bemobile cross-submission to NICTA's second Discussion Paper on the need for an RSD in mobile services

28 June, 2012

Introduction

bemobile welcomes this opportunity to provide comments on the submissions which have been made on NICTA's Public Inquiry into the need for a Retail Service Determination regarding certain mobile telephony services; Second Discussion Paper issued 4th May 2012.

In the absence of comment from any other party, this cross-submission deals solely with the submission made by Digicel and the accompanying economic paper by Prof. Martin Cave and Dr. Chris Doyle.

We commissioned Professor Justus Haucap, Director of the Dusseldorf Institute of Competition Economics (**DICE**) and Chair of the German Monopolies Commission, and Emma Lanigan, Director of Link Economics, to critically evaluate and comment on the independent opinion paper prepared by Prof. Martin Cave and Dr Chris Doyle submitted by Digicel. Prof. Haucap and Ms. Lanigan have provided detailed comments on the appropriateness of the papers cited by the Cave report on competition in the PNG market and the report forms an integral part of this cross-submission.

Contents

Executive Summary

Digicel’s submission is very reliant on the views of its economic experts and suggests NICTA’s interpretation of the theory is “seriously flawed”. We show how those experts have themselves misinterpreted the economic literature. Economic principles and even one of the academic papers that is supposedly of most relevance to the PNG market suggests that regulatory intervention on on-net/off-net retail price discrimination would increase long-term welfare and strengthen competition when applied to the PNG market, given the strong potential for ongoing discrimination to severely restrict the ability of small networks to compete.

Digicel also suggests variously that retail prices will increase, investment will decrease and the rate of growth and penetration will reduce as a result of NICTA’s proposed RSD and that as a result, government objectives for the ICT sector will not be met. Digicel provide plenty of rhetoric but little evidence either from economic literature or from international examples to support its views. We by contrast show that competition will increase as a result of the intervention and show that in the comparative countries referenced by both Digicel and NICTA, retail prices fell when the regulator intervened to remove on-net / off-net retail price discrimination

Digicel also tries to suggest that NICTA does not have the authority to pursue the proposed RSD but this is manifestly wrong. NICTA has the primary responsibility for promoting and maintaining competition in the ICT industry and is charged with exercising the powers under the Act to promote this objective. We take this opportunity to remind NICTA of its powers under the Act.

Finally, Digicel makes a number of criticisms of NICTA’s conclusion on SMP. We show that those criticisms do not stand up to scrutiny. Any contention that Digicel does not have SMP is absurd under the circumstances.

Digicel and its experts misinterpret the economic theory

Digicel accuses NICTA of "theory –induced myopia" in its interpretation of the wealth of economic literature on the issue of on-net / off-net retail price differentials claiming that the models "assume saturated markets and are completely divorced from PNG's historical, economic and developmental context".

It commissioned a review of the literature from economists Prof. Martin Cave and Dr. Chris Doyle who were asked to consider the academic work on on-net / off-net retail price discrimination used by NICTA to inform its views expressed in its Discussion Paper. The economists report will be referred to as the Cave/Doyle report hereafter.

The Cave/Doyle paper states that "what matters is whether externality effects induced by price discrimination between on-net and off-net calls are necessarily detrimental from an economic welfare perspective".

Going on to state that "*in relation to the effects of price discrimination of on-net and off-net call tariffs on welfare, the papers Hoernig (2008) and Sauer (2011)* ***are the most relevant****"(emphasis added).* It notes that *"these papers are* **not** *cited in the NICTA discussion paper".*

The Cave/Doyle paper concludes:

"much of the economic theory literature has suggested that price discrimination between on-net and off-net tariffs is detrimental for welfare".

They say that most models assume that all potential customers are served in the market and that:

"this assumption fails to capture the fact that in PNG many potential customers do not currently subscribe to a mobile network. In other words there is much potential for market expansion. The presence of market expansion possibilities has been shown in the economics literature [i.e. in the Hoernig and Sauer papers] *to result in price discrimination as having beneficial effect on welfare".*

We commissioned a review of the Cave/Doyle paper by Prof. Haucap and Emma Lanigan which accompanies this cross-submission and they agree that, under certain specified conditions (where markets are effectively competitive) price discrimination can be welfare enhancing, however, none of a range of specific conditions listed by Sauer are met in PNG and as a result, the Sauer model cannot be applied as proposed by Cave and Doyle to the PNG market. In fact, Haucap and Lanigan explain that price discrimination by Digicel in PNG is likely to be anti-competitive and welfare reducing in the long-term.

