

**Salient Findings of the Six-Country Multi-Component Study:**  
*Competition in whichever way drives growth*

Report by Harsha de Silva, Lead Economist, LIRNEasia

## 1.0 Introduction

This note brings together the salient findings of six individual studies among six emerging Asian countries on the status of their telecommunications, i.e. ICT infrastructure sector. India, Pakistan and Sri Lanka in South Asia along with Indonesia, Philippines and Thailand in Southeast Asia are the countries covered in the study. Each individual country study was undertaken by a team of two LIRNEasia researchers, one acting as the lead and the other as support.<sup>1</sup> These studies analytically describe the reforms that had been implemented; measures the sector performance and thereafter assesses the telecom regulatory environment [TRE] using a perception based technique developed by LIRNEasia. This paper draws from the six papers and summarizes the salient findings across the fixed and mobile sub sectors.<sup>2</sup>

The most important finding across the six countries is that competition or the lack thereof is the key influencing factor in the performance of the sector. This is true across the sub sectors of fixed and mobile telephony.

The movement of the various indicators of performance overlaps with the level of effective competition in each sub sector clearly showing a strong positive correlation between the two. Where there is effective competition, the sub sector performs well; where there is no effective competition, the sub sector performs badly. Of course, technological innovations made a tremendous impact on the global ICT infrastructure landscape and each of the six countries under study had and continues to have access to the same in equal measure. The pertinent point that emerges is that it was, and is, the level of effective competition within a favourable regulatory framework that influences the use of such technology in optimal measure.

In this context, the TRE surveys are useful in gauging the perceived level of competition that exists in each country. Combined with the analytical description of past regulatory action the country studies find that a better TRE resulting from a credible and effective regulation for the most part lead to better performance of the sector. However, this is not a 'if and only if' condition, in that, some countries where the TRE is not so good performs better than hypothesized [that better TRE will lead to better performance]. It is in this perspective that the rationalization of the finding that it is effective competition that drives growth in the sector becomes important. Disruptive competitors and 'work-around' solutions in less than ideal TRE conditions under weak governance structures seem to be cracking the nut in a number of instances.

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<sup>1</sup> Lead researcher were India: Payal Malik, Pakistan Joseph Wilson, Sri Lanka Malathy Knight-John, Indonesia Divakar Goswami, Thailand Deunden Nikomborirak, Philippines Lorraine Carlos Salazar,

<sup>2</sup> Internet, as discussed within the fixed sector is not considered in this paper, but is available in the individual papers.

In this note we show, using the output from the country researchers, that the much recommended model of a sequenced reform program of establishing an independent regulatory agency and promoting competition and thereafter [full or partial] privatization of state monopolies leads to better sector performance still hold true.<sup>3</sup> However we also show that there seem to be several alternative means in which the desired results could be achieved. From the point of view of the regulatory agency technocrat having to make decisions in a weak, badly governed and possibly corrupt environment, we hope this note would enlighten him or her on possible choices available instead of doing nothing because the text-book model is un-implementable.

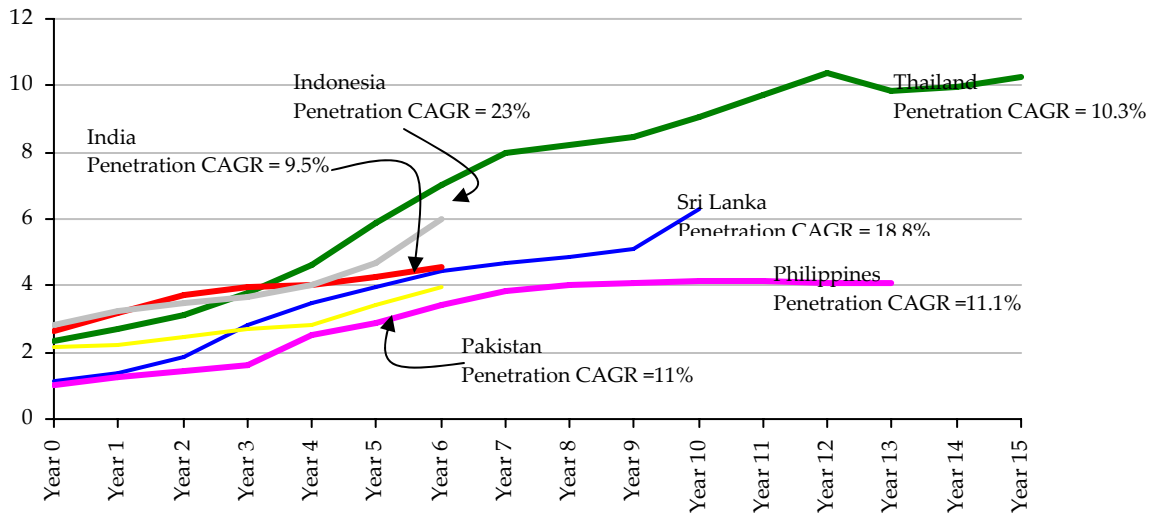
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<sup>3</sup> A good empirical discussion is available in “Does Sequencing Matter? Regulation and Privatization in Telecommunications Reform”, Scott Wallsten, World Bank, 2002

## 2.0 Brief description of the six countries performance

The performance of the six countries in terms of penetration of fixed line and mobile telephony in per hundred inhabitants is given in the two figures below. Year zero for each country is a subjective selection of each lead country researcher based on the beginning of the chronological sequence of sector reform events. End year is 2006. Each country's cumulative annual growth rate (CAGR) is given along side its growth line.

**Figure 2.1 Fixed lines: CAGR of penetration**



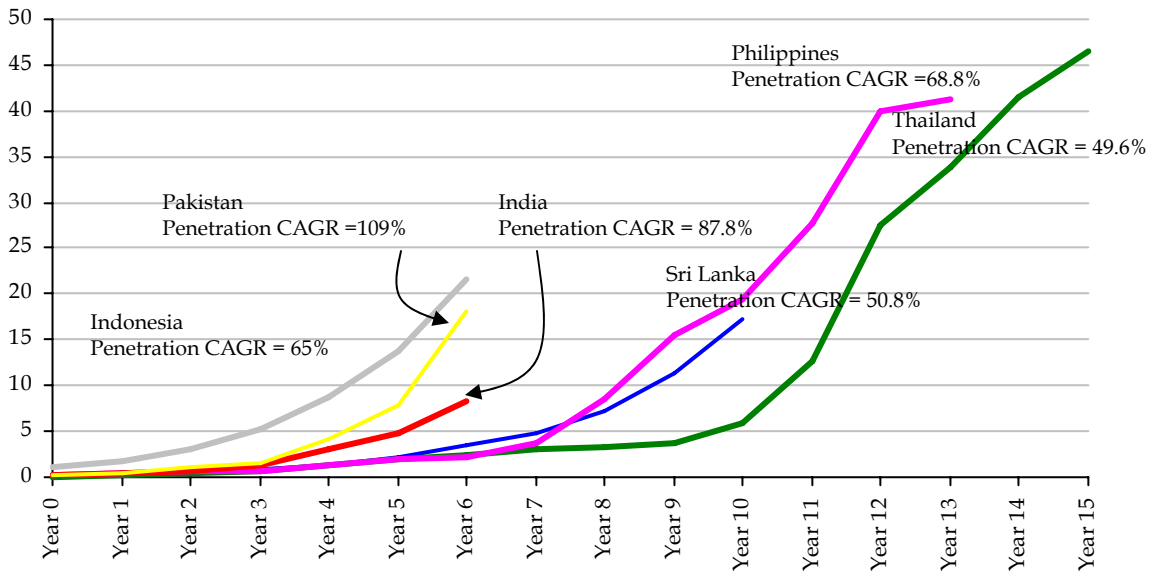
Notes: India on an April – March reporting period ; Pakistan on a July – June reporting period; Other countries follow Jan – Dec (calendar year) reporting periods; Philippines Year 3, 4, 11, 12 are calculated numbers assuming average uniform growth (or decline) due to unavailability of data. Sources: India-TRAI; Thailand-Company Reports; Pakistan-PTA; Philippines-NTC; Sri Lanka-Company reports; Indonesia-1999 from DGPT, 2000 onwards from company reports

It is fairly clear from Figure 2.1 that in general, post reform growth in fixed line telephony has not seen any dramatic improvements with CAGR of subscribers increasing between 10 and 15 percent. Only exceptions are Sri Lanka and Indonesia which saw sudden surges in the last year. This overall moderate growth pattern resulted in penetration of fixed lines for the group of countries around 5 per 100 inhabitants.<sup>4</sup>

In contrast to fixed line telephony, the post reform growth in the mobile sector across all six countries, as can be seen in Figure 2.2, has been quite dramatic. The subscriber CAGR ranges from low of 52 percent in Sri Lanka to a high of 120 percent in Pakistan.

<sup>4</sup> However, the urban-rural breakdown of this penetration is heavily biased towards the former.

**Figure 2.2 Mobile lines: CAGR of penetration**



Notes: India on an April – March reporting period ; Pakistan on a July – June reporting period; Other countries follow Jan – Dec (calendar year) reporting periods; Philippines Year 2, 3 and 4 are calculated numbers assuming average uniform growth (or decline) due to unavailability of data. Sources: India-COAI, TRAI; Thailand-Company Reports; Pakistan-PTA; Philippines-NTC; Sri Lanka-Central Bank of Sri Lanka Annual Report; Indonesia-1999 from DGPT, 2000 onwards from company reports.

An interesting observation is the different inflection points in the growth lines; some starting in the early years of reform as in India and Pakistan while some much later as in the case of Thailand. However the reality is that, even after such significant rates of growth, most countries have thus far only achieved penetration levels of under 20 subscribers per 100 inhabitants.

