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Liberalisation and Regulatory Reform in Telecommunications Markets -- A Taiwan Story

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Introduction

Taiwan epitomises the phenomenon of the Asian Tiger economy, successfully transforming itself from a labour-intensive into a capital-intensive, high-tech-oriented, and service-promoted economy. Over successive decades, government-led economic planning has allowed Taiwan to quickly respond to global trade movements with effectiveness and flexibility. These characteristics are also reflected in the liberalisation process for the telecoms sector, and in related regulatory reforms.

Over the past two decades, the telecommunications sector has undergone rapid change due to advanced technologies and surging demand from businesses and consumers. The market structure of telecoms sector has been transformed from one of monopoly to one of competition. Its regulatory framework has also evolved from a ‘command-and-control’ model to that of ‘competition-promoting’ and ‘market-steering’. The trigger of liberalisation of telecommunications in the early 1980s causes a series of reactions in market and the law. Current and potential prosperity has led authorities to consider how this process occurred and the direction it will follow.

This paper looks at the telecoms sector through three categories of: market, law and

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regulation. It presents a case study of Taiwan, illustrating an analytical study in telecoms regulation, the linkage between market development and regulatory reform within the liberalisation process. One of its purposes is to explore the role of regulation and regulators, with particular emphasis on how regulatory reform of liberalisation has been carried out in different telecoms market sectors. Experience from both markets and regulatory mechanism is illustrated, and path-dependent regulatory approaches are analysed.

Five sections are presented in sequences. Firstly, a brief introduction of the telecommunications liberalisation policy is addressed. Secondly, a general outline describing regulatory reform and sequential amendments of Telecommunications Act are provided. Thirdly, issues of regulatory mechanisms for competition promotion and possible deficit are analysed. This is followed by the next section, which briefly addresses regulatory challenges in a new communications convergence era. The paper concludes with reference to some lessons that can be learned from Taiwan’s experience. Future aspects are also addressed as subjects for on-going research.

1. Liberalisation Background in Telecommunications Sector

Liberalisation was made one of the two pillars of Taiwan’s economic development in the early 1980s, with the Taiwanese government emphasising internationalisation and liberalisation in order to promote Taiwan’s global trading strength. Despite the prevalence of a global movement of liberalisation and deregulation in the west, Taiwan’s economic reform and liberalisation process were not initiated until the lifting of Martial Law in 1987. A series of economic reforms, accompanied by a
significant democratic reform, took place in the late 80s and early 90s, rapidly transforming Taiwan into one of a world-leading economy with pro-active media, competitive manufacturing and trading sectors, and a broadly liberalised society both politically and economically. The idea of internationalisation and liberalisation was closely connected to Taiwan’s participation in international economic trade. As a member of Asia-Pacific Economic Cooperation Forum (APEC), Taiwan has long been committed to promoting implementation of liberalisation and made it priority of the national agenda. The liberalisation of telecommunication became a focal point of the WTO-GATS negotiation, which inevitably developed into a major issue in the context of Taiwan’s application towards to join the WTO.2

1.1 The APROC Project as Driving Force for Liberalisation

In 1995, in order to stimulate general microeconomic performance and to help bring about an ‘information society’, the Taiwanese government proposed a national development project, the ‘APROC Project’ (Asia-Pacific Regional Operation Centre Project), with the aim of making Taiwan a hub for economic activities in the Asia-Pacific region. The project addressed a broad range of economic issues and, in essence, comprised five target sub-projects: (a) the Air Transportation Centre Project, (b) the Maritime Transportation Centre Project, (c) the Financial Centre Project, (d) the Telecommunication Centre Project, and (e) the Media Centre Project. Of these, the Telecommunication Centre project became the key driving force of Taiwan’s telecommunications liberalisation, while the Media Centre project served a substantial parallel role to bring about the achievement of the liberalisation process. Above all,

2 Taiwan entered into WTO on 1 January 2002, as the 144th member (just one day after China’s WTO accession).
effective telecoms services were regarded as an essential element of economic progress, upon which the success of other projects as well as the whole APROC Project depended. It therefore attracted specific endorsement from the government and private sectors. It was clearly planned in the APROC project that the monopolistic telecoms market was to be liberalised in three-phases, involving gradually opening up different sectors for competition (i.e., value-added services, mobile telecoms services, and fixed-line telecoms services), with the whole liberalisation process to be completed in a five-year period by 2001.