In summary of the Sauer paper which shows that on-net / off-net discrimination can be welfare enhancing, Haucap and Lanigan note that the conditions under which the model shows it to be welfare enhancing is in a case with: 1) two symmetric operators with 50% market share, 2) balanced calling patterns among them, 3) small termination mark-ups, 4) limited scope for market expansion and 5) no incentive for market foreclosure, where all five conditions have to be cumulatively fulfilled. In contrast to Cave and Doyle, Haucap and Lanigan do not believe that this describes a situation which is "most relevant" for PNG. Indeed, none of these five conditions are satisfied for PNG.

Furthermore, the Sauer paper (and the Hoernig paper) focuses entirely on the case of non-linear pricing. Non-linear pricing best represents the situation in the post-paid market where customers pay a monthly fee and a per minute charge, but PNG is almost entirely a prepaid market.

Haucap and Lanigan go on to show that:

1. "On-net/ off-net price discrimination is likely to severely limit competition in the present PNG mobile market"
2. Market growth and the pace of growth in mobile teledensity are typically found to be highest when there is effective competition"
3. If the market is characterised by a monopoly or collective dominance, even with some fringe competition, growth will be slower as monopolies tend to keep up prices".

Haucap and Lanigan cannot, for numerous reasons explained in detail in their accompanying paper, agree with Cave and Doyle that price discrimination is likely to be welfare enhancing in the present PNG market but instead concur with NICTA that on-net / off-net price discrimination is likely to severely limit competition in the present PNG mobile telecommunications market.

Moreover, Haucap and Lanigan point out that the Hoernig (2008) paper highlighted by Cave and Doyle as being one of the two most relevant papers to NICTA's analysis specifically recognises the trade-off between: "lower consumer surplus in the short run for a reduced probability of exit of the small network in the future."[1] This is consistent with the view that where networks are asymmetric then even if regulation reduces consumer welfare in the short term through higher on-net prices, it is a measure that can protect the long-term interests of consumers through strengthening ongoing competition.

In respect of the appropriate form of regulatory interventions, Haucap and Lanigan conclude that:

- Relying on competition law alone risks runs a considerable risk of irreversible damage to competition due to the significant potential for exit by one of more of the smaller networks.

- It is apparent from the economic literature, analysis of the consumer decision-making process and actual outcomes in other jurisdictions that reliance on wholesale regulation alone will often not remove the incentives that a dominant network has to restrict competition through on-net/off-net-price discrimination.

- NICTA's proposal to implement a non-discrimination rule will be less distortionary than the application of direct regulation of retail pricing.

[1] Hoernig (2008), pp. 18-19.

- Cave and Doyle's proposal that NICTA formulate a pricing rule through observation of pricing structures in markets where competition is effectively competitive is more obtrusive than the non-discrimination rule proposed by NICTA. Moreover, the on-net/off-net differentials observed in effectively competitive markets could well harm competition and overall welfare if applied in a market where market shares are highly asymmetric.

PNG's objectives for the ICT Sector are in fact best met by implementation of the RSD

Digicel has described the objectives for the ICT sector and proposed that imposing the RSD will stifle the achievement of those objectives. We disagree. The objectives for the ICT sector are to promote economic growth and social development and an important outcome of the proposed regulatory intervention is whether it will promote competition, greater investment in networks and uptake of services (at affordable prices).

The question is therefore about whether intervention will promote those goals. We agree with NICTA and believe that RSD will ensure that the ICT industry contributes to the greatest possible extent to the "long- term economic and social development of PNG."

Digicel describe mobile expansion being in a "land grab" phase[2] and state that there is a clear risk that "penetration growth will slow or reverse under the proposed RSD"[3]. However, as Haucap / Lanigan have shown, the reverse is true in PNG and "market growth and teledensity are typically found to be highest when there is effective competition" going on to note that the "retail prices in PNG appear to be high by international comparisons and conjecture that the first order effect of limited competition is at work, resulting in comparatively low market penetration levels."

Much is made of the growth and penetration point by Digicel which states that the views of its independent experts seriously undermine NICTA's case, on a point that is "***absolutely critical*** for market development in PNG, pivotal to NICTA's argument and on which Digicel has previously made submissions to NICTA". This line of reasoning should now be set aside in light of the Haucap / Lanigan paper that shows that Digicel's experts have mis-interpreted relevance of the economic papers.

[2] Digicel submission para 12.
[3] Digicel submission para 15.