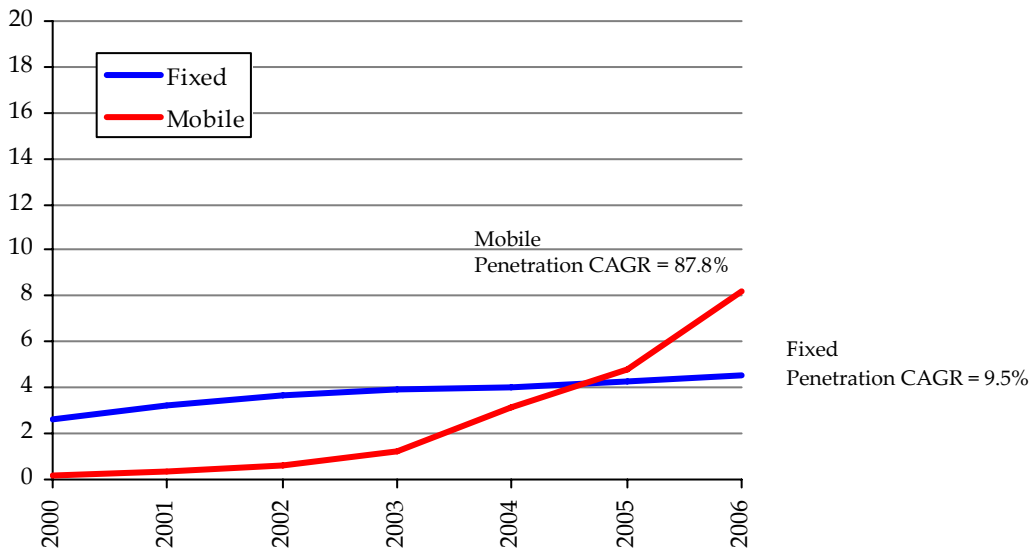
Next we consider the six countries individually. Unless otherwise specified, the discussion here is based on each country paper.

### 3.0 India

#### 3.1 Competition and growth

We consider the case of India. The first attempt at reform in the sector began with the auctioning of licenses for basic and mobile services in January 1995. However this exercise was fraught with problems emanating from specification issues. The result was unrealistically high bids for licenses which ultimately resulted in the new licensees struggling to survive. To deal with this situation, the Government introduced a New Telecom Policy in 1999 (NTP 99) where the existing licensees were allowed to migrate from the earlier fixed license regime to a revenue sharing regime. This is what is commonly considered as the first phase of true liberalization of the Indian telecoms market. India's year zero therefore is 2000.

**Figure 3.1: India penetration; fixed vs. mobile**



Analysis of the Indian sectoral performance reveals that effective competition which was at the root of the dynamic growth in the mobile sub-sector as opposed to the fixed sector was driven by market entry and falling tariffs. While the policy of one fixed provider per circle under NTP 99 remained [in fact some circles did not have bidders and thus not awarded], the duopoly per-circle in the mobile sector, was broken in favour of a third player in August 2000. Then in September 2001, a license for a fourth mobile player was auctioned creating vibrantly competitive circles. During this time, the Government also opened up the domestic and international long distance markets to the new private operators. However, in a move that was to create a stand off between fixed and mobile providers and a further price war, wireless in local loop [WLL] based fixed operators were granted permission to provide 'limited mobility' in 2001.

As expected, the competitive market entry opportunities generated significant downward pressure on tariffs. These pressures were absorbed well and reflected in rather dramatic price revisions as there was no artificial stickiness incorporated in the tariffs. This was because, by this time, the implementation of the Telecommunication Tariff Order 1999 had already started the tariff rationalization process by. By January 2003, tariffs were left to the operator's discretion as long as they were below a certain ceiling for calls beyond local regions.

While tariffs were coming down in leaps and bounds, the introduction of a high Access Deficit Tax [ADC] on mobile operators in 2003 moderated this fall. The subsequent reduction of the ADC by almost two thirds [in terms of sector revenue] had a significant positive impact on further declining of tariffs, which by March 2004 had almost reached that of fixed line tariffs. The drastic reduction of entry fees and lowering of the revenue share license fee on national and international long distance services in January 2006 and the removal of per minute ADC in favour of a revenue share arrangement the very next month saw the mobile tariffs fall further to the level of fixed tariffs for the first time. The availability of cheaper handsets by allowing for instalment payments [subsequently abandoned] and also the mass popularization of pre-paid cards contributed immensely to this fall. The impact of competition over the years saw the number of mobile subscriptions increasing from under 2 million in 2000 to over 90 million by end of 2006. The level of competition in the fixed sector did not however reflect that of the mobile sector. The fixed sector continues to be dominated by public sector incumbents accounting for almost 80 percent of the market. According to the country researcher, despite the fact that India having backbone optical fibre covering virtually the entire country the private basic service operators have resorted to extending their networks mainly to high revenue customers in large cities due mainly to an absence of a policy on infrastructure sharing. The absence of competition in the fixed segment has thus had an impact not only on voice services, but also on data services.

### **3.2 A brief assessment of the sequencing of liberalization and contribution of the regulator in fostering competition**

Unlike the much hailed sequencing process where setting up of an independent regulator should have preceded the liberalization of the market, in India, there was a reversal of sequence and the regulator came into being later. Even though the action of creating the Telecommunications Regulatory Agency of India [TRAI] in 1997 should have led to a redefinition of the role of Department of Telecommunications [DoT] which was until that time the de facto regulator, this did not happen satisfactorily. TRAI was neither given the power to issue licenses nor allowed to set standards and allocate spectrum. In the following years, DoT and TRAI got tangled in court cases and the role and credibility of the regulator was seriously undermined in the process. In January 2000, the Government made major changes in the institutional structure of TRAI by splitting it into two agencies, a 'new' TRAI, divested of all its adjudicatory and dispute-

settling powers, and a newly created agency named Telecommunications Dispute Settlement and Appellate Tribunal. The successor TRAI was further strengthened by several specific mandatory powers that deal with tariff fixation, fixing of interconnectivity charges and laying down standards for service and technology. In addition, it became mandatory for the government to seek the opinion of TRAI on the need and timing of the new service providers although the recommendations were not binding.

While TRAI was effective in promoting competition through opening up of the market and allowing for dramatic declines in tariffs it was not so effective in certain other areas. For instance, the TRAI policy on allocation of spectrum has been widely criticized. The country researcher notes that TRAI has wasted spectrum and that 'spectrum management is beset with several shortcomings as a result of which spectrum availability is rapidly emerging as a major constraint' in the growth of sector. Regulation of interconnection related matters is another area TRAI has not been able to promote further competition in the sector. Its failure to restrict the incumbent from exploiting interconnection agreements to handicap new entrants, the inability to introduce a calling party pays regime at an early stage and the dragging on of the 'quasi-politically motivated' ADC regime<sup>5</sup> are some key issues. In terms of regulating anti-competitive practices, the regulator has been faulted in its role in the WLL controversy and the inability to allow for infrastructure sharing between the incumbent and new entrants which if successfully implemented would further reduce ILD tariff and also encourage greater ITeS type business. Yet another area where the regulator could have done better according to the country researcher is in the universal service obligations [USO] where the structure of the least cost auction for USO subsidies was flawed in favour of the incumbent, notwithstanding the [limited] competitive bidding process.

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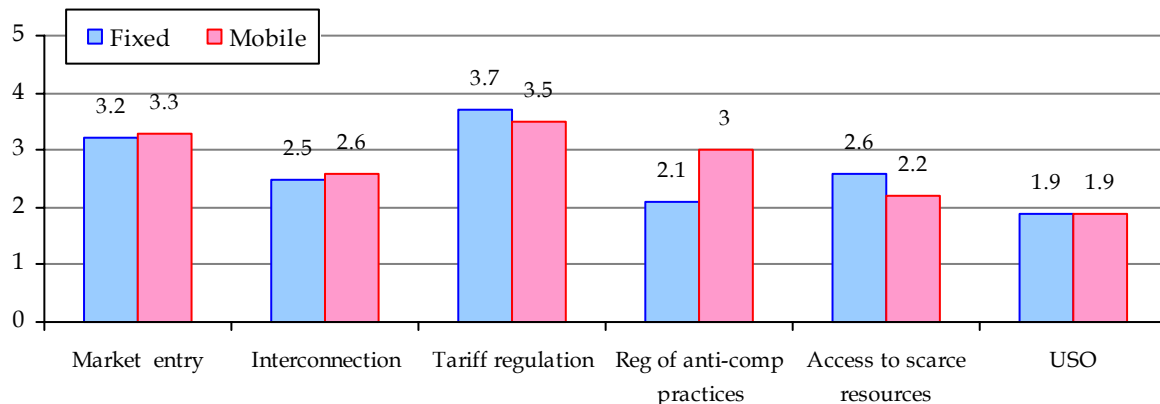
<sup>5</sup> Malik Payal and Harsha de Silva, *Diversifying Network Participation: A Study of India's Universal Service Instruments*, LIRNEasia, September 1, 2005



### 3.3 TRE assessment

Given below are the results of the telecom regulatory environment [TRE] survey among 50 stakeholders in the sector.<sup>6</sup>

**Figure 3.2: India TRE**



It is observed that the TRE for the mobile sub sector is perceived to be better than that for the fixed sub-sector. The competition promoting activity in market entry and more so in tariff regulation of TRAI is adjudged the best areas of TRE in India and validates the earlier discussion. This finding goes to reiterate the positive contribution in terms of the said two factors in the significant growth in the mobile sector in that country. The not so positive contribution of the regulator in regulating interconnection, anti competitive practices, access to spectrum and USO is also reflective of the discussion earlier. It is however important to note that the role of the TRAI is only recommendatory as the policymaker formulates the policy.

From the evidence presented above it is plausible to conclude that the Indian growth phase, particularly in the mobile sub-sector, is a direct result of competition in the market initiated for the second time in 2000 and accelerated in 2003. The competition friendly actions of TRAI in market entry and in tariff regulation were the key drivers of creating an environment within which private operators performed well. It should,

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<sup>6</sup> TRE survey, a LIRNEasia methodology to assess the perceptions of the telecom regulatory environment among stakeholders was carried out by each country researcher in the country of interest. For each dimension the minimum score is 1 and maximum is 5. Stakeholders were divided in to four categories and in order to achieve a balanced representation, over-represented categories were given a weight of less than one and under-represented categories were given a weight of greater than one, in such a way that all four categories equally contribute to the final score. More on the TRE and the country findings is available in "Telecom Regulatory Environment [TRE Assessment: A Five-Country Comparison]' by Rohan Samarajiva, Divakar Goswami, Helani Galpaya, Dimuthu Ratnadiwakara with contributions from Payal Malik, Joseph Wilson, Lorraine Carlos Salazar, Malathy Knight John, LIRNEasia,2007

however, be noted that this change in market structure took place without privatizing the domestic incumbent service providers. The partial privatization of the overseas carrier in April 2002 represents the only instance of government transferring control of a telecom undertaking to the private sector.

