy this situation.

The Act maintains the prohibition against competition with Telecom in network services, except for previously licensed private or leased networks and transmission facilities on private property and established a timetable for competition that envisioned completion of the process by April 1989.

Following re-election of the Labour government in 1987, the consulting firm of Touche Ross was engaged to study telecommunications in New Zealand, working closely with Telecom, users, and potential competitors. Touche Ross examined Telecom's operations, its cost and pricing structure, the cost structure of the industry, and the markets for network services. Among other things, Touche Ross concluded that competition with Telecom's network is feasible and desirable. In light of this, SOE Minister Richard Prebble announced that the government was reviewing Telecom's monopoly and that Telecom's board had developed "goals and implementation strategies which it believes can only be attained in a fully deregulated environment."

In late 1987 Prebble announced that legislation would be introduced in early 1988 to permit competition in network services by late 1988 or early 1989. At the same time, ministerial responsibility for Telecom was transferred and placed with the other SOEs under Prebble, who had long argued for a more open and competitive industrial climate for New Zealand. Prebble's announcement reflected government policies toward SOEs: They were to be placed in a competitively neutral position, should not be hindered by government-imposed disadvantages such as employment rules, and should not benefit from special advantages or privileges given by the government. The Telecommunications Amendment Act (December) 1988 was the result.

Premise wiring, telex equipment, telephone sets, cabling for PABX equipment, the telex, and the line side of telephone network were deregulated by April 1989. The trunk side of the network, including mobile telephone and paging, were deregulated in July 1989. Deregulation was rapid, on schedule, and proceeded without delays.

21.4.4 Privatization of Telecommunications

By 1989 the government had sold the Post Office Savings Bank, Air New Zealand, the Forestery Corporation, the national oil company, a synthetic fuel plant, and a steel mill. The sell-off reduced overseas debt, and the government

maintained that long-run benefits would accrue to the economy from the more efficient operation of these concerns as private firms.

The initial steps toward telecommunications deregulation were taken in April 1987 and the final steps came in April 1989; therefore, the entire process took some twenty-four months. In that time, telecommunications in New Zealand were transformed from a traditional government PTT monopoly to the most deregulated system in any developed nation. The government's objective was to sell Telecom for the highest possible price; little or no thought was given other goals, such as promoting wide shareholding or selling shares to employees.

21.5 Social Costs of Economic Success

From the government of Vogel, who instituted compulsory free education for Maoris and whites in 1876, through Dick Seedon's 1890s social legislation, down to Muldoon's 1975 promise to raise pensions, New Zealand had been known as a model egalitarian society with extensive government-provided services. As a result of the associated costs, the country was near bankruptcy by 1983 and the old joke that capitalist countries share the wealth unequally while communist ones share the poverty equally looked like it might need to be modified to fit New Zealand.

The Labour government that came to power in 1984 had a clear mandate to take drastic steps to reverse the falling fortunes of the nation. The resulting economic success has had social costs. The rapidity of the reforms led to what were called "speed wobbles." Interest rates over 20 percent (the high was 26 percent) and an inflation rate well over 10 percent persisted from 1987 through the early months of 1988 despite the floating of the New Zealand dollar and reductions in the trade deficit. Professional and skilled workers continued to emigrate to Australia, the United States, and the United Kingdom.

Toward the end of 1988 prime minister Lange found himself under pressure to slow the rate of economic change. Inflation had been brought down to 4–5 percent, but at a cost in unemployment of more than 10 percent, the highest level in the nation's history. Interest rates had also fallen, but still hovered around 13 percent. The budget was balanced and there was a small trade surplus. Crime, however, was increasing and unemployment was about 25 percent among minority groups, primarily Maoris and Polynesians. Maori unemployment led to increasing demands from them for reexamination of provisions of the 1840 Treaty of Waitangi (whereby New Zealand became a British colony) which the Maori and their supporters argue are not being respected.

While Lange and Douglas agreed on the restructuring of the economy, they could not agree on social policy. The prime minister was unwilling to further reduce expenditures on health, education, and welfare, while Douglas believed that not doing so would slow down the rate of change and that, once momentum was lost, it could not be recaptured. Prebble agreed with Douglas, and Lange first dismissed Prebble and then Douglas from his cabinet in late 1988.