Competition and not retail prices are likely to increase if an RSD is imposed

Digicel states that "increasing customer numbers is *more important than maximising revenue per customer* so operators offer moderate tariffs designed to attract customers" (*emphasis* added) [4]. This seems to imply that once Digicel has attracted a sufficient number of customers it will then start increasing prices in order to maximise revenue. This aligns with its proposition that it is in a "land grab" phase. However, if Digicel's intention is to increase prices anyway (presumably unless competition is effective and an increase is difficult to implement), then it makes for convenient PR to blame NICTA for the increase which is presumably the reason for its statement at 3.5(b) that "a profit maximising firm faced with NICTA's proposed regulation *will increase on-net prices* to the detriment of consumers". Digicel have clearly set out its stall to increase prices regardless of NICTA intervention and we believe that Digicel's ability to increase prices will be stifled only by competitive constraints but competition must first be allowed to take hold – and the RSD is crucial to that goal.

As noted by Haucap and Lanigan "*the risk of softening competition through an on-net/off-net price discrimination ban appears to be rather low, as bemobile has to price aggressively and to undercut its rivals in any case in order to acquire customers. In addition, the degree of competition in the mobile telecommunications market in PNG has not appeared to be strong so far, given the dominance of Digicel"*[5]

[4] Digicel submission para 44.
[5] Haucap and Lanigan para 33.

Digicel's comparisons made with other countries are misleading and ill-informed

Digicel argues that "there are significant and relevant differences between PNG and the comparator countries chosen by NICTA"[6] and uses mobile penetration, income levels and time since liberalisation in an attempt to show that PNG is different and therefore does not warrant a non-discrimination ban. We disagree with the conclusions reached by Digicel on each of these measures and question the reliability of the evidence provided by it in forming its arguments.

Firstly, Digicel examines the income levels of some countries that have adopted retail price intervention and concludes that "PNG is quite different to NICTA's comparator countries in respect of average income"[7]. We also note that the comparator countries have very wide range of income levels from one of the richest nations on earth (Qatar) to one of the poorest in Kenya. However if this tells us anything, it tells us that anti-competitive on-net / off-net discrimination is income agnostic and that it is the market structure that matters for competition and not the income of a country's citizens.

Secondly, Digicel argues that penetration or teledensity is a critical difference - as relied on by its independent economic experts in their interpretation of the economic literature, however as is shown in the Haucap / Lanigan report, low mobile penetration does not imply that a price discrimination ban will not be welfare enhancing. The risk that price discrimination will foreclosure competition is significant and therefore market growth will likely be restricted without regulatory intervention. Growth in market penetration and associated benefits are likely to be strongest when the competitive intensity is highest – this is not the case where price discrimination by the dominant network forces out competition.

Thirdly, Digicel argues that the time difference between liberalisation and regulation is important as it shows the time that a regulator allows for market forces to play out before intervening.

In this section it is important to note that economic understanding of anti-competitive network effects brought about by on-net / off-net retail price differentials has improved significantly over the past decade[8] which is why most retail interventions have been introduced in more recent history. However, the lag between liberalisation and regulatory intervention is not nearly as pronounced as Digicel suggests and many regulators have acted not only sooner than implied but in some cases prior to the market becoming liberalised and/or prior to any anti-competitive effect being evidenced in the market as the main concern is to prevent the effect from occurring in the first place rather than remedying it once it is already in the market. In particular:

[6] Digicel submission para 40.
[7] Digicel submission para 46.
[8] Understanding of the issue has improved markedly over the last decade. It was once thought that reducing MTRs to cost would result in off-net retail price reductions – which it does in the absence of strategic incentives to choke off calls to rivals. The strategic incentives increase with network size and the strength of the club effect increases rapidly with network size. It is for this reason that regulators of markets where there is high concentration are increasingly looking to ban on-net / off-net retail price differentials rather than solely rely on reducing MTRs to cost.

1. Qatar may have established an independent telecommunications regulator back in 2004 as suggested by Digicel but what Digicel omitted to mention is that the mobile industry only experienced new entry when Vodafone, which was awarded the second mobile licence in Qatar on 28th June 2008, "switched on its mobile network on 01 March 2009"[9]. It is noteworthy that despite Vodafone being an immensely experienced and successful global operator, it was deemed appropriate by ictQATAR to introduce an outright ban on retail price discrimination (for both voice and SMS services) just two years later in May 2011 to protect competition. This also goes to challenge the attacks made by Digicel on bemobile and Telkom management which it describes as incompetent[10] despite the highly respected global telecommunications company Vodafone seeking regulatory intervention to impose price discrimination bans in certain countries due to market structure.