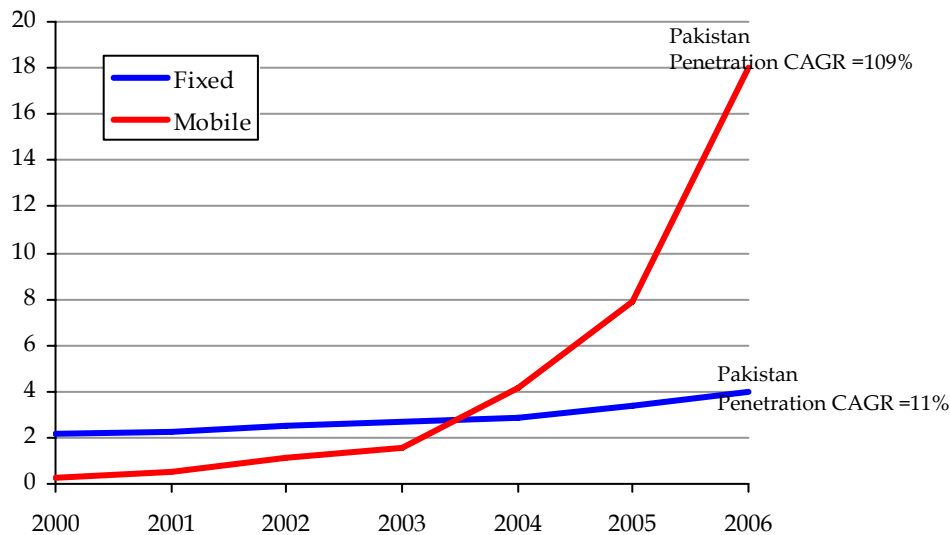
It can also be argued that if the Indian regulatory regime was more conducive to competition through better management of interconnection issues, spectrum and was able to deal with anti competitive issues that cropped up earlier than actually done; particularly in the WLL controversy, the ADC issue and a more efficient allocation of subsidies for USO, the performance of the Indian case could have been even better.

## 4.0 Pakistan

### 4.1 Competition and growth

The country researcher credits the early 2000s opening up of the sector for competition in general and the entry of two major service providers in the mobile sector in particular as the key reason for the surge in the growth and spread of telecommunications in Pakistan. Unlike the other countries in the study, Pakistan followed the text-book liberalization process where a first the regulator was established, then competition introduced and finally incumbent privatized.

**Figure 4.1: Pakistan penetration; fixed vs. mobile**



The Telecom De-regulation Policy of 2003, for fixed telephony, and the Mobile Cellular Policy of 2004 was to have paved the way for new entrants in the fixed and mobile telecommunications sectors respectively. The policy in awarding 38 fixed local loop licensees in 14 telecom regions of Pakistan called for the establishment of at least one network connection point in their respective licensed region within 18 months of receiving certificate to commence fixed line services. However, as of December 2006, only four companies had started operation since receiving commencement of service certificates [and five more became operational by March 2007]. Notwithstanding the above, the incumbent continues to enjoy 98 percent of the market share and more so, the fixed line teledensity has actually begun to decline slightly in the most recent past.

But the story in the mobile sector is completely different to that of the fixed. The country researcher believes that “It is fair to say that the objectives of the Mobile policy have been achieved.” With the large private investments that were facilitated with the granting of two mobile licenses in 2005, the competition shot up taking the total number of operators to six. The total mobile subscriber base grew by a remarkable eleven fold

between June 2004 and May 2007. The competition offered by the new entrants had brought the tariffs down and made it more affordable to subscribe to mobile telephony; particularly that of the new entrants'. This is seen by the rapid expansion of market share of the new entrants at the expense of the incumbent.

While the country researcher does not highlight any significant price war, what seems to be important is the consistent policy of the Pakistan policy makers and the regulator to sustain competition among operators created with the market entry, at least in the mobile sector. The policy of processing applications for the allocation of radio spectrum within a period of 30 days and creating control centres across the country with technological capability to assess potential interferences with other operators which allowed the clearance of spectrum applications expeditiously is a case in point. The country researcher points out that in the year 2004-05, a total of 103 licenses of WLL and value-added-services using radio spectrum was issued. Another policy that the country researcher expects would generate and sustain further competition in Pakistan is the implementation of mobile number portability which happened in early 2007. This new policy will allow subscribers to retain the same number if and when they change their service provider. With a relatively successful interconnection regime where operators are free to negotiate in accordance with the procedure laid down by the regulator subject to a Reference Interconnection Offer if an operator attains a significant market power, and a regulatory framework that has been able to minimize anti-competitive practices the level of competition has been sustained to drive growth.

Another common denominator across countries which has been true in Pakistan is the availability of very-low denominations prepaid cards which has significantly boosted the affordability levels driving the growth of prepaid connections at unprecedented levels

#### **4.2 A brief assessment of the sequencing of liberalization and contribution of the regulator in fostering competition**

The first wave of liberalization started in 1991, when the Government of Pakistan corporatized its Telegraph and Telephone Department. Then in 1996 with the Pakistan Telecommunications [Re-organization] Act the Pakistan Telecommunication Authority was established with the powers to grant and renew licenses for telecommunication services; to monitor and enforce the terms of the licenses; to receive application for the use of radio frequencies and to regulate tariffs for telecommunication services. The Authority was made responsible for safeguarding the interest of consumers and for encouraging fair competition in the telecommunications sector. However this was excepting the provision of basic telephone services where the corporatized incumbent which was made a company by the same Act and was given exclusive rights for seven years starting from January 1, 1996. The exclusive rights of PTCL however came to an end in 2003 and as earlier mentioned nine new companies now provide fixed local loop

services in Pakistan. Indeed, the Act was implemented with a view to sell shares of the incumbent to private investors and general public. The majority of shares of the incumbent were bought by a large middle-eastern operator in 2006, who now manages the incumbent fixed line operator as well as the currently second largest mobile operator which has seen rapid progress under the new ownership.

The Act also created a rather unusual National Telecom Corporation which was granted a license on a non-exclusive basis to provide services within Pakistan to the armed forces, defense projects, the government and its agencies. Besides all of the above the Act also established the Frequency Allocation Board with the exclusive right to allocate radio frequency spectrum upon an application made first made to the PTA.

The IT Policy of 2000 is another important milestone in Pakistan which inter alia set out to establish an 'efficient and cost-effective infrastructure that provides equitable access to national and international networks and markets'. Incidentally, this is where the country researcher refers to as time zero, or the start of the reform and liberalization process for this assessment. The next phase was the all important Telecom Deregulation Policy [TDP] of 2003 where the objective was to 'improve teledensity by promoting competition in the provision of telecom services and by ensuring that rural areas get connected.' It laid out details on license fees, performance obligations, and interconnection and co-location provisions. The TDP also exempted tariffs of both local loop and long distance international licensees from regulation by the PTA unless the licensee attained significant market power [if and when it acquires a market share of 25 percent]. It also created an Access Promotion Contribution, where a portion of the revenue generated by the net incoming international was to be applied for developing fixed line infrastructure. Finally it also placed certain obligations on the incumbent to facilitate market liberalization and install exchanges and lines in rural and under-served areas at the same annual average rate as it achieved during the exclusivity period until the end of 2008.

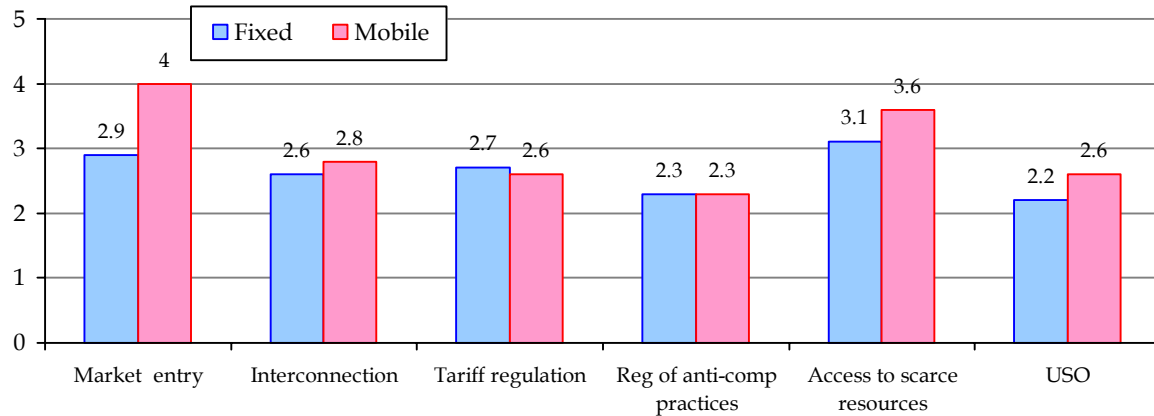
The last and one of the most important pieces of liberalization was the Mobile Cellular Policy of 2004 which was implemented to promote efficient use of radio spectrum; increase choices for customers of cellular mobile services at competitive and affordable price; encourage private investment in the cellular mobile sector; recognize the rights and obligations of mobile cellular operators; encourage fair competition amongst mobile and fixed line operators; and establish an effective and well defined regulatory regime that is consistent with international best practices.

As per the foregoing discussion, it is clear that Pakistan followed the text-book model of a sequenced reform and liberalization program of establishing an independent regulatory agency and promoting competition and thereafter the privatization of the state owned incumbent. In fact, Pakistan is the only country in this study that did so. Now consider the TRE assessment.

### 4.3 TRE assessment

Given below are the results of the telecom regulatory environment [TRE] survey among 40 stakeholders in the sector.

**Figure 4.2: Pakistan TRE**



The assessment favours the mobile sector over the fixed as in every other country in the study. In the mobile sector, the strong scores for Pakistan’s market entry and access to scarce resources reiterate the discussion in the previous section wherein the positives of the two aspects were highlighted. In fact Pakistan scores the highest for those two aspects as well as for interconnection among all countries after normalizing the scores to correct for the non-uniform distribution of respondent categories. The country researcher attributes the low score for tariffs to the high taxes imposed by government on telecom service providers and consumers where total corporate taxes were significantly higher in Pakistan than in other countries in the region [at the time the research was conducted]. In addition it was pointed out that there are a number of other taxes: activation tax, central excise duty, sales tax, and advance tax added in the consumer’s bill having an adverse bearing on the cost of telecom services. Besides, in the case of operators with significant market share, PTA regulates the tariff [for instance unlike in India which scored the highest in this dimension] which perhaps led to the lower score.

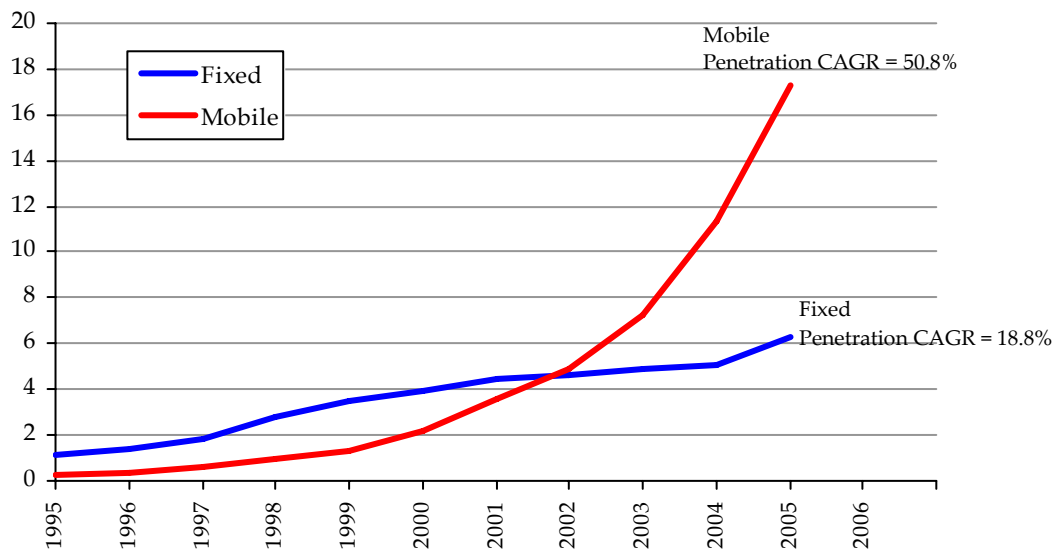
Pakistan also scored low in the regulation of anticompetitive practices which is thought to be reflecting the impression that the anti-competitive practices of significant market players are not properly monitored and controlled by the PTA. For instance it was only in 2006 that the Act was amended to grant the PTA the power to regulate anti-competitive practices of the telecom licensees. The rules to regulate the anti-competitive practices were yet to be made by the PTA at the time the research was conducted. Finally, the universal service fund which is to be administered by an independent not for profit company with a Board of Directors representing government, consumers and the industry has still not got off the ground and as of the time of writing the report no money had been distributed.

## 5.0 Sri Lanka

### 5.1 Competition and growth

Even though some sector reforms took place in the 1980 to 1995 period starting with the de-linking of the department of telecommunications from that of posts in 1981, licensing the first mobile operator in 1989 and legislation to establish a regulatory commission and corporatizing the incumbent in 1991, the country researcher has selected 1996 as year zero. The reason for this selection is that the significant reform action of licensing two new entrants in the fixed sector; using WLL technology, happened in that year along with progressive amendments to the regulatory commission. Partial privatization of the fixed line incumbent took place immediately thereafter in 1997 and the sector saw several other significant reforms in subsequent years.

**Figure 5.1: Sri Lanka penetration; fixed vs. mobile**



Analysis of the Sri Lankan sector performance reveals that the significant growth was, for the most part driven by competition enabled by wireless technology; both in mobile and fixed, as well as the new opportunities that opened up in the Northern province of the island after a ceasefire came in to being during the 2002 to 2005 period. The sudden turn of a 'cozy colluder' in to a 'disruptive competitor' also is conjectured as having contributed to the growth in recent times. While the wireless mobile equation is straightforward the wireless impact on the fixed sector came in the form of WLL licenses at the start of the liberalization and subsequently in the form of CDMA licenses issued to inter alia all fixed operators recently.

It is clear from figure 5.1 that the fixed sector growth spurt occurred fairly early after the first wave of reform. This was driven by the competition in that market brought on by

the two new WLL entrants in 1996 who also spurred the incumbent in to action. However it is noted that this burst actually began before the two new entrants got started; when the incumbent was jolted by the imminent entry of competitors. The incumbent itself was partly [35 percent and full management control] privatized in 1997 which no doubt helped in further increasing internal efficiencies of that firm to better compete. The improvement in the terms of fixed and mobile interconnection in 1998 was another milestone in creating further effective competition. While it is a fact that a significant amount of planning, design and development was done since then, particularly on the issue of licensing regional telecom networks in two difficult areas in the country, moving to a CPP regime and awarding unified licenses, they were never implemented. The ending of the international exclusivity to the privatized incumbent in 2003 did not have a significant impact; positive or negative in the penetration of the fixed line sector. In fact, contrary to conventional wisdom the financial performance of the incumbent actually improved.

The next fixed sector spurt was due to the issuance of CDMA licenses; first to the two WLL operators in 2005 and later to the incumbent a few months later. Given the significant cost advantage in deploying fixed phones on the CDMA 800 frequency the level of competition not just in the fixed sub-sector but in the entire sector was increased by a notch. Even though not supported by empirical evidence [data not available], it can be conjectured that the receiving party pays regime on mobile phones also would have had an additional impetus on the growth in the lower cost fixed sub-sector. Evidence suggests that noteworthy growth took place in the rural provinces, perhaps also driven by often stated view that tastes of the rural people to view a fixed phone as a status symbol being greater than that for a mobile phone.

The allowing of the incumbent to rebalance domestic tariffs over five stages between 1998 and 2005 however, saw nominal increases in fixed tariffs during the period under review. Both the monthly rental component and the per-minute charge increased. This was in stark contrast to the pricing of international calls which reduced dramatically with the important pro-competitive act of liberalization of the external gateway operators [EGO] in 2003, hitherto a monopoly of the incumbent. On the eve of the unlimited licensing; at a mere USD 50,000 for anyone who applied and met the technical qualifications, the incumbent slashed prices by an average of 70 percent. In all, 32 EGOs obtained licenses. Beyond immediate price reductions due to the newly opened up market a number of major investments were also undertaken by the operators who were 'waiting in suspense' to find out the new state of play at the end of the exclusivity. The incumbent's investments in the multi nation SE-ME-WE 4 undersea cable, a joint venture with the Indian incumbent on a cable between the two countries and recently the venture with the Maldivian incumbent for one between the two countries are examples. One of the two new entrants has also announced the laying of a separate submarine cable with a large Indian operator to link the two countries.



While there was some amount of fixed growth due to competition as discussed above, the growth in the mobile sector was far more pronounced. It is argued by the country researcher that soft regulation adopted by the regulator with a rather 'hands off' approach, particularly with mobile tariffs, was conducive to this growth. Figure 5.1 indicates at least two inflection points; one around 1999 and another in the 2003 period. It also shows rapid growth in the post 2005 period.

It is plausible that the competition related reasons for these are; the improvement in the fixed and mobile interconnection regime; the liberalization of the external gateway operations; and the unexpected strategic repositioning of a mobile operator fully owned by the incumbent driving prices down respectively in those years. In the issue of improving mobile interconnection with fixed, the incumbent and the regulator were engaged in a bitter court battle for two years on the issuing and implementation of an interconnection determination by the regulator. The matter ended with a USD 1 million fine on the incumbent. The issuance of EGO licenses as expected had a positive impact on the mobile sub-sector; the prices dropped drastically, bypass reduced and strong network effects and positive consumption externalities drove both incoming and outgoing international minutes. The 'disruptive competitor' i.e., the repositioning of one of the operators from being a passive follower to aggressive price leader also seem to have had a positive influence in intensifying the competition. With a change of management and backed by a massive advertising campaign this operator dropped prices to a level unheard of at the time. This move was immediately followed by the market leader who dropped prices deep but not to match the lowest level. This activity spurred the remaining two players also in to action in aggressively competing in what has become a highly competitive market by expanding coverage, introducing new services and improving quality of service and attempting various loyalty programs in the midst of the price war.

Another important factor in the growth of [mainly] the mobile sub sector was the advent of peace with the signing of a ceasefire agreement in early 2002. Samarajiva in a recent analysis describes this phenomenon as 'When private mobile operators were allowed to provide services after the Ceasefire Agreement of 2002 took effect, the war-weary populace of the Northern Province got connected at a spectacular rate rohan.'<sup>7</sup>

## **5.2 A brief assessment of the sequencing of liberalization and contribution of the regulator in fostering competition**

It is fairly clear from the foregoing analysis that the generally competition friendly environment which existed in the post liberalization Sri Lanka favoured the growth rates observed. However, the liberalization sequence did not follow the advocated path. For instance, all four mobile operators were already competing in that sub-sector even

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<sup>7</sup> Rohan Samarajiva, Precondition for Effective Development of Wireless Technologies for Development in the Asia-Pacific, Information Technologies and International Development, Winter 2006, Vol. 3, No. 4

before the Telecommunications Regulatory Commission of Sri Lanka [TRCSL] was made effective in 1996,<sup>8</sup>

Facilitating access to the sector was muddled. The same year the TRCSL was set up two new WLL entrants were allowed in the fixed sector through a transparent process. These new entrants were promised a duopoly and exempted from price regulation under certain conditions. However, soon thereafter the Government partially privatized the incumbent to NTT with full management control and undertook to issue no more wire-line licenses until 2002 along with a guarantee to allow adjustments to rentals, connections and tariffs that were to yield almost 150 percent nominal increase in five years. In addition, the Government allowed the newly privatized incumbent to use certain frequencies for WLL that was in conflict with the two new entrants restricted to WLL. The implementation of the various undertakings and the 'assumed monopoly' on the external gateway by the incumbent was at odds at various times with various other players and gave rise to a number of court cases, which for the most part dragged on increasing the uncertainty in the sector and working counter to the objectives of increasing competition.