David Caygill became the new finance minister and promised to continue the economic policies of his predecessor. Nevertheless, it became clear that economic reform was going to slow while the social consequences were considered (see Pinfield 1987 and Royal Commission on Social Policy 1988).

It was fairly clear that simply exploiting New Zealand's natural resources could no longer subsidize high living standards even for a population of 3.3 million; therefore, people were simply going to have to work harder. A large part of Labour's traditional constituencies were finding out the personal short-term costs of a competitive society were likely to be large long-run costs, and they did not like it. Labour Party infighting led to Lange's replacement by Geoffrey Palmer as prime minister in August 1989.

21.6 Testing the Limits

New Zealand wants to achieve its goals in a manner that is unique to New Zealand, in a cooperative rather than an adversarial manner. Unlike other nations, it is experimenting with a nonregulatory process. New Zealand wants to avoid a system of regulated competition and thus seeks to let the marketplace set fair prices, control market entry and exit, and otherwise perform all of the tasks traditionally undertaken by regulation in the United States and United Kingdom.

If the market does not work, regulation will be added back, preferably in very small doses. This is in marked contrast with liberalization in the United States, the United Kingdom, and Japan, where regulations are removed if it appears the market for a specific service has emerged as a competitive one. A mix of regulatory authorities has been overseeing this process. In the United States, these are the Federal Communications Commission, state regulatory commissions, the Antitrust Division of the Justice Department, and the courts. The United Kingdom has the Office of Telecommunications (OFTEL), the British version of the Commerce Act, and one or more parliamentary offices. In Japan the Ministry of Posts and Telegraph and the Ministry of International Trade and Industry (MITI), as well as the Diet, have a role.

Policymakers in New Zealand concluded that the U.S. model is expensive and inflammatory and does not suit the country's parliamentary structure, while OFTEL, even with a staff of just 150, is expensive and does not have sufficient experience to be taken seriously. They believe New Zealand courts, acting through the Commerce Act, will insure competition through the "essential facilities" legal principle, which asserts that owners of essential facilities cannot deny new entrants fair and reasonable access on grounds of competitive advantage.

A precedent was set when the High Court ruled that the Auckland Regional Authority could not deny a rental car firm access to the airport. The judge noted that the essential facilities doctrine had been widely applied to telecommunications in the United States, clearly referring to the common carrier principle

that was the basis of telecommunications regulation. This was a clear warning to New Zealand Telecom.

The telecommunications market is a complex one both in terms of technology as well as in how costs of services are determined, how costs are allocated between local and long-distance services, and how these services are priced. Whether access to the network by competitive service providers is to be priced on the basis of incremental costs or on the basis of fully distributed costs must be determined. The Commerce Act and the courts alone may not be sufficient to keep the cost of regulatory oversight low, to avoid engaging in the adversarial activities New Zealanders see as unseemly in the United States or in the United Kingdom, and to achieve the competitive market in telecommunications that New Zealand wants.

Backstopping faith in the market and the courts is the Commerce Commission. As now constituted, however, the Commission is not geared to deal with the complexities of telecommunications regulation; its members are concerned with all aspects of fairness in all the newly liberalized markets. These include electricity, domestic air travel, railway service, and petroleum distribution. There are no carefully crafted procedures for determining the extent of competition that exists in certain markets and, inversely, fully determining if anticompetitive practices are occurring. There appears to be no formal oversight proceedings currently in place. Thus, how well the New Zealand approach works depends in part on the Commission's staffing.

21.6.1 Whither Telecom?

The threat of competitive entry could force Telecom to bring its prices closer to costs for those segments of its business where commercial entry is feasible. This is initially likely to be in long-distance, international calling and high-speed data networks. Touche Ross estimated that in a liberalized market over a two- to three-year period toll prices could be expected to fall by about 50 percent in real terms, leased lines by about 40 percent, and international calls by 25 percent. Lower prices are expected to increase demand. Data just after deregulation showed the number of long-distance calls rising sufficiently that revenue increases can be expected. As in the United States, the share of the long-distance market for new entrants will not be large and Telecom is likely to maintain a dominant position.

Finland had a reasonably comparable economy but twice the productivity of Telecom, measured in access lines per full-time equivalent employee, in 1985. There is thus presumably some room for increased productivity and consequent significant decreases in Telecom's costs.

There is concern over the fate of the cross subsidy from long-distance to local services. Based on Touche Ross' allocation of Telecom's network costs between long-distance and local calls, the price of local calls is far below the full costs of providing the services, just as toll costs are above full costs. Telecom does not agree with this, claiming that cost recovery from local calls is not far below full cost, but toll costs may still have to provide a subsidy to

residences in any case, especially to rural subscribers. Residential prices have not been increased in real terms (although they have in nominal terms), but residential customers, both urban and rural, may not be sharing in the productivity improvements and lower costs created by the digitalization of the network and staff reductions at Telecom.

21.6.2 Prospects

New competitors have found it difficult to enter the United States, United Kingdom, and Japanese markets without explicit regulatory assistance by government. There have been no efforts by the New Zealand government to stimulate competition, as has been done in the United States and United Kingdom. Indeed, Telecom's revenue is likely to be greater than estimated by Telecom's analysts, thereby making entry even more difficult. Telecom will remain the dominant provider. As has been learned in the United Kingdom and in the United States, a monopoly provider of essential services is not easily displaced by new competitors.

Difficulty in plugging into the Telecom network is the main anticompetitive activity new entrants could face. There are two approaches in dealing with this problem: one is to rely on the Commerce Act to force Telecom to interconnect; the other is to draft comprehensive regulations so all entrants know just what interconnection conditions and terms apply. The ideal might be a mixture of the two, as it is difficult to believe Telecom will allow new entrants unobstructed access without some sort of resistance. Telecom might volunteer interconnection standards, and the Commerce Act would provide legal redress. If Telecom were to obstruct a new entrant by either unfair or unreasonable pricing or by restricting interconnection information, the Commerce Act and the courts could, as a last resort, set prices and other conditions for competitive entry.

Telecom's interconnection policy appears reasonable. For example, should a competing firm wish to offer long-distance toll service between Wellington and Auckland and use Telecom's local network in both cities for origination and termination, Telecom will charge the competing company the same interconnect charges as it would charge any business phone or PBX to connect to the system. The competing company would pay a low monthly fixed charge at each end of its circuit and a charge per minute for each call terminated or originated on Telecom's local networks in the two cities. There is a small fee for extra programming charges, but no other up-front charges.

Although these technical matters are important, competition will emerge only if there is sufficient growth in demand for its products and services. This depends on significant growth in other sectors of the economy.

Telecom promised to provide equal or nondiscriminatory installation and repair services to competing networks, a matter now being tested in the courts, as is the ability of the Commerce Act to deal with such issues and, further, if New Zealand can continue a policy of nonregulation.

The arguments for liberalization that have been set forth by consultants and by government economists draw heavily on the experiences in the United King-

dom and the United States. However, such comparisons must be made with extreme care. It is not simply that New Zealand is much smaller, but also that its economy has not been an expanding or particularly vibrant one. It has only been since the early 1980s that the nation has begun to confront the fact it can no longer be the egalitarian society it was and that it cannot provide a high standard of living with a protectionist economic policy. Although "speed wobbles" toppled the reform wing of the Labour government in 1989 and helped bring the National Party to power in October 1990, the need for society-wide reforms has come to be accepted.

There is evidence that Telecom's operations can be more efficient through better management, changes in labor practices, and continued application of new technologies. Its costs can thus remain essentially the same or even fall in the face of sustainable competition. A liberalized market where competitive entry is possible clearly allows the limits of natural monopoly to be tested continually and in ways that regulators may not be able to foresee.

Natural monopoly has been dismissed as a basis for communications policy. The question of how to regulate the new communication infrastructure has been answered with *minimally*—indeed, with a policy on nonregulation. The Labour government that began the process said it was "testing the limits of nonregulation" and that has been the case.

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