2. Also of note is the Singapore Regulator's decision to ban on-net / off-net retail price discrimination early on after liberalisation as retail price discrimination could "hinder the development of effective competition in the mobile market, *especially in the initial days of competition development*" (*emphasis* added).

3. We can also look to New Zealand where in 2006, Vodafone was looking to enter the fixed line market and the Commerce Commission was asked by Vodafone to ban retail price differentials by the then incumbent Telecom. Vodafone argued that *"if Telecom can require callers to Vodafone local numbers to pay higher rates than callers to other local numbers, there could be a significant disincentive to take up Vodafone's local service. Hobbling Vodafone's local service before it begins is unlikely to promote competition for the long-term benefit of end-users."*[11] The Commerce Commission agreed and imposed a ban on retail price discrimination.

Of grave concern to markets is the potential for foreclosure (with concomitant adverse impact on investment and competition) that results from inaction by a regulator given clear evidence of the anti-competitive effects of retail price discrimination, especially in the presence of above cost MTRs. NICTA is aware of the example from Slovenia where retail price discrimination was widely used by the dominant incumbent to prevent the small operator's customers from receiving calls. As described by Trilogy International Partners in its letter to the New Zealand Commerce Commission in July 2009: "The large cost differential discouraged Slovenians from signing up with the new entrant as they knew that incumbent subscribers would be reluctant to call them due to the higher cost that would be incurred."

[9] http://www.vodafone.qa/en/media-centre-and-investor-relations/investor-relations/analysts-coverage/about-vodafone-qatar

[10] Digicel response para 106

[11] Vodafone, *Letter - Commission decision to investigate local service application*, 4 April 2006, para 43.

Digicel mis-represents the scale of its off-net premium

Digicel questions the reliability of the off-net price premium analysis in section 6 of NICTAs Discussion Paper and suggests that its off-net premium is far below that indicated by NICTA, concluding that once Digicel PNG's off-net premium is recalculated, the data "does not support NICTA's view that Digicel's price structure is excessive by international standards."[12]

The first point to note is that the countries selected were all deemed to have excessive off-net premiums so even if Digicel's new calculation were correct (which it is not), it would merely place Digicel's off-net premium on a par with other operators with excessive premiums – not on a par with normal international standards.

That aside, we show here that Digicel's presentation of its own data is not only extremely misleading but fundamentally wrong. On closer inspection its off-net premium is far higher than it would have NICTA believe. Of course, Digicel could have presented its average on-net prices using information direct from its management accounts but instead uses a degree of contortionism to arrive at the conclusion that 1 minute is the 'relevant call length for comparison'[13].

1 minute is not the relevant call length for comparison. NICTA was correct to analyse different call lengths as calls do vary significantly in length. If a single price point is required for comparison purposes then it should not be the price of a 1 minute call, it should be the average revenue per minute of an on-net call versus the average revenue per minute of an off-net call.

Digicel provides enough information in its submission for us to make a *conservative* estimate of the average revenue per minute for on-net calls. In figure 4 Digicel shows the distribution of outbound call durations. This distribution is likely to be skewed down slightly as we suspect that the average duration of on-net calls is materially longer than the average duration of off-net calls but as the proportion of off-net calls is so low (due to the excessive price) we have not assumed a different distribution for the purpose of calculating this estimate.

Methodology:

If we take 100 calls made by Digicel customers and assume (from the graph provided by Digicel at fig.4. of its submission) that 72% of them are of 1 minute or less duration, 12% are between 1 and 2 minutes etc. We also assume that the average length of calls is mid-way between the upper and lower bounds of the category so that the average length of a call that is less than 1 minute is 0.5 minutes, and the average length of a call between 2 and 5 minutes is 3.5 minutes duration, and that

[12] Digicel submission para 58
[13] Digicel Submission para 57.

calls over 10 minutes are calculated as being of 10 minute duration. (we recognise that this is imprecise and in practice calls of less than 1 minute duration are likely on average to be shorter than 0.5 minutes (which would act to decrease the average revenue per minute) and calls between 2 and 5 minutes are likely to on average be shorter than 3.5 minutes (which would act to increase the average revenue per minute) and calls above 10 minutes are likely to average more than 10 minutes (which would act to decrease the average revenue per minute) but these effects will largely cancel each other out and if anything this methodology errs conservatively such that the average revenue is more likely to be below the figure calculated here.