The other significant new entry since 1996 was the issuance of 32 EGO licenses in 2003.<sup>9</sup> Here the process was most transparent. Everyone who applied received a license for USD 50,000 as long as minimum criteria were met. However, a point to note is that out of the 32 licensees only four are active in the wholesale market; the market leaders in the fixed and mobile sectors and two others who do not have a network but have interconnection agreements with operators. This result, emanating from the unresolved interconnection quagmire is obviously not what was expected and perhaps diminished the level of possible competition. The use of the word 'perhaps' is to note that it may be the case that no other EGOs would actually be able to operate profitably even if it were able to obtain satisfactory interconnection agreements with a PSTN; a revealed preference of sorts in terms of the number of possible competitors. The threat of competition triggered a massive reduction of prices by the incumbent and others soon followed wiping out the possible space to compete by the newly licensed EGOs. Related with the above is an international telecom levy [Vishva Gnana Fund levy] of LKR 3.80 per minute on all incoming calls to be used for rural rollout; two thirds to be given back to the operator on proof of such and one third to be used for the Government's e-Sri Lanka program. However, while the operators are liable for the levy, the rural rollout program disbursements have not taken place creating serious doubts in the minds of the operators besides the fact of creating opportunities for bypass.<sup>10</sup>

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<sup>8</sup> In 1996, an amendment to the 1991 Law strengthened the autonomy of the regulatory agency, including expanding it from a one-man regulator to a five-person commission.

<sup>9</sup> 32 includes all 3 fixed operators and 4 mobile operators. Further to this in 2006, a 3G license was obtained by the market leader of the mobile sub-sector on the payment of a specified fee.

<sup>10</sup> A local access fee of LKR 5.20 to the terminating network and interconnection fee of LKR 1.60 added to the levy of LKR 3.80 totals LKR 10.60 while a local call from a fixed line is LKR 3.00.

Sometime back, the regulator called for applications for a fifth mobile license, but it is publicly unknown what has happened to that process. A mobile operator recently announced plans for CDMA based fixed telephony on a license obtained with the purchase of another firm which had been assigned the same at some previous time.<sup>11</sup>

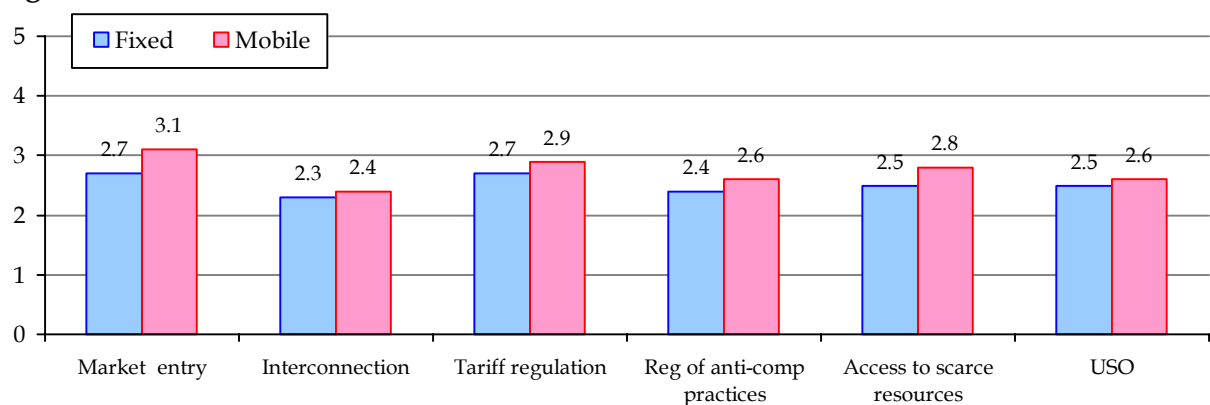
Another criticism of the liberalization process is that the access to international cables landing in Sri Lanka [SE ME WE 2, 3, and 4] were not unbundled and thus operators have to negotiate with those who have for access. A regular complaint is excessive charges for access and long operational delays by the incumbent.

Yet another area where the regulator has failed in promoting competition, in this case through regulating anti-competitive practices is due to its inability to take a decision on unified licensing, in spite of numerous policy briefs and high-level discussions on the subject over the last decade. The asymmetric rules where the incumbent fully owns a mobile operator and where another mobile operator is about to launch a fixed wireless service with a CDMA license is evidence of such anti-competitive practice. Introduction of CPP for the mobile sector is also pointed out as something that would have increased competition.

### 5.3 TRE assessment

Given below are the results of the telecom regulatory environment (TRE) survey among 135 stakeholders in the sector.

**Figure 5.2: Sri Lanka TRE**



The TRE scores are around the mid point for all six dimensions while the mobile sector scores better than the fixed sector in each. Market entry obtains the highest individual score which the country researcher feels is a result of the provision of CDMA licenses and the call for bids for the fifth mobile license. The country researcher is also of the

<sup>11</sup> It is unknown to the author how and when it was granted.

view that the regulator's 'hands off' stance of the mobile tariff regulation could be the reason for that dimension being rated high; only second to market entry. Interconnection is perceived to be the worst dimension. The low scores on interconnection are in line with what the country researcher highlights using a comment from a stakeholder that "the incumbent and the regulator messing around with interconnection"; to show it is an accurate reflection of reality.

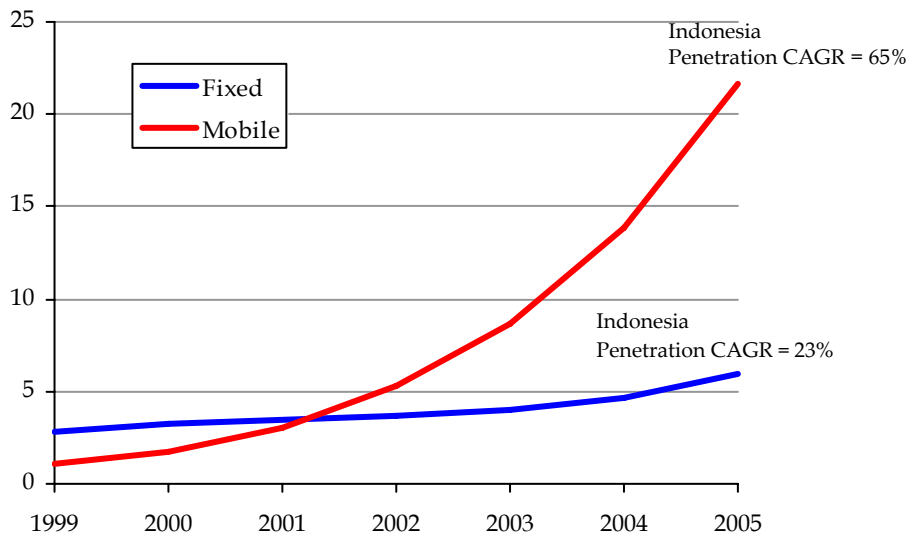
Thus the TRE scores reflected in the perceptions of stakeholders justify to a great degree the foregoing discussion on the growth driven by competition and the effectiveness of the regulatory regime.

## 6.0 Indonesia

### 6.1 Competition and growth

The country researcher has selected 1999, the year the new Telecom Act separated policy and regulatory functions in the sector and changed the legal framework to allow greater private participation. However it must be noted that although the Act provided the government the option to create an independent regulatory agency, that option was not exercised until 2003. Notwithstanding the above, Indonesia has seen a dramatic growth in the mobile sector largely fuelled by competition among the two former incumbents [one with a majority ownership by Indonesian government and the golden share controlled by Indonesian government in the other] and a new entrant owned by a foreign telecoms firm.

**Figure 6.1: Indonesia's penetration; fixed vs. mobile**



Over the period of post-liberalization, the performance of the Indonesian telecom sector in general was uneven, but wherever competition was introduced performance improved significantly. As can be seen in Figure 6.1, mobile growth has been remarkable surpassing the total number of fixed lines in 2001. This growth turned even more positive with the entry of a new CDMA based fixed wireless service provider in 2004. This was because its aggressive pricing schemes spurred mobile providers to offer lower prices and to target more actively the bottom end of the market. However, given Indonesia's geographic challenges, the majority of the infrastructure is still concentrated in the island of Java with an acute digital divide within the country.

Interestingly, competition in Indonesia has not come in via the traditional method of market opening for a large number of players. According to the country researcher, although Indonesia allowed private investment into the telecom sector through

concessions none of markets in the Indonesian telecom sector can be described as being competitive in the traditional sense [for instance using the Herfindahl-Hirschman Index]. The mobile sector is relatively more competitive than the fixed sector even though it is dominated by the incumbent that has a large market-share. But with two new entrants in 2006, competition is expected to increase significantly. In the fixed sector, even though the Government introduced a duopoly for local, long distance and international in 2002, in actual fact, except for the international gateway where a duopoly exists, other fixed services continued to be a government monopoly until fixed wireless access providers using CDMA were introduced in 2004.

## **6.2 A brief assessment of the sequencing of liberalization and contribution of the regulator in fostering competition**

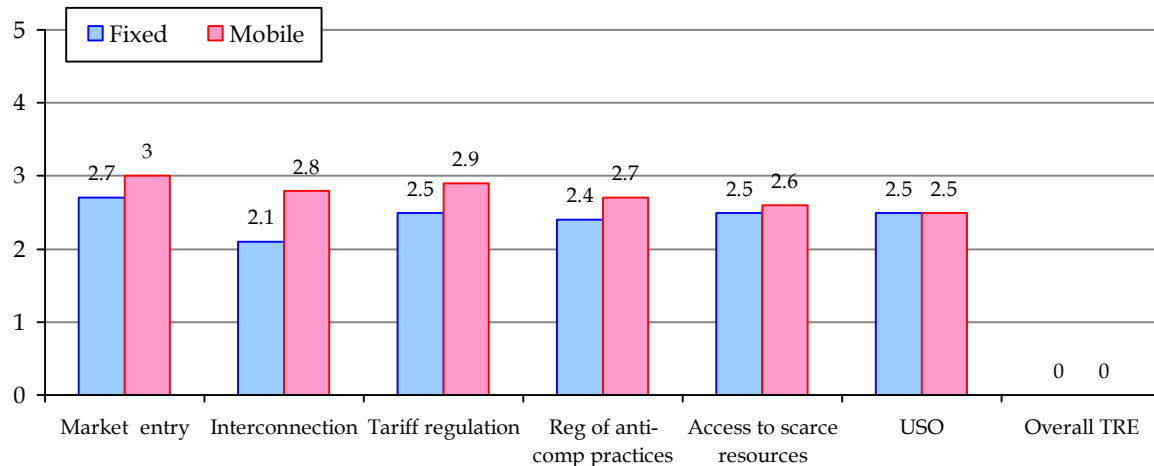
Indonesia, unlike many other countries has two regulatory bodies in the sector, but yet, according to the country researcher, does not have an effective regulatory environment. It has been pointed out that even though the Indonesian Telecommunications Regulatory Body [BRTI] was established in 2003 to be effective starting January 2004, it has been a 'transitional' body that would become fully independent at some future date. In the interim, BRTI is crippled since legal powers have not been transitioned to the body and it lacks enforcement powers. Currently, the Regulatory body's budget is allocated from the Ministry of post and telecom. In addition, the country research finds Indonesia to have a 'messy licensing framework' that constraint infrastructure rollout and requires individual licenses for different services.

In terms of sequencing liberalization, Indonesia partially privatized the fixed international incumbent in 1994 and the fixed domestic incumbent in 1995. This was long before the regulator was established and competition promoted; a complete reverse of the accepted sequencing plan.

### 6.3 TRE assessment

Given below are the results of the telecom regulatory environment [TRE] survey among 59 stakeholders in the sector.

**Figure 6.2: Indonesia TRE**



The TRE scores are better for the mobile sector and reiterates the sector environment as discussed in the foregoing sections. None of the dimensions seem to obtain significantly high or low scores and hover around the mid-point. Interconnection is seen as a significant problem. In terms of tariffs, mobile prices in Indonesia have remained high compared with other Asian countries and fixed prices are heavily regulated.

The Indonesian performance thus seems counter-intuitive; how is it having an almost explosive growth in a 'bad' regulatory environment with relatively low competition [in terms of market entry and tariff]? Goswami and Malik [2007]<sup>12</sup> investigating this outcome posit that by granting exclusivities to the state owned incumbents in their respective markets and by tightly restricting entry, Indonesia was able to guarantee a relatively stable investment environment which in turn attracted large investments from investors looking for a stable environment where investments are insulated from arbitrary administrative action, sudden shifts in policy or market conditions. While it may look like a complete contradiction to theory and evidence, the fact is that as long as the ends were met, the means did not matter. The authors however warn that "It would be hasty to conclude from this study that regulatory reforms are not necessary for obtaining good sector performance. Indonesia's sector performance may be the exception rather than the rule. The reform trajectory followed by Indonesia may not yield the same fruits if replicated in another country with different institutional endowments."

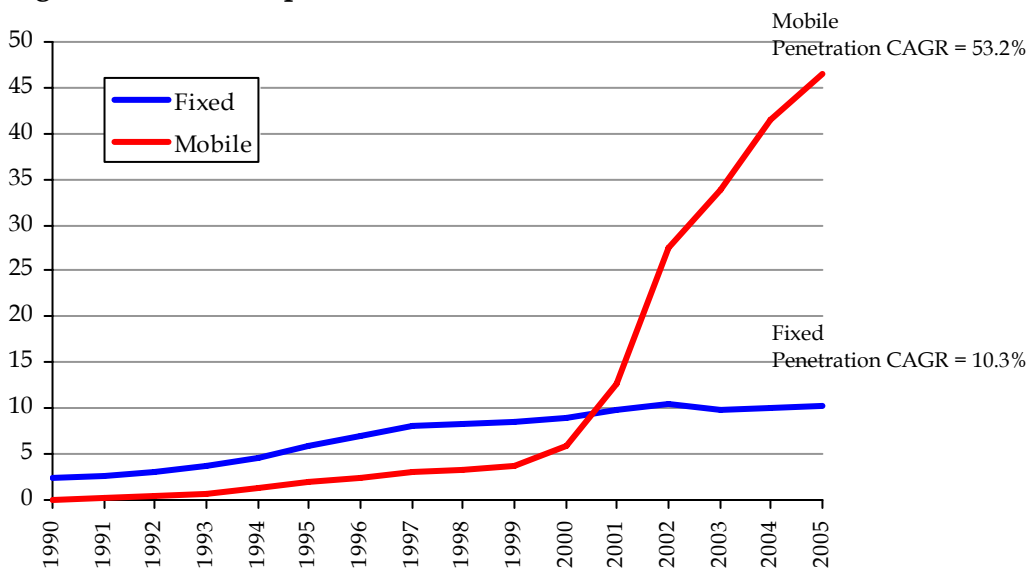
<sup>12</sup> Telecom growth in poor regulatory environments: A comparative analysis of Indonesia and India. Paper submitted for consideration for Communication Policy and Technology section (CP&T), IAMCR Conference, Paris, July 23-25, 2007

## 7.0 Thailand

### 7.1 Competition and growth

Thailand's telecom regulator; the National Telecommunications Commission [NTC] which was constitutionally mandated in 1997 was established after much pain at the end of 2004. However, by that time the sector was already in a complex state of play with severe competition in certain sub-sectors and hardly any in others. Given that liberalization of the sector began with private participation in 1990, the country researcher has decided to use 1990 as year zero of reform.

**Figure 2.9: Thailand penetration; fixed vs. mobile**



The growth in Thailand's telecom sector, driven almost completely by the mobile sub sector, has been quite spectacular particularly since 2000. The primary reason for this growth was simply competition. The discussion in this section will reveal how even under conditions that were not conducive for fostering competition, severe competition was suddenly brought to bear. The crucial role played by a "disruptive competitor", and work-around schemes adopted by others to sidestep restrictive Government policies drove this growth.

For a long period of time Thailand's two state-owned incumbent monopolies; one in domestic fixed services market and the other in external gateway market existed with not much activity. With a view to bring in private investments in to the sector, yet not lose the statutory monopoly of the state enterprises the Thais considered a number of options. Instead of going with the traditional method of issuing licenses for private operators to provide services, Thailand utilized a rather unusual scheme, at least in telecoms. Under Build-Transfer-Operate (BTO) agreements, the two state owned monopolies awarded concessions to private entities to develop networks, transfer the



assets back to them but with rights to use the network exclusively to provide fixed and mobile and other communications services. These exclusive concession contracts were awarded on a competitive basis based on maximum revenue share offered and generally was for 25 to 30 years. Starting in 1990, two concessionaires were selected for the fixed sector and two were selected for the mobile sector. All four were Thai owned, but the two fixed line concessionaires had minor foreign ownership.

Consider Thailand's fixed line growth since the reforms of 1990. The performance is poor. The growth has been hovering around zero for a number of years. One does not have to construct complex theories to explain the reason for this situation; it is because the concessionaires have no more room to grow. When the concessions were awarded limits were placed on the number of lines that could be installed by either concessionaire. One was set at 2.6 million lines with approximately 20 percent revenue share and the other at 1.5 million with some 43 percent revenue share during the 25 year agreement. Even though the ceilings have been met, no new concessions have been issued and thus the fixed line growth has seriously declined. It is not surprising that both these concessionaires have been registering losses.

Unlike in the fixed line sub sector the mobile sector concessionaires were not subjected to any numerical limits. In addition the revenue share was also lower; ranging between 12 to 25 percent on time blocks. But, contrary to simple expectations, the mobile sub sector's performance, in terms of growth in numbers, was not satisfactory from the beginning. In fact the post liberalization period can be segmented in to two separate periods; until 2000 and thereafter. The former period was marked by lackluster growth while the latter by explosive growth.

The growth in the former period was limited by collusive and anti-competitive practices carried out by both operators. One of the critical activities was price collusion where both operators had fixed monthly subscription of THB 500. The reason for this is perhaps the concession condition of a THB 200 a month as access fees to the incumbent. Another was 'tied selling' where subscribers had to purchase the phone instrument only from the service provider since the network access code was locked and could be used only with the particular operators SIM card. It is reported that the same instrument could be purchased for one fourth the price in the Philippines indicating a very high mark-up of which there was no revenue share with the original fixed line incumbent. While such practices should have been regulated away, with a lacuna the non existence of neither a sector regulator nor a competition commission they continued undeterred. All this changed with the emergence of two more players in the market. This happened because one of the two original concessionaires sold extra spectrum it had been assigned to two new entities. The third and fourth operators also obtained a concession from the state owned fixed line entity under the same conditions and entered the market. But, suddenly the new players were not willing to participate in the collusive games of the two concessionaires and the entire strategy was turned upside down. Thailand had just

got a couple of 'disruptive competitors'. For the first time in a decade the THB 500 monthly subscription was reduced to THB 300 by one of the new entrants and the others followed suit. It also waived various fees associated with registration and also waived deposits. In fact one of the most important changes happened just before the new operators arrived in the market. The mere threat drove one of the existing operators to introduce pre-paid services which every one else followed. Not content with the drastic changes one new entrant did away with the practice of locking its network access codes opening the flood gates for competition in the phone instrument market as well. Others followed suit and soon switching costs declined dramatically. Soon effective tariffs were coming down and a price war had started. By 2001 the annual mobile growth reached 120 percent from just 20 percent two years prior to that. However, later one of the new entrants were bought over by one of the original concessionaires.

By the end of 2005, the market shares of the major three operators as measured by their number of subscribers stood at 54, 29 and 15 percent across the country and the penetration per 100 households had increased to almost 47. The number of mobile subscriptions that stood at slightly over 30 thousand at end 1990 increased to 30 million at end 2005.

## **7.2 A brief assessment of the sequencing of liberalization and contribution of the regulator in fostering competition**

As in the case of a number of countries discussed earlier, Thailand did not follow what is commonly referred to as best practice of sequencing in liberalization; establishing an independent regulator and promoting competition and thereafter privatization of state monopolies. In fact when the NTC was established to regulate licensing, spectrum management and supervision of telecommunications operators in November 2004, all currently operating service providers were already present. In fact, even the privatization of the state owned incumbents were expected to be privatized before the establishment of the regulator, but did not happen due to a conflict-of-interest litigation that annulled the pending privatization Electricity Generating Authority of Thailand, another large SOE.

Consider the contribution of the regulator in fostering competition. Thailand's story is one where competition has emerged in spite of a regulator. Given the lack of neither a regulator nor a favourable regulatory regime at the time of liberalization, market entry and licensing in the early period was fraught with numerous problems as explained earlier. Frequency allocation was also done on a non-transparent basis. In fact, the Thai law does not stipulate how frequencies are to be assigned. It merely states that the NTC is empowered to determine the fee for frequency usage and that frequency usage licenses cannot be transferred. The country researcher points out that in the past, frequencies had been assigned on a first-come first-served basis; and on one occasion a certain mobile concessionaire was given such a large frequency band that it was able to

resell excess to two new operators [which however opened the door for perhaps unexpectedly aggressive competition]. According to the country researcher, even at present, it remains unclear how frequencies are to be allotted and the given the political turmoil marred by allegations of conflicts of interests and fraud etc., private operators remain uncomfortable with the regulatory uncertainty and have decided to wait for some resolution to the political wrangling. Interconnection between private concessionaires and SOEs is not specified in the concession contracts posing serious problems. This has proved chaotic leading to sharp deterioration in the quality of service. As discussed earlier, tariffs are agreed upon by the SOEs and their concessionaires; thus, price adjustments had been infrequent, except in the mobile sector where a disruptive competitor turned the tables.

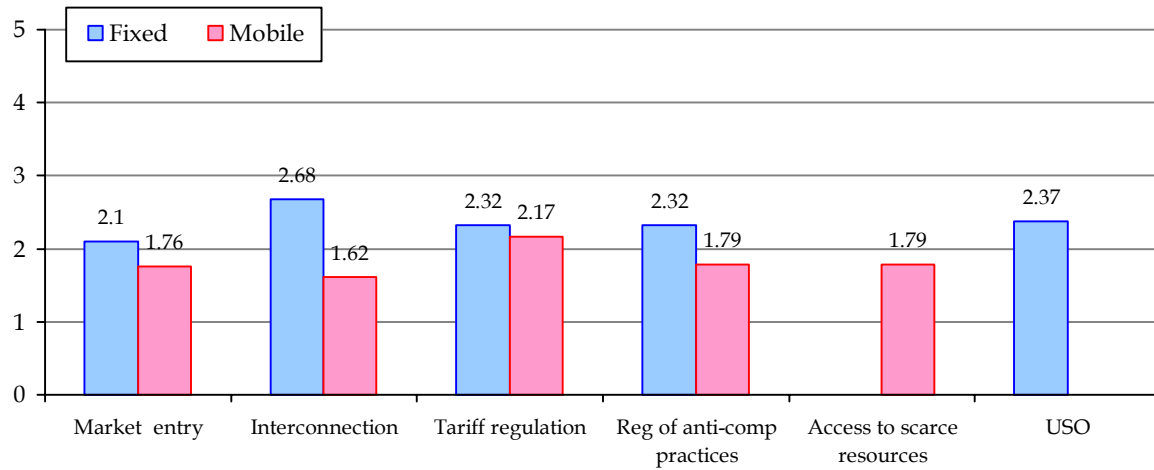
Currently, two of the three major mobile operators are foreign operators; and as has been discussed, competition between them was fierce, benefiting consumers through fierce price wars. However, the Ministry of Commerce and the NTC are currently investigating the qualifications of the two foreign operators and whether they are in violation of the Telecommunications Act, which limits foreign equity holdings to a given percentage. According to the country researcher, should the NTC decide to pass rules that include indirect foreign equity holding in the calculation of the foreign equity share, then they would have to divest leading to the share falling into the hands of one of the local business tycoons that already wield overwhelming economic and political power in the Thai market. In terms of USO, in 2006, the NTC announced a contribution to the USO fund at 4 percent of revenue for all licensed operators that did not invest in remote areas. It also announced it has the authority to decide how the Fund would be utilized to provide universal services creating ambiguity on the mechanics of disbursement of the money.

To briefly conclude, competition in the Thai telecom has been confined by the terms and conditions of SOE's concessions that disadvantaged private operators against state counterparts. The inordinately long delay in the selection of the commissioners of the National Telecommunications Commission meant that no new operators could enter the market during the year 2000-2004 as licenses could not be handed out in the absence of a functioning regulatory body and no new concessions could be signed since the statutory monopoly of the two state enterprises had already been abolished when the Telecommunications Act was promulgated. And even after the NTC began to operate in November 2004, it took almost a year and a half to settle the details of the licensing regime.

### **7.3 TRE assessment**

Given below are the results of the telecom regulatory environment [TRE] survey among 31 stakeholders in the sector.

**Figure 7.2: Thailand TRE [not weighted]**



Given the low number of responses, Thailand TRE has not been weighted and thus, is not directly comparable to the TRE scores of the other five countries in this study.

Scores do not seem to vary across one dimension to another, but are relatively lower for mobile services; unlike in the other countries. The scores clearly reflect a general lack of confidence in the NTC. The country researcher feels this could be due to the fact that the selection of commissioners was marred with many alleged rigging such that the process took several years to complete. As a result, the public questioned the integrity, impartiality and capability of the NTC.

The country researcher points out that the lower mobile scores reflect the current interconnection turmoil, whereby an unequal level playing field exists among competitors. Issues regarding frequency allocation and anti-competitive effect of the terms and conditions of concessions are external to the NTC as the law stipulates that frequency allocation can only undertaken jointly between the NTC and the NBC [National Broadcasting Commission] whose commissioners have not been appointed due to various political reasons. Finally stakeholders are not satisfied with the allocation of USO funds since the disbursement of the fund is not transparent.

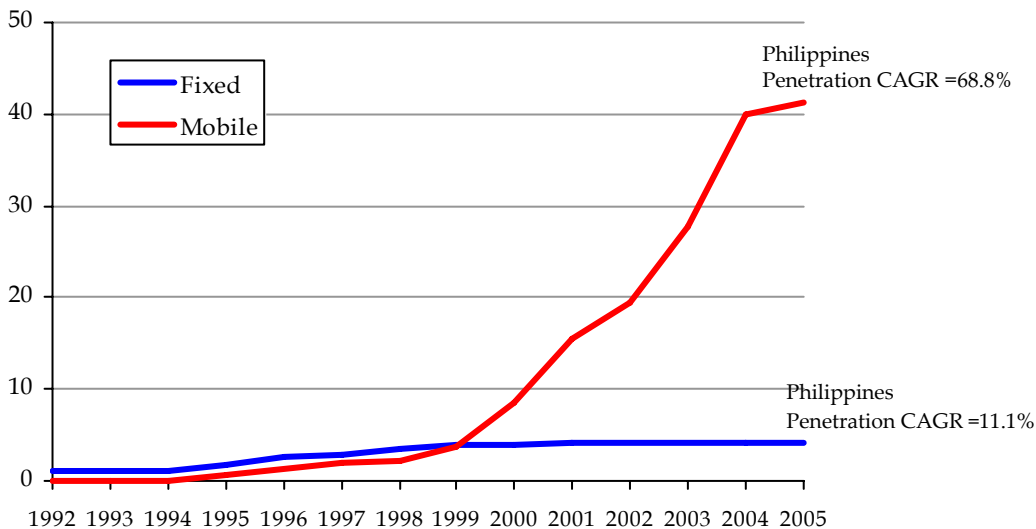
In contrast, tariff regulation receives the highest score for mobile. Given NTC has not been setting prices for any particular service, as competition in the market has been strong, the outcome has been positive.

## 8.0 Philippines

### 8.1 Competition and growth

The Philippines is an interesting case where under a generally weak regulatory regime where even market entry was cumbersome relative to other countries in the region, besides perhaps Indonesia [but the regulator having had the courage to take some crucial market friendly decisions] dramatic growth in the mobile sector took place due to fierce competition.

**Figure 8.1: The Philippines penetration; fixed vs. mobile**



Fidel Ramos, the newly elected President of The Philippines in his inaugural address in June 1992, undertook to “break up the oligarchic cartels and monopolies that had long dominated the Philippine economy” as one of the central tasks of his government. In terms of telecommunications, the Philippines was dominated by incumbent Philippine Long Distance Telephone Company [PLDT] which had the sole authority to operate a national communications network. Interestingly, the ownership of PLTD, according to the country researcher was “taken over by a group of Filipino businessmen close to the then President” in 1967. Thereafter, under martial law, this company had consolidated its monopoly status and privileged position, and had been under very little pressure to expand its network or improve its services. The need for reforms therefore had been paramount because, according to the country researcher, “[Even after Marcos], PLDT’s owners used familial ties to the President and its political influence in Congress and the Supreme Court to protect its position. Monopoly rent was thus captured for private benefit and was growth-hindering”.

The new Philippines government was therefore, adamant to break the monopoly and expand the market via competition. It mandated interconnection and allowed new

players, but due to implementation issues of interconnection for the most part, the growth in the market in the early to mid 1990s was not significant. One of the primary causes of this slow growth in the early years of reform was the focus on fixed lines. While a more detailed account of the sequencing of the reform process is given in the next section it is important to note that starting in 1993, a program called the Service Area Scheme [SAS] was utilized as a means to attain the social goal of increasing the availability of fixed line phones by mandating cross-subsidized roll out and provision of services in rural areas. While it had some impact, the numbers were not at all significant as seen in Figure 8.1.

The revolution happened in the mobile sector. Undermining the SAS, which was modeled on fixed line telephone usage and teledensity count, mobile phones, became substitutes for fixed line telephones as they became more affordable by the late 1990s. The country researcher points out that competition among the three mobile operators started in earnest when one introduced pre-paid services with free SMS services in 1999. This event began a sustained period of competition that saw an almost exponential growth in the mobile sector. However, without a significant price war possible due to unresolved issues with respect to interconnection and the ratio of voice tariff to SMS remaining high, Filipino mobile operators started competing on value added services [VAS] by introducing innovative packages. Soon Philippines saw a rapid expansion of the mobile sector driven by SMS to such an extent that it earned the moniker 'SMS capital of the world' with some 250 million SMS per day averaging six per user per day. The country researcher explains this phenomenon as follows: "As mobile teledensity rose, it became clear that Filipinos were not using their mobiles for voice calls. Rather, they were using their phones to send text messages [SMS]." The importance of data services in Filipino mobile telecoms firms can be seen in their financials where their non-voice revenues are at least equal to the share of voice revenues.

It is pertinent to consider what explains the tremendous growth in SMS that has driven the growth in mobile in the Philippines at benefiting both consumers and service providers. The country researcher explains this phenomenon using a number of reasons. One, the high ratio of SMS to voice calls; after its free introductory phase, telecom firms billed each message at US 2 cents while voice calls cost between US 9-15 cents per minute besides promotions for prepaid services include unlimited SMS during varying time periods of two, five, or 30 days, depending on a flat fee. Two, Filipinos are said to be culturally sociable and are always in touch with their family members and friends, and SMS has become the cheapest way to do so. Three, SMS has become a boon to the countless overseas Filipino workers [some 10 percent of the total population] and their families who have found an inexpensive way to keep in touch without needing to pay the expensive cost of overseas calls. Philippines has become a leader in developing various SMS applications and now have numerous applications from reporting crimes to booking movie tickets to sending remittances from overseas and passing on credit from one phone subscriber to another.

## **8.2 A brief assessment of the sequencing of liberalization and contribution of the regulator in fostering competition**

Reforms in the Philippines telecom sector started with President Ramos signing Executive Order [EO] 59 in February 1993 that required interconnection among all authorized telecommunications companies. The EO also empowered the regulator, National Telecommunications Commission [NTC], to set the terms of interconnection in case parties could not arrive at a settlement and to establish penalties for violations. It enumerated severe penalties for refusal to interconnect. Meanwhile the NTC also announced additional mobile licenses would be granted in addition to nine companies that had already obtained telecommunications franchises but were unable to operate without interconnection being made compulsory and mandatory. Thus, EO 59 was a central aspect of liberalizing the sector.

The next key piece of reform was the signing of EO 109 in July 1993 and implementing the same by NTC in September 1993. Known as the Service Area Scheme [SAS] this required all authorized International Gateway Facility operators to install and maintain a minimum of 300,000 fixed lines within three years and for cellular mobile telephone system [CMTS] operators to install at least 400,000 telephones lines within five years. In their roll-out plans, telecom operators were required to provide at least one rural exchange line for every ten urban lines. Finally, the telecommunications network had to be interconnected in accordance with EO 59. However, only four of the eight telecom firms that initially joined the SAS accomplished their required fixed line rollouts. Those who did not, cited law and order situation in some areas, delays and conflicts over permit issuance at the local government level, environmental issues raised by residents of the area and the 1997 financial crisis. None of the telecommunications companies fulfilled the requirement of a one in every ten line rural-urban deployment ratio. The biggest criticism of the SAS was that it preserved PLDT's dominant position.

The last piece of important reform took place in March 1995 with the passing of the Telecommunications Act of the Philippines. The Act institutionalized liberalization and competition and emphasized the role of private enterprises in the provision of telecommunication services. It also affirmed the policy of cross-subsidization of the previous SAS and provided for the privatization of all existing government communications facilities. The Act also identified NTC as the principal administrator of the law while the Department of Transportation and Communications was tasked to formulate and recommend national policy guidelines. However, the Act committed some serious blunders; chief among which was instead of bolstering the provisions of EO 59, which mandated interconnection it muddled and reduced the role of the regulator in the process. The country researcher sums up by saying "Despite the existence of bills on interconnection that could have been incorporated into the law, the lobbying of PLDT coincided with a senator's self-interest and won the day," adding

that it showed “how Congress could be obstructionist. Far from encouraging reform, the authors of the Act sought to reverse the process that the executive had laboured to create.”

However, it is pertinent to note that the NTC was created well before liberalization happened; in July 1979, ‘to supervise and regulate telecommunications, broadcasting, and the radio spectrum’. Being a quasi-judicial body, NTC decisions could only be challenged in the Supreme Court. According to country researcher, the “NTC regulatory powers were weak because it lacked funding, was ill equipped, and did not have sufficient staff members who could adequately carry out its regulatory function and induce a rich and influential monopolist to provide quality service and fulfill its social obligations. Compared to PLDT, a profitable company that could afford to hire the best engineers and accountants, the NTC was badly under-staffed.” Another key problem with NTC was ‘regulatory capture by the regulated’. The country researcher has detailed how the NTC was reliant on PLDT for information, which it had no way of verifying with its personnel lacking equipment, technical expertise and training. In spite of the forgoing, the NTC was authorized to establish a floor or ceiling on tariffs when there was ruinous competition, a monopoly, a cartel, or a combination of these in restraint of free competition. However, the law was silent on what ‘fair and reasonable rate of return’ meant. All the while interconnection issues were unresolved. Thus, while liberalization opened the telecommunications industry to competition, the new legislations left many issues unresolved, making regulation more difficult, and with the net effect of benefiting the dominant player, PLDT.

In terms of the six dimensions of the Telecom Regulatory Environment [TRE], the Philippines has a rather cumbersome two-step process of market entry; with an application [franchise bill] having to be approved by both houses of Congress, which means a company must invest a considerable amount of time in entering the market. Besides these approvals various other time consuming certificates have to be obtained which also involves public hearings and opportunity for the incumbent to object [frequently seen]. However, in the face of such a problematic environment the NTC decided that pure VAS providers did not need to secure a franchise from Congress and would only need to secure a license from the NTC to operate. The regulator demonstrated this when it ruled that VOIP service is a type of VAS which only requires a license from the NTC. Allocation of scarce resources has been opaque at the best with the government having the right to allocate the spectrum to service providers who will “use it efficiently and effectively to meet public demand for telecommunications service and may avail of new and cost effective technologies in the use of methods for its utilization”. Interconnection is a problem in the Philippines. Even though interconnection is mandatory the Telecom Act had muddled the process by not clearly specifying the role of the regulator in the interconnection regulatory process between two service providers. The country researcher has pointed out that currently, the NTC is working on interconnection templates in order to hasten the interconnection process.

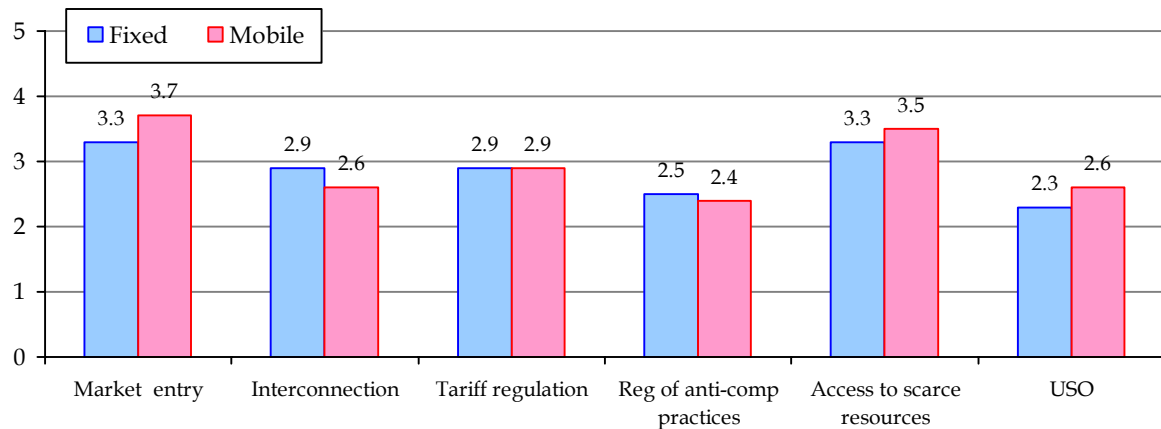


In terms of tariffs, the Act has fully deregulated tariffs and the regulator comes in only when complaints are brought to the regulator when pricing are deemed anti-competitive. A pertinent case is when the regulator supported the entry into the market of a third player, by ruling that its promotion offer of unlimited calls and SMS on-net was not anti-competitive as claimed by the existing players. Finally in terms of USO, the Philippines does not have an explicit policy besides SAS program which aim to increase telecommunications access based on fixed lines availability.

### 8.3 TRE assessment

Given below are the results of the telecom regulatory environment [TRE] survey among 52 stakeholders in the sector.

**Figure 8.2: The Philippines TRE**



As in the case of other countries in the assessment, regulation of the mobile sector received higher scores than the fixed sector, on all aspects. The foregoing discussion of the reform and liberalization process and the specific references to the various dimensions of the TRE provides the background to interpreting these results. While only three players compete in the mobile sector and market entry is relatively cumbersome the recent actions of NTC seem to have created a perception that effective market entry with VAS for instance can be relatively easier. The low scores on interconnection are understandable given the existing complexities, and so is the regulation of anti-competitive practices where PLDT has been able to get away with much. The low scores on USO is also logical given the failure of SAS and the lack of any other effective scheme to address the issue.