1.2 Trigger of Telecoms Liberalisation

The implementation of telecoms liberalisation was triggered by an intensive regulatory reform starting in 1996, when the Legislative Yuan (the Parliament) passed the so-called ‘three telecom reform acts’, including the ‘1996 Telecommunications Act’, the ‘Organisational Statute of the Directorate General of Telecommunications’ and the ‘Chunghwa Telecom Organisation Act ’.

The 1996 Telecommunications Act provided the basic regulatory framework for the liberalisation process. It began with an institutional reconstruction, which required the separation of the regulatory mechanism from the business function of the previously state-owned monopoly, hence the formation of the Directorate General of Telecommunications (DGT) and the state-owned Chunghwa Telecom Company (CHT). The previous DGT was reformed as an independent regulator charged with policy-making and enforcement of regulations under the auspices of the Ministry of
Transportation and Communication (MOTC). It plays a focal role in market monitoring and competition promotion, in order to advance efficient operation and service quality in the domestic telecoms market. At the same time, telecoms operations were separated from the previous DGT and reconstituted as the state-owned Chunghwa Telecom Company (hereafter CHT). It carried on providing telecoms services during the transition period of liberalisation, while at the same time being subject to a 5-year privatisation plan, which was later said to be ‘too ambitious’. Since the 1996 Telecommunications Act, regulatory reviews and modification of statutes have continued in parallel with further liberalisation. Four major legislative reforms have been implemented between 1996- 2003, which will be briefly described in the following section.

Although telecoms liberalisation only took place in 1996, a remarkable outcome was achieved with the markets being fully opened to competition by 2001. Remarkable competition was witnessed in mobile communications markets; however fixed-line businesses remain barely competitive due to insufficient access to the ‘last-mile’ of the incumbent’s network and the incompletion of alternative networks by other competitors. Competition promotion, together with the deployment of competitive networks, becomes main tasks for the regulator in economic prospects. Social aspects of the telecoms regulation are also highlighted on the list of regulator’s priority. Regulatory framework for universal services provision, specially combined with the government’s project of establishing a broadband society, reflects the importance of utilising telecoms regulation and the effects it can achieve in facilitating a modern

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3 The Organisational Statute of the Directorate General of Telecommunications.
4 The original plan of privatising Chunghwa Telecom by 2001 was impeded by serious concerns of the social-economic aspects, mainly derived from the strong resistance from the Chunghwa Telecom’s employees and its trade union. Although the Chunghwa Telecom launched an IPO in Taiwan Stock Exchange (TSE) in October 2000, by late 2002, the government still hold 95% of CHT’s share.
2. Regulatory Framework

The first regulatory framework for telecommunications in Taiwan was set up in the late 1950s under the auspices of a state-owned natural monopoly. During the decades that followed, very little reform took place. Although the Taiwanese government did consider privatisation and corporatisation of state-owned enterprises in the late 1970s, the intention eventually came to nought, due to lack of success in legislative processes. Nonetheless, the growing world trend of liberalisation and internationalisation which started around the early 1980s had a major impact on Taiwan. Sectors traditionally characterised by a natural monopoly or originally deemed natural candidates for extensive regulation came under the twin pressures of liberalisation and deregulation. Despite certain initiatives during the 1980s, the liberalisation and regulatory reform were not properly launched until the 1990s. In general, the liberalisation process in Taiwan was guided by the government’s ‘APROC Project’ boosted in 1995, which aimed at establishing Taiwan as an ‘Asia-Pacific Regional Operation Centre’(hence APROC). In response to one of the sub-project of the APROC Telecommunications Centre, the current regulatory framework for telecommunications was established in the 1996 Telecommunications Amendment Act, which provided the basic legal framework for market liberalisation. A step-by-step schedule was put in place to break up the market monopoly and open up different sectors in phases: the mobile communications business was opened up in 1997, following strong demand on both operators’ and subscribers’ parts.\(^5\) Over the five years that followed, the satellite