We assume an on-net retail price of 99 toea for the first minute and 11 toea for each subsequent minute, charged on a per second basis.

So for 100 calls of peak time minutes we calculate the average retail charge as follows:

Figure 1. Digicel PNG average on-net price using distribution from Digicel submission.

Call duration	Number of calls	Av duration of call (mins)	total call duration (mins)	Revenue toea	Revenue per minute
up to 1min	72	0.5	36	3564	99.0
1-2min	12	1.5	18	1254	69.7
2-5min	10	3.5	35	1265	36.1
5-10min	4	7.5	30	682	22.7
over 10 min	2	10	20	396	19.8
			Total: 139	**Total: 7161**	**Average: 51.52**

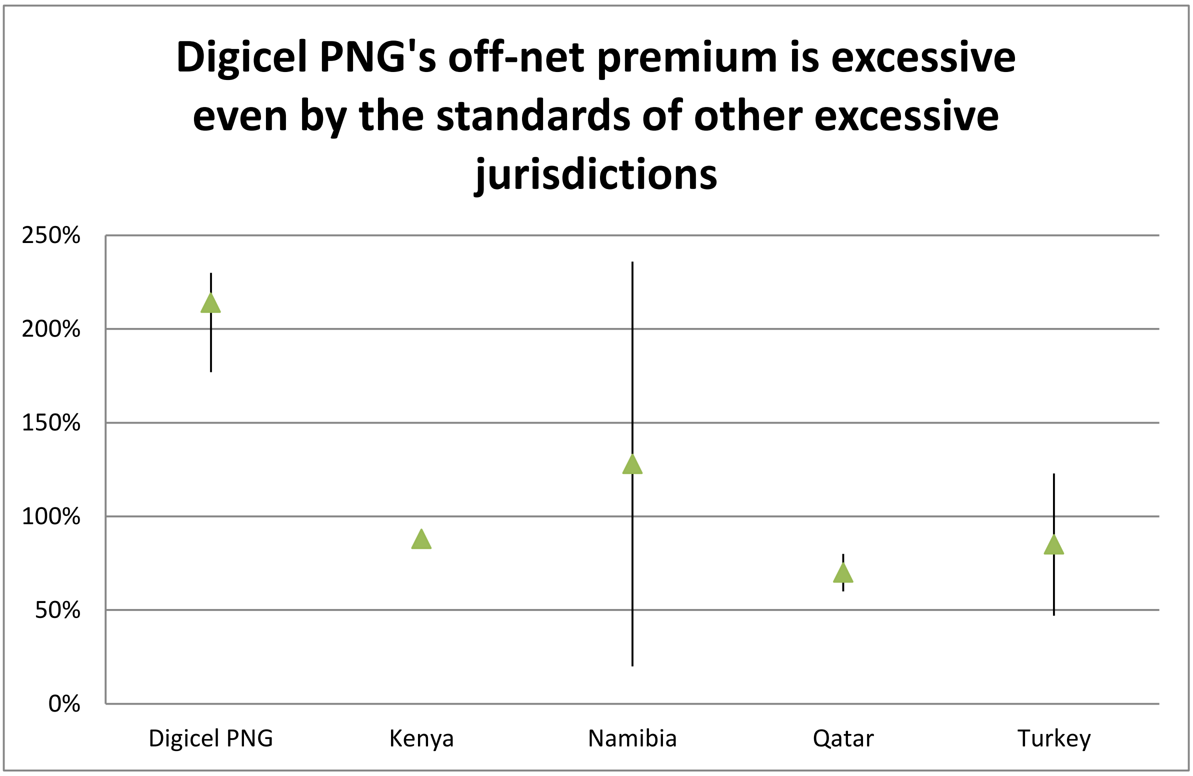
We calculate, by reference to Digicel's chart of call length distribution that Digicel's average peak on-net price is no more than 51.5 toea per minute and its average off-peak on-net price (using the same methodology) is no more than 28.5 toea.

Given that Digicel's off-net prices are 170 toea peak and 79 toea off-peak[14], the off-net premiums charged by Digicel are therefore at least 230% for peak time calls and 177% for off-peak calls.

If we assume that 70% of calls made are peak time calls then the average off-net premium is at least 214% which is slightly higher than the 209% 2 minute average used by NICTA and significantly higher than Kenya, Namibia, Qatar and Turkey – we reproduce Digicel's figure 5 below for illustration:

[14] We note that Digicel pricing for off-net off-peak calls reduced from PGK 1.40 to PGK 0.79 only after NICTA initiated the Public Inquiry. This makes for convenient submissions but given the fundamental strategy to utilise price differentials and the clear strategic incentives to do so, It is highly likely that Digicel will increase its off-net pricing should NICTA not implement the proposed RSD.

Figure 2. Off-net premiums for comparator countries illustrating Digicel PNG off-net premium over Digicel's average on-net revenue per minute.



Even though Digicel's contention was that its off-net premium was not excessive by comparison to NICTA's sample (which it evidently is), the sample itself was of countries where the off-net premium was deemed so high as to stifle competition and require retail regulatory intervention so even if, as Digicel would have us believe, its off-net premium was merely on a par with those countries, it should still indicate that retail intervention should be strongly considered.

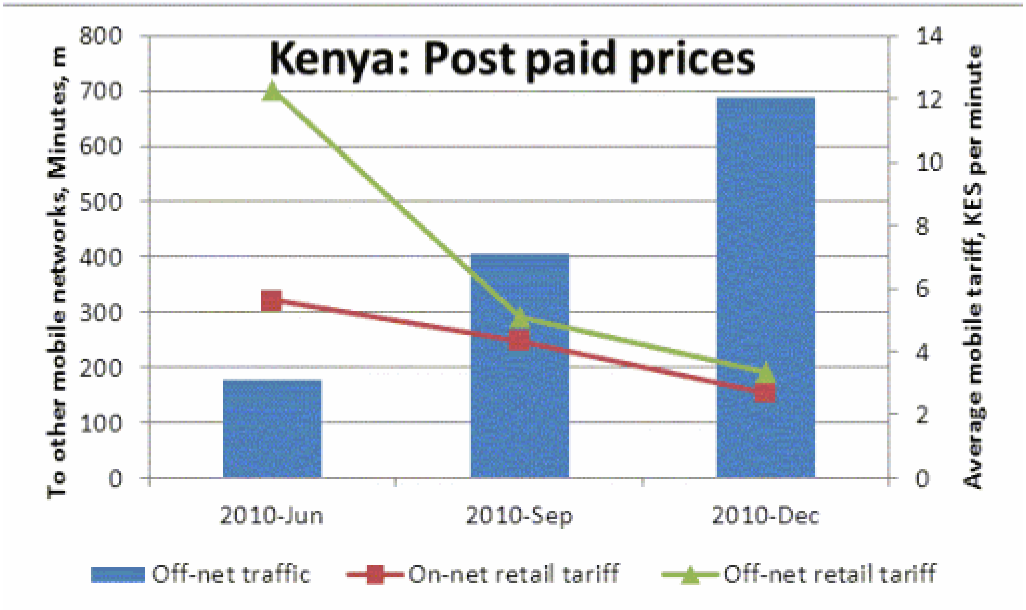
As it is, Digicel's off-net premium is the most excessive of all the comparator countries which themselves were selected as examples of excessive off-net premiums so it follows that retail intervention should be very strongly considered and in our view is essential.

A note on Kenya

Digicel also suggest that Safaricom's off-net premium remains high despite the efforts of the regulator to curtail the practice of retail price discrimination. The fact that Safaricom in Kenya now has an off-net premium is significant to this inquiry but not for the reason given by Digicel which used it as to cast doubt on NICTA's analysis. The important point to note is that once a regulator has made a decision regarding on-net / off-net retail price discrimination, it must also have the ability to enforce the regulation or dominant operators will try to avoid implementation. There are two main avenues by which operators avoid introducing retail price structures that are demanded by regulators. The first is if the regulator is persuaded that there can be exceptions to the general rule – examples could be that 'promotions' are exempt from the rule which opens up the rule to interpretation (see bemobile's reference to Singapore in its submission to the second Discussion Paper) or perhaps, as is proposed by NICTA, if a differential can be justified by cost differences. This creates incentives for operators to push the interpretation of the regulation to its competitive advantage, and so in order to avoid such gaming behaviour, regulators should impose the most simple and unambiguous regulation possible with little room for 'interpretation'. The second reason is if the regulator does not possess the armoury to enforce its ruling then operators will accept the weak consequences of flouting the rules but continue with their behaviour.

Kenya is a good example. The Kenyan mobile market experienced an outbreak of connectivity immediately after the initial decision to reduce termination rates and ban retail price discrimination in June 2010 with off-net traffic increasing by nearly 300% in just six months as illustrated in the ITU regulatory toolkit chart reproduