

Network Governance in Malaysia's Telecommunications Industry

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Abstract

The focus of this study is on the liberalization of the telecommunications industry, especially the mobile phone sector and the emerging network governance structure in the mobile phone sector. From being a monopoly of the government, telecommunications services are now being provided by a number of government linked privatized firms, private firms and a foreign firm with Malaysian partners. In the mobile phone market there are currently three firms that are competing for market share. However, there is a close connection between the firms because current government officers or retired government officers sit on the board of all four firms. An independent regulator, the Malaysian Communication and Multimedia Commission (MCMC) has been set up to facilitate and coordinate competition among the mobile phone firms and to ensure the efficient diffusion of accurate information. The elite connection between members of the board of the five firms and members of the MCMC, who are from the government and the private sector, also facilitates the flow of resources between the members of the network and the interconnection of services between the firms. The MCMC is also required to hold public hearings before making decisions and recommendations to the Minister and this allows for the participation of civil society groups in the policy making process. The private sector has also been empowered as it is free to set rates and negotiate interconnection charges. This article argues that the mode of governance has changed from the command and control type of governance to one which calls for partnership and networking between the main actors in the sector, which includes the state, the government linked firms and local and foreign firms and the public. This article also argues that the emerging network governance structure is different from the liberal governance and the emergence of network governance has been responsible for the rapid growth of the mobile phone market in Malaysia.

Network Governance in Malaysia's Telecommunications Sector

I. Introduction

The provision of telephony services was considered a public monopoly in Malaysia until the mid 1980s when the Malaysia Incorporated policy was announced by the Prime Minister and the Privatization Act was passed by the Malaysian Parliament. Privatization followed in the heels of a liberalization policy because of the need to open the economy to foreign investment and technology, especially Foreign Direct investment (FDI) and Foreign Portfolio Investment (FPI) to generate exports and create employment and to provide the enabling environment for attracting foreign investment into the equities market, especially after the relatively deep economic recession of 1985-86. Prior to privatization and technological changes in the industry, the public provision of telephony services had increased transaction costs or the costs of doing business because of the long delays in getting a fixed line. Until 1984, only fixed line analogue services were available and the new digital and mobile phone technology demanded by multinational corporations, foreign banks and hedge fund managers was not available in Malaysia. The public monopoly was also seen as not responding to the demands of industry.

To reduce transactions costs the government privatized the public monopoly that is the Department of Telecommunications to enable the privatized monopoly to raise funds in the capital market to finance investments in new technology in the telecommunications sector, for example, the laying of optic fiber cables. The regulatory framework was also very gradually changed from the authoritarian and hierarchical command and control approach to one where an independent regulatory authority was set up that was made accountable to all stakeholders in the industry. The stakeholders were also empowered to provide inputs into the policy making process to increase the legitimacy of the new independent regulator. The interconnectedness and mutual interdependence of the stakeholders to reduce costs and achieve outputs also indicated that a new form of network governance had evolved where it was considered that without the active participation and cooperation of all stakeholders the system might not work efficiently and might not be sustainable. The new form of governance emphasized partnership and network transactions with global firms and the local public and private sectors and civil society groups and the public at large. The state and firms cooperated to develop the mobile market.

The role of the state changed from being the provider and regulator of telecommunications services to being the policy maker. The function of regulation was delegated to an autonomous body that was made more responsive to society and the providers of the mobile service. The providers now included privatized entities and private sector firms both domestic and foreign. While the government promoted private ownership and market competition to increase efficiency and reduce cost, it adopted a governance framework that departed from the US model of liberal governance based on the functioning of free markets. The government still maintained an equity interest in some of the mobile companies and the firms had an incentive to network and form partnerships because of technological interdependence.

II. Theories of Governance

The regulation of telecommunications services in Malaysia was performed by a government department. In fact until the privatization of telecommunications services in 1987, a government department, Jabatan Telekom Malaysia both provided telecommunications services and acted as the regulator. The department was embedded within the hierarchical government bureaucracy of Malaysia. It was thought at that time that the provision of telecommunications services was only possible on the basis of strong state institutions. However, the statist approach to the provision of public service was replaced by a governance approach based on market driven models. The new public management that was based on market models followed closely the neo-liberal prescriptions on how public services should be delivered. The market models argued persuasively that the private provision of public services was more efficient. However, it was soon discovered that in some industries that the pure bureaucratic or market model was inappropriate for allocating scarce resources as there was a need for coordination between the state and non-state institutions to allocate scarce resources. Hence the term network governance to describe the interaction and partnership between the state and non-state agents in decision making and implementation arrangements. The necessity for networking has also risen as a result of rapid technological changes which necessitated information sharing between all stakeholders in the industry. While governments are able to coordinate economic activities in a stable environment and the market promotes competition, rapid technological changes require partnership between the state and other stakeholders to promote competition, cooperation and information sharing to ensure the reduction of transaction costs and to increase efficiency. Hence network governance rather than the market or the government bureaucracy has become the mechanism for providing and regulating the mobile phone industry in Malaysia.

III. Privatization and the Evolution of the Telecommunications Sector in Malaysia

In the mid 1980s when the economy went through a recession because of the collapse of commodity prices and the large fiscal deficit the government adopted the Structural Adjustment Program (SAP) promoted by the World Bank and passed the Promotion of Investment Act 1986 to encourage foreign investment in various sectors of the economy. The government also adopted the Reagan-Thatcher doctrine and the recommendations of the Washington Consensus and privatized several public enterprises to reduce the Public Sector Borrowing Requirements and for the privatized entities to compete in the financial and capital markets for financing of new investments. The theory that guided them was the Coase theorem which argued that if there was a market where assets could be bought and sold and property rights were well defined and transaction costs were zero or near zero then resources will flow to their most valued users. The owners of property rights should also be secure in the belief that there would exist an independent judiciary that would protect their property rights

As noted earlier, the liberalization of the telecommunications sector was caused by external competitive factors and technological developments. Because other countries in the ASEAN region that were competing for foreign investment were investing in new technology and opening their markets to foreign telecommunications corporations Malaysia had to liberalize the domestic telecommunications industry to remain competitive in attracting foreign investment and generating exports. Malaysia opted to privatize the existing public telecommunications department and open the market to multiple providers and establish a new independent regulatory regime under an Act of the Malaysian Parliament.

Before the liberalization of the telecommunications sector in 1992, a government agency, that is, the Jabatan Telekom Malaysia (JTM) or the Telecommunications Department Malaysia was the sole provider of fixed line and mobile phone services in Malaysia. It also acted as the regulator of the industry and set rates based largely on historical costs. There was no incentive to introduce new technology or increase efficiency as there was no competition. In 1984, the first mobile phone, that is, ATUR was introduced by JTM and as a consequence the JTM had a monopoly over the provision of both fixed line and mobile phone services. In 1987 the JTM was corporatized under the National Corporatization Policy and its name was changed to Syarikat Telekom Malaysia Berhad (STMB) or Malaysian Telecom Corporation Limited to indicate that it was no longer a government department but a private firm although wholly owned by the government. In 1988 the STMB set up the first mobile phone company, STM Cellular Communications, to provide GSM mobile services.

In 1990, STMB became Telekom Malaysia Berhad (TMB), after it was privatized and listed in the Kuala Lumpur Stock Exchange. As a result of the listing the government sold 25% of STM's equity to the public and retained 75% of the equity in TMB. The government also owns a single unit "golden share" that entitles it to veto on major decisions that have national interest implications

In 1992 STM Cellular Communications was sold to a private corporation, that is, TRI and was renamed Celcom. Between 1992 and 1995 there were only two providers of mobile phone services that is Celcom and TM. In the early and mid-1990s, TM's advantage was its effective monopoly over fixed line services, including broadband and internet access services but this has also been its weakness as there is little pressure from domestic competitors to innovate.