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\(^5\) There were more than a million applicants waiting to subscribe to mobile phone services in 1996, in the monopoly era. However, insufficient facilities and manpower left the monopolistic incumbent, Chunghwa Telecom (CHT), unable to handle the tremendous demand, and the company could only keep the applicants on a long waiting list. Growing complaints about the inefficient Chunghwa
communications, fixed-line communications, and third-generation (3G) mobile communication sectors were opened up, in 1998, 2001, and 2002, respectively. By December 2002, Taiwan had a total of 73 companies engaged in Type I telecoms businesses (facilities-based network businesses) and 380 Type II telecoms businesses (service-based network businesses). Operating revenues in the domestic telecoms market reached NT$327.1 billion (around US$ 10 billion), accounting for 3.36% of the total gross domestic product. More and more competition was introduced into previously protected sectors, and competition unfettered by boundaries emerged.

This paper argues that Taiwan initially achieved a rapid transformation in its regulatory reform and created a basis for further competition in the telecoms sector (1996-2001). However the achievement of regulatory reform has not been entirely reflected in market performance due to a sector structure still dominated by the former state-owned incumbent, Chunghwa Telecom. It also shows that the inter-relationship between Chunghwa Telecom with its government competent authority, the Ministry of Transports and Communications (MOTC), and the sector regulator, the Director of General Telecommunications (DGT), has impeded regulatory efficiency--a problem which is derived from the unresolved aspects of the privatisation process. The dilemma of whether to use more regulation in order to facilitate market entry, or to lower entry barriers and allow market mechanisms to cure dominant market power.

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6 USD $1 is equal to approximately TWD $33 in 2002. (TWD: Taiwanese Dollar).
7 V. B.L. Wang (2003), Plenary paper “Policy and Regulatory Update”: Chinese Taipei, in the APEC Telecommunications and Information Working Group (APEC-TWG), 28th Meeting, 4-10 October 2003, Taipei, Taiwan.
8 DGT has been converged into the newly established regulatory agency, the National Communications Commission (NCC) in 22 February 2006.
9 The Taiwanese government has announced the completion of the privatisation of Chunghwa Telecom on August 2005, when over 51% of Chunghwa Telecom’s share was released to private markets. However, critics were drawn towards the privatisation process, with focus on the methods and shareholding chosen in the privatisation process.
still preoccupies the regulator.

Table 1: Regulatory Reform and Telecoms Amendment Acts

- The 1st Regulatory Reform – the three telecoms reform acts of 1996 -- Establishing the foundation of telecoms liberalisation
- The 2nd Regulatory Reform – Telecommunications Amendment of 1999 -- Preparing for the WTO Accession
- The 3rd Regulatory Reform – Telecommunications Amendment of 2003 -- Promoting a broadband society
- A New Regulatory Regime for Communications Industry – Fundamental Communications Act of 2004 and the Inauguration of the NCC\(^{10}\) -- Establishing a convergent communications regulatory regime

3. Mechanisms for Competition Promotion

3.1 Regulatory Mechanism for Competition

Regulatory mechanisms are adopted in order to promote competition in the previously monopolistic market. Policy goal of ‘making competition as the best regulation’ were preceded according to various reform stages. Regulatory reform process, with a focus on the sequential amendments of the Telecoms Act since 1996, and corresponding regulatory mechanisms were adopted to enhance market competition. Elements such as Taiwan’s pursuit of WTO accession and its active participation in international and regional economic cooperation organisation, such as APEC, have helped to formulate its economic regulatory framework. Various regulatory approaches and implementation were carried out to facilitate a liberalised regulatory environment.

A series of regulatory approaches were adopted in order to promote competition in a newly opened telecoms market. Firstly, licenses are opened to private operators, with

\(^{10}\) The NCC was inaugurated on 22 February 2006 as the sector-specific regulator for telecommunications, broadcasting and information industry.
some favourable strategies towards new entrants. For example, asymmetrical regulatory mechanisms are adopted, imposing various legal obligations on the incumbent; while at the same time leave more freedom for the new entrants in services operation. Secondly, interconnection obligation is required on both incumbent and the new entrant, so as to ensure network connection as a whole, and to reduce unnecessary investment and overlap in network construction.

In addition, anti-competitive safeguard mechanisms are implemented through both general competition rules and sector-specific anti-competitive rules. It focuses on controlling unfair competition behaviour operated by existing operators with significant market power or dominant position. Prohibition of abuse of dominant position; prohibition of unfair concerted practice, and prohibition of explicit and tacit collusions in between operators are of particular importance.

Table 2: Regulatory Mechanisms for Competition

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<tr>
<th>Asymmetrical Regulation</th>
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<tbody>
<tr>
<td>1. Facility-based Operators (Type I) vs. Service-based Operator (Type II)</td>
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<tr>
<td>2. Incumbent vs. New entrants</td>
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<tr>
<td>3. Fixed-line operator vs. Mobile operators</td>
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<th>Interconnection Obligation</th>
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<td>Anti-Competitive Safeguard</td>
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3.2 Remaining Problems in Competition Regulation

A basic concept of liberalisation is that of opening-up regulated markets and enhancing competition with a regulatory framework that is of market-oriented and competition-promoting. Despite the adoption of the market-oriented regulatory
principle, several regulatory mechanisms in practice are under criticism as they may be considered as ‘anti-competitive’, ironically. A special case study of the incumbent CHT’s ‘099 Follow-me call’ service reflects the dilemma faced by the regulator in having to choose between regulatory consistency and the promotion of an innovative service during the transition period of liberalisation. It also reveals a potential problem of excessive intervention and its impact on the autonomy of market actors.\(^{11}\)

In terms of implementation, some specific questions, selected for the light they shed on the wider phenomenon of telecoms liberalisation in Taiwan, are also under discussion. These relate to constraints deriving from the structure of the current telecoms markets and some existing regulatory approaches. The problem of the current dual regulatory system, shared between the general competition authority, the Fair Trade Commission (FTC), and the sector-specific regulator, the former DGT, is of particular interest. A regulatory regime that is cross-sector, independent and collective in decision-making has been formulated in response to a communications convergence era, so that the newly established National Communications Commission (NCC) is now supposedly empowered to overcome previous regulatory deficiencies.

Table 3: Remaining Problems in Competition Promotion

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<th>Licensing Mechanism and Classification of the Telecoms Market</th>
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<tbody>
<tr>
<td>Removal of Asymmetrical Regulation</td>
</tr>
<tr>
<td>A Dual Track System – Fair Trade Law vs. Telecoms Law</td>
</tr>
<tr>
<td>Future Tasks for Maintaining Competition Mechanisms by FTC and NCC</td>
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4. Regulatory Challenges in a Digital Convergence Era

Challenges and responses to the ‘digital convergence era’ are reflected in the implementation of the ‘Fundamental Communications Law of 2004’, and the establishment of the independent communications regulator, the National Communication Commission (NCC). National policy in advancing hi-tech industry and competitiveness is closely linked to the government’s ICT\textsuperscript{12} policy reflected in the current ‘National Project -- Challenge 2008’, which encourages enhanced market performance in parallel with improved regulatory efficiency. The government’s plan is to promote Taiwan’s telecoms industry to become a billion dollar sector by 2008.\textsuperscript{13}

Table 4: Challenges in Convergence Era

| The Phenomenon of Digital Convergence |
| Institutional Reform- Establishment of NCC |
| Latest Development in Communications Law |
| Prospects of the NCC Regime |

5. Conclusions

\textsuperscript{12} ICT stands for Information and Communications Technologies.

\textsuperscript{13} Taiwan is a world-leading economy specialised in manufacturing IT hardware and high-tech products. The high-tech industries have been the engine for the island’s growth for the last 25 years. In 2004-5, Taiwan led the world in the production of over 10 different forms of IT hardware, such as notebooks, LCD monitors, motherboard and cable modems. Its semiconductor and display industries, which occupy top positions globally, have been influenced by the government’s “Two Trillion, Twin Start” project (initiated in January 2002), which aims at a growth value of NT$1.59 trillion (US$ 50 billion) and NT$1.37 (around US$ 43 billion) respectively by 2006. In addition to the promotion of the high tech and biotech industries, the Taiwan government has also proposed to promote the telecommunications industry as a third US$ billion business by 2008. On the data just cited, see the official website of the Council for Economic Planning and Development (CEPD), Taipei, Taiwan at <http://www.cepd.gov.tw/encontent/index.jsp>. Also see official announcements of the Department of Reconstruction, Ministry of Economic Affairs (MOEA), Taipei, Taiwan
The case of Taiwan’s telecommunications liberalisation provides a model of an emerging economy in responding to domestic and international pressure. By the time its liberalisation was triggered in 1996, Taiwan had learned from advanced economies such as the UK, the US and Japan, and proceeded upon a five year intensive reform process to open up the domestic telecoms market. By July 2001, the liberalisation process had established a fully open basis for market competition. Unprecedented mobile telephony development makes the Taiwan experience exceptional -- rapid growth in the mobile penetration rate surged from far below the average of global parameter in 1998 to that of outperforming all OECD member countries in 2002. It is pointed out that ‘among the countries that have undergone telecoms reforms, none of them has ever achieved so high a mobile penetration rate or reversed the dominant status of the incumbent in such a short time.’

The task of ‘creating a fair and free environment for competition’ has led to a wide range of rules and conditions issued by the regulator. Various policy goals are realised through licensing conditions. In order to promote competition, an asymmetric regulatory system was employed to constrain an incumbent’s market power and so that favourable entry conditions for new operators were created. However, conflicts between regulation and competition arose as some regulations risk excessive intervention and are thought likely to distort market development. Growing debate on the timing of the removal of asymmetric regulation reflects the essential issue: How should the regulator control market power? And: how should the regulator foster

15 For example, a minimum constructive capacity is required for Type I telecoms enterprises (facility-based) in order to promote telecoms infrastructure; obligations of equal access, number portability, and access tariff controls etc., are imposed on dominant operators in order to facilitate service-based competition.
market-oriented competition without excessive intervention? Overhaul of the regulatory framework is needed as some regulatory approaches designed for promoting market entry at the beginning of liberalisation may have become unnecessary, and even impede an incumbent’s incentive for innovation. This will involve trade-offs between different policy goals. For example, the ‘mobile operator priority’ principle (also known as the ‘Tariff Attribution Scheme’ for the mobile-to-fixed network interconnection charge), applied in the “Rules Governing Interconnection between the Fixed Network and Mobile Operators”, has posed a dilemma for the regulator. Whether and when to cease such a favourable scheme for the purpose of fostering mobile industry against dominant power from the fixed network incumbent becomes highly controversial. As a personal viewpoint, a crucial challenge for the regulator is to establish criteria for market competition assessment, which needs to set forth clear conditions for withdrawal of asymmetric regulation, so that both an incumbent and new entrants can foresee the regulatory environment and reduce the risk of regulatory uncertainty when planning their future businesses.

It is undeniable that the regulator plays a key role in the transformation process. Since the opening of the telecoms markets, the Taiwanese DGT has effectively implemented rules and restrictions to constrain the incumbent Chunghwa Telecom in order to promote market entry. After nearly a decade of liberalisation, however, market conditions have evolved and competition further established. The role of the regulator as a market creator needs to be adjusted accordingly. Fostering competition by establishing general competition mechanisms, rather than employing sector-specific

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regulation, has become desirable. As a result, the regulator needs to be more cautious before initiating any rules or regulations for the purpose of promoting competition. Current debate suggests that the general competition authority, the Fair Trade Commission, should take precedence over the telecommunications-specific regulator, the DGT and MOTC, in handling cases involving the abuse of market power and relevant competition issues. One the one hand, this will overcome the inefficiency of a sector-specific regulator’s decision-making in respective cases; on the other hand, it may well avoid regulatory capture by particular interest groups. It is considered that such a regime would be more consistent, pressure-resistant and effective with time. Nonetheless, such concerns will continue into a new regime as the National Communications Commission (NCC) is established as an independent, cabinet-level, communications regulator. With more manpower, resources and a higher regulatory hierarchy, the NCC has proposed clear means to tackle competition issues in its administrative plan. Whether in due course the NCC will function more effectively as a sector-specific competition specialist, or by incorporation within the FTC thereby becoming subservient to the general competition authority, remains an open question.

It is also interesting to explore another challenging issues related to the interaction between the markets and the regulation. In August 2005, the MOTC announced the completion of privatisation of the state-owned incumbent CHT, when nearly 60% of the CHT’s share was released to the private market. The newly privatised CHT will enjoy more freedom in business planning and less obligations as a public enterprise. After removing the status of a SoE (State-owned Enterprise), the interaction between

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the CHT and the sector-specific regulator NCC is to be examined, in contrast to the old regime of the DGT and MOTC. In general, the regulator’s view in controlling market power is closely linked to an incumbent’s ability and capacity to compete and innovate. It is arguable that policy goals for the promotion of competition and market innovation need to be carefully assessed and implemented within a more transparent and credible regulatory framework. Sufficient communications and cooperation between the regulator and incumbents will also become a major theme towards a healthy regulatory environment.

Generally speaking, the Taiwan experience in telecoms liberalisation reflects a strong government-led economic and regulatory reform, in which national competitiveness is emphasised and an ‘e-Taiwan’ vision, together with the ‘m-Taiwan’ program, are currently promoted. Policy focused on accelerating the island’s ICT development has led to Taiwan’s leading position in government efficiency and national competitiveness in recent surveys. Benchmarked against neighbouring countries, such as South Korea, Japan, Singapore and Hong Kong, Taiwan has become a driving force for further policy-making and innovation development. The vision to become a world’s leading ICT country and an environment-friendly ‘green silicon island’ will largely depend on continual efforts on the enhancement of a competition-steering regulatory regime (which is contrary to the previous command-and-control regime). A forward-looking regulatory framework and corresponding mechanisms, which promote market competition and innovation, will be most desirable.

18 The m-Taiwan program is recently advocated by the Taiwanese government, aiming at making Taiwan an mobile digital society with ubiquitous access to digital communications facilities and internet connection. Details of the ‘m-Taiwan Program’ is available at the National Information and Communication Initiative Committee (NICI) website at <http://www.nici.nat.gov.tw>

19 Refers to the World Economic Forum—Global Competitiveness Report with the Growth Competitiveness Index (GCI), the Network Readiness Index (NRI), and the Information and Communication Technology Index (ICT Index), available at <http://www.weforum.org>
Annex: Major connection for telecoms research in Taiwan

- NCC, National Communications Commission at <http://www.ncc.gov.tw>


- III, Institute for Information Industry at <http://www.iii.org.tw/index1.htm#>

- APEC-TELWG, APEC Telecoms Working Group at: http://www.apec.org/apec/apec_groups/working_groups/telecommunications_and_information.html#

- OECD at <http://www.oecd.org>