In 1995, the mobile market was opened to other private sector participants. Celcom upgraded its services to GSM 900 services. Celcom was the largest mobile phone company when the market was opened up and added mobile wireless licenses were issued (see Table 1). According "to one source, licenses for paging, cellular mobile, telephone call boxes, satellite communications, value added services and fixed line networks were issued, albeit in a largely opaque manner. Requests for licenses frequently by-passed the Jabatan Telekom Malaysia or JTM (Department of Telecommunications) under the MEPT, going directly to the PM's Office, with the JTM periodically not informed of licensing decisions until after the fact. Many notable political allies and

personal associates of UMNO’s leadership were successful at obtaining licenses” (Ken Zita, Malaysia Telekom Brief, p.6 http://www.ndaventures.com/Malaysia_Telecom_brief_pdf)

Table 1: Mobile Phone Companies in 1995

Name of Mobile Phone Company	Parent Company	Type of Cellular Phone License
Mobikom	Telekom Malaysia joint venture With Sapura Holdings	800 MHz GSM1800
Celcom	Technology Resources Industries	900 MHz
Maxis	Binariang	900 MHz
Mutiara Swisscom	Berjaya	900MHz
Sapura Digital	Sapura Holdings	GSM1800
Time Wireless	Time Engineering	GSM1800

(Ken Zita, Malaysia Telekom Brief, p.6. http://www.ndaventures.com/Malaysia_Telecom_brief_pdf)

The financial crisis of 1997 resulted in the insolvency of several of the mobile phone operators. In view of the impending liberalization of the sector under Malaysia’s commitment to the WTO, the government encouraged the merger of the mobile phone companies. As a result of the restructuring and merger exercise, three service providers emerged; Telekom Malaysia, Maxis and Telenor. Telekom Malaysia acquired Time.dotcom and Celcom. Maxis acquired TimeCel and Telenor increased its minority position in DiGi to effective control. Each consolidated mobile operator has its own trunk networks and international gateway.

After the 1997 financial crisis, the government also enacted two new pieces of legislation that is the Communications and Multimedia Act, 1998 and the Malaysian Communications and Multimedia Commission Act 1998 to promote and regulate the telecommunications industry in Malaysia.

IV. Creating a New Regulatory Structure

In drafting the new pieces of legislation, the Malaysian government had to depart from the existing command and control type of regulation because it had to liberalize the sector as a result of technological developments in telecommunications and pressure from membership of the World Trade Organizations, which it joined in 1996. The government also did not opt for the liberal type of governance although the prescription of the Washington Consensus was then that the regulatory regime that the government should create for privatized entities and markets for assets should be consistent with the neo classical market model or liberal governance. However, due to the nature of the technology and the industry where there is need for cooperation, for example, interconnection between fixed lines and mobile phones, it is difficult to implement neo liberal governance and the statist type of control will inhibit technological innovations and competition. What has emerged, we will argue is a network type of governance where there is competition, coordination and information sharing among competitors and the activities are regulated by a centralized agency that is responsible and accountable to the Minister of Energy, and Communications.

The Communications and Multimedia Act 1998 set up the new regulatory agency, that is the Malaysian Communication and Multimedia Commission and provided the broad framework as to how the sector would be promoted, regulated and developed. The second piece of legislation, that is, the Malaysian Communications and Multimedia Commission Act 1998 gave the broad outline as to how the new so called independent regulatory agency would operate. It will be argued that the new regulatory framework was not neo-liberal or statist in ideology and it had both centralized and decentralized features and depended on partnership and networking between the state, the regulators, the firms providing the service, civil society groups, the society at large, regional and multilateral institutions, foreign governments and multinational, foreign and domestic corporations.

It should also be pointed out that the government initiated the move to set up a more open regulatory environment to promote competition because of pressure to implement competition laws in the ASEAN region. After the crisis, the IMF had insisted on competition law being introduced in Thailand and Indonesia as part of the conditionality for bailing out the two countries. After the crisis, the US government put pressure on Singapore and Vietnam to implement competition policy and law as part of the conditionality for signing the Free Trade Agreements. Malaysia is under similar pressure currently to implement competition policy and law as its FTA with the USA is stalled.

V. The Regulator – Malaysian Communications and Multimedia Commission (MCMC)

The MCMC was set up under the Communications and Multimedia Act of 1998. The Act is based on the following principles: (i) transparency and clarity; (ii) more competition and less regulation; (iii) bias towards generic rules; (iv) regulatory forbearance; (v) emphasis on process rather than content; (vi) administrative and sector transparency; and (vii) industry self-regulation. The MCMC regulates not only the telephony sector (which includes mobile phones) but also the broadband sector.

Although the power to approve spectrum licenses rests with the Minister, he is expected to consider the published advice of the MCMC and the Minister has to give reasons for his decisions. The MCMC is required to have public consultations on the issuance of licenses before giving advice to the Minister.

The MCMC comprises of government appointed neutral commissioners. The composition of the board is : (i) Chairman ; (ii) 1 government representative and (iii) 2 to 5 other members. The current chairman is the former head of the Ministry of Science, Technology and Innovation. The two government representatives are the current heads of the Ministries of Science, Technology and Innovation and Energy, Water and Communications. The Minister, the MCMC advises is the Minister of Energy, Water and Communications. The other three members are from the private sector but with strong

previous links to the government. One of them was an economic planner in the Malaysian government and is currently a member of several private sector boards of directors. A second private sector representative is the head of a rating agency that rates corporate bonds but was previously a senior official of the Central Bank of Malaysia. The third private sector member of the board was formerly an employee of MCMC. It is obvious that all six members of the board have strong current links or past links with the government.

The major mobile companies in Malaysia are Maxis, Celcom, Digi, TimedotCom and TM. Of the five, three (that is, Celcom, TimedotCom and TM) are offshoots from Telekom Malaysia, which was originally a government department and which has been privatized and listed in the Kuala Lumpur Stock Exchange or Bursa Malaysia. The Directors of these three companies, that is, Celcom, TimedotCom and TM have strong links to Telekom Malaysia and the Government of Malaysia. In the case of Maxis and DiGi they also have been judicious in appointing former senior government officials and officials of the fixed line monopoly, that is, Telekom Malaysia to sit on their board. This is to reduce their transaction costs when dealing with the regulator or the Minister.

VI. Industrial Policy and Foreign Entry Barriers

Malaysia has had a nationalistic and closely managed industrial policy for telecommunications and information that was slowly liberalized in the early 1990s to allow for foreign firms to enter the market. However, although network services were liberalized after Telekom Malaysia was privatized and listed in the Kuala Lumpur Stock Exchange (now known as Bursa Malaysia), the market framework that was created did not favor easy entry and exit. It was felt that licenses would only be given to companies that were close to the Prime Minister and the political party in power. This was to protect the strategic national security interests of the country in telecommunications and information. There was no clear regulatory regime and there were restrictions on the entry of foreign companies and government policy was targeted to protect the monopoly status of the state controlled network provider, that is, Telekom Malaysia.

Although the Promotion of Investment Act 1986 encouraged investments in the labour intensive manufacturing sector, the employment advantage was not seen in the telecommunications sector. It was only after the Vision 2020 statement was announced by the Government to transform the Malaysian economy to an advanced industrial economy was there a great deal of interest shown in attracting foreign investments in the telecommunications sector. Foreign investments in fixed line and telecommunications companies were encouraged but were capped at 30 percent.

During the financial crisis period in 1997-1998, however, the foreign ownership limit was temporarily relaxed, first to 49% in February 1998 and even up to 61% in April 1998 (on a case-by-case basis, provided the funds used to purchase these stakes came from abroad) subject to bringing the limit back down to 30% once the crisis was over. By 2001, however, the foreign ownership of three of the major operators had come back down: Maxis (only 33% owned by British Telecom), Celcom (only

21% by Deutsche Telekom AG) and DiGi (only 30% by Telenor International AS) all with shareholdings far below their 1998 highs. There is now a 30% limit on foreign participation in all future domestic telecommunications companies. This is consistent with Malaysia's commitment in Mode 3 under the Agreement on Basic Telecommunications under the World Trade Organization that Malaysia is a member of.

Table 2: Foreign Ownership in the Malaysian Mobile Phone Sector, 2007

Name of Company	Foreign Ownership
Maxis	33 % by British Telekom
Celcom	21% by Deutsche Telekom AG
DiGi	30% by Telenor International AS
Telekom Malaysia	5% by Singapore Government

Source: Financial Statements of Companies

Still, market structure and the role of foreign investment in the sector will be important issues in the future. With the third generation cellular technology (3G) on the horizon, the industry will require additional infusion of funds. With most operators being heavily indebted and the industry facing diminished foreign participation, technological diffusion in the sector may be delayed.

VII. Empowering the Private Sector

The entry of new private firms into the mobile phone sector was due to the realization that state run monopolies would not be able to satisfy the demand for telephone service given the in-built inertia to innovate and to reduce costs and increase efficiency. This is clearly reflected in the ease with which the private mobile phone companies were able to eat into the market shares of the public provider of mobile services. In 2000, for example, the combined market share of the government linked mobile phone providers was 69% instead of the 100% before the entry of the private firms into the market. In other words within a short span of five years the private companies were able to capture more than 30% of the market from Telekom Malaysia, which had traditionally a monopoly over the market for mobile phone services.

Table 3: Market Shares of Mobile Phone Companies, 2007

Name of Company	Market Share (%)
Celcom	32
TM Touch	17
TimedotCom	5
Mobikom	5
Maxis	24
DiGi	17

Source: Malaysian Communications and Multimedia Commission

The growth in the market shares also was brought about by fierce competition by the mobile operators as they were able to set their own rates and negotiate cost based interconnection rates with Telekom Malaysia, which held a monopoly over fixed lines in Malaysia. The power to set their own rates within limits and negotiate cost based interconnection agreements with the fixed line monopoly was outlined in the General Framework for Interconnection and Access (GFIA), 1996 and also the Malaysian Communication and Multimedia Act 1998 and the Malaysian Communication and Multimedia Commission Act 1998.

Interconnection

In the early days of competition among the mobile phone companies and between the mobile phone companies and the fixed line monopoly, that is, Telekom Malaysia, there was no formal agreement governing interconnection. From 1990, interim agreements were reached. For example, the original agreement between Celcom and Telekom Malaysia Berhad (TMB) was based on revenue sharing and was not cost based. There was also no operational guidelines and principles to govern interconnection and access. It was only after the GFIA was released in 1996 were the operational guidelines and principles to govern the interconnection and access between telecom networks in Malaysia clearly laid out. The GFIA emphasizes clarity, stability and transparency in interconnection relationships between network operators in order to ensure that end users enjoy the full benefits of competition, including choice, convenience and a variety of high quality services at the lowest possible cost. The emphasis of the GFIA is upon commercial negotiations and agreement before any regulatory intervention takes place. If regulatory intervention becomes necessary it will take account of: (i) the government's national policy on communications and multimedia; (ii) rights and obligations of operators; (iii) promotion of technical and economic efficiency; (iv) the interests of consumers and the community and (v) provide competitive safeguards against abuse of market power and (vi) take into consideration international best practices.

The benchmark interconnection rates were determined by using ceiling prices. Not all operators would accept them. Any privately negotiated agreement can undercut them and will remain commercially confidential, but must be registered with the CMC which can compare agreements to ensure no anti-competitive practices are in place. No licensed mobile service provider can be denied access to the fixed line because the Communication and Multimedia Act 1998 specifies *Access to Services* which are to be made available to interconnecting licensed network operators.

Rate Setting

Before the passing of the Malaysian Communication and Multimedia Act, 1998 and the Malaysian Communication and Multimedia Commission Act 1998, rates were set based on historical costs and affordability by bureaucrats in the Jabatan Telekom Malaysia. However, the passage of the two Acts in 1998 gave autonomy to the private providers of mobile services to set their own rates. According to the Communications and Multimedia Act 1998, any network facilities provider, applications service provider or content applications service provider may set rates in accordance with market rates. All providers are required to furnish rates charged to customers for one or more services.

The principles on which rates are to be set include: (i) rates must be fair and non-discriminatory; (ii) rates should be oriented towards costs; (iii) cross subsidies should be eliminated; (iv) rates should not contain discounts that unreasonably prejudice the competitive opportunities of other providers; (v) rates should be structured and levels set to attract investment into the communications and multimedia industry; (vi) rates should take account of the regulations and recommendations of international organizations of which Malaysia is a member.

The freedom to set rates and enter into price competition is a departure from previous practice where the government department, JTM set rates without any reference to cost recovery because it considered the provision of telephone services as a public good that may need to be subsidized. A cross-subsidy was also given to poorer regions, for example, the rural areas.

VIII. Self Regulation Among Principal Stakeholders

The Communications and Multimedia Act 1998 also departs from the previous mode of regulation by encouraging the setting up of Industry Forums to facilitate competition, coordination and information sharing among the stakeholders in the industry. The Act seeks to establish a regime of self-regulation by providing for the creation of industry forums. The function of the Industry Forum is for the competitors to come to an agreement to formulate and implement voluntary industrial codes, which would serve as a guide for the industry to operate. The companies and other stakeholders can take the initiative in developing these industrial codes or the initiative can be taken by the Commission. In this sense then the type of governance departs from the statist model and the liberal model as the emphasis is on partnership and networking.

If the Malaysian Communications and Multimedia Commission is of the view that a voluntary code prepared by the designated industry forum is ineffective, the Malaysian Communications and Multimedia Commission may determine a mandatory standard, which is the subject matter of the voluntary industry code. The Minister may also direct the Malaysian Communications and Multimedia Commission to determine a mandatory standard in place of a voluntary industry code.

The Malaysian Communications and Multimedia Commission designated the Communications and Multimedia Content Forum of Malaysia and the Communications and Multimedia Consumer Forum of Malaysia as the Content Forum and Consumer Forum respectively. Both forums are now in the midst of preparing the Content Code and Consumer Code.

On 31 March 2003, the Malaysian Access Forum Berhad was designated as the Access Forum. The Access Forum has the task of developing the Access Code and it may also recommend facilities or services that should be included or removed from the Access List. In the absence of a voluntary industry code or mandatory standards on access, the industry is currently guided by the following: (i) The General Framework for Interconnection and Access, May 1996; (ii) The Statement on the Implemental Plan of Equal Access and

Cost-Based Interconnection Pricing in Malaysia, issued by the Minister of Energy, Telecommunications and Posts in 10 April 1998; Telecommunications Regulatory Determination - Customer Access Arrangements 24 May 1998; Determination of Cost Based Interconnect Prices and the Cost of Universal Service Obligation, 15 July 1998 (TRD 006/98); Ministerial Direction on Equal Access, 23 March 2001; the Commission Determination on Access List, 24 March 2001 and the Communications and Multimedia Act 1998. The Access Forum is in the process of developing the Access Code.

The Communications and Multimedia Act 1998 also provides that the Malaysian Communications and Multimedia Commission may designate an industry body as the Technical Standards Forum. The main function of the Technical Standards Forum would be to prepare the Technical Code, which may include matters relating to the requirements for network interoperability.

No industry body has been designated as the Technical Standards Forum. Pending designation of the forum, the Malaysian Communications and Multimedia Commission has facilitated the formation of various Working Groups within the industry to carry on work on technical standards.

It appears then that the Communications and Multimedia Act 1998 and the Malaysian Communications and Multimedia Commission Act 1998, provide a new policy and regulatory environment for the development of new types of services such as provision of application services and provision of content application services that are technology neutral. The regulatory environment is also a less licensing environment with the introduction of industry forums to promote a self-regulatory environment.

IX. Empowering the Public

The MCMC tries to empower the public by holding public inquiries on issues of interest to the various stakeholders in the mobile phone industry. Since its inception the MCMC has held about 17 public inquiries up to June 2007 on a variety of issues including Access issues including Access pricing, quality of service, competition, mobile phone portability, dominance, universal service provision, cost of capital and financing. The public inquiry may be called by the Commission or the members of the industry or consumers or NGOs, the government, public interest groups and other stake holders in the industry. The goal of the public inquiries are to enhance competition, deploy advanced technology, lower cost to users and develop competitive markets.

For example, in the case of the “Ministerial Direction on Number Portability,” the Commission held a public inquiry on the 10th of September 2004. It sought public views on the implications of the action by subscribers to switch service providers without having to give up their numbers. The views were invited from the industry, service providers and public consumers. Submissions were made by five mobile phone companies, that is, Maxis, Celcom, DiGi, TM, Time and six other companies that were not service providers but were in the industry. A total of 41 submissions were addressed

by the Commission. The remaining 30 submissions were from the members of the public. The hearings were held in the open and a record of the proceedings that amounts to about 167 pages is available in the internet and on the webpage of the Commission. In fact the proceedings of the other 16 hearings are also available on the internet.

Table 4 Public Enquiries conducted by the Malaysian Communication and Multimedia Commission

No	
1	A Report on a Public Inquiry on the Access Pricing of VoIP Services Based on Pre-fix Number 0154
2	A Report on a Public Inquiry on the Review of the Determination No. 5 of 2003, Commission Determination on the Mandatory Standards for the Quality of Service for Broadband Access Service
3	A Report on a Public Inquiry The Mandatory Standard on the Digital Terrestrial Television Broadcasting (DTTB) for "Free to Air" service in Malaysia
4	Public Inquiry Paper on the Mandatory Standard on Digital Terrestrial Television Board (DTTB) for "Free to Air" Service in Malaysia
5	A Report on a Public Inquiry under Section 55(2), 55(4) and 61 of the Communications and Multimedia Act 1998 on Implementation of Mobile Number Portability
6	A Report on a Public Inquiry on Access Pricing
7	A Report On A Public Inquiry Under Section 55 Of The Communications And Multimedia Act 1998 On Review And Expansion Of Access List Determination
8	A Report on a Public Inquiry: Assessment of Dominance in Communications Markets
9	A Report on a Public Inquiry on the Mandatory Standards for the Quality of Service Phase Two
10	A Report on a Public Inquiry under Section 65 of the Communications and Multimedia Act 1998 on Mandatory Standard on Access
11	A Report on a Public Inquiry under Section 65 of the Communications and Multimedia Act 1998 on the Review of the Universal Service Provision Determination.
12	A Report on a Public Inquiry under Section 65 of the Communications and Multimedia Act 1998 on Access Pricing
13	A Report on a Public Inquiry under Section 65 of the Communications and Multimedia Act 1998 on Cost of Capital
14	A Report on a Public Inquiry under Section 65 of the Communications and Multimedia Act 1998 on Local Access Funding
15	A Report on a Public Inquiry under Section 55 of the Communications and Multimedia Act 1998 on Mandatory Standards for the Quality of Service
16	A Report on a Public Inquiry Under Section 55 of the Communications and Multimedia Act 1998 on a System of Universal Service Provision
17	A Report on a Public Inquiry under Section 55 of the Communications and Multimedia Act 1998 on Access List Determination

Source: Malaysian Multimedia and Communications Commission

X. Conclusion

Hierarchical government structures has been the dominant model for public service delivery of telephone services in Malaysia. However, although government departments have been able to provide the service, there are several weaknesses in the structure, that is, inward-looking culture; lack of incentive to innovate or diffuse knowledge and inability to respond to changes very fast. Unlike private companies, government departments cannot merge with each other to take advantage of economies of scale or reduce transaction costs. Bureaucrats seldom see it in their benefit to respond to public criticism or demands because whether they get more or less customers to subscribe to their services makes very little difference to their remuneration or service conditions.

Government structures are also rigid and bound by procedure that is hard to change. In the case of private companies they can respond to high levels of interdependence and

opportunism by divesting or merging with another private entity, which in the case of government departments may be quite difficult to do. There is also a limit on exchange as one government department may not be able to pay another department for its service. This places a limit on partnership and networking.

To overcome the rigidness and inflexibility of government operations, Malaysia opted to privatize telecommunications services in the late 1980s. However, although the market based reforms increased competition and improved the quality of service to the end users and facilitated the more efficient diffusion of innovations, there was still need for an independent regulator and central policy direction from the Minister. The regulators have to coordinate the activities of multiple stakeholders. They also have to understand the complex interdependent relationships between stakeholders which is influenced by technological change and which is important for service provision, regulation and policy making. The type of governance has changed to one where the government has to work with an empowered private sector and public. Networking between the government, private sector and the public has been important for the growth of mobile phone services and its sustainable development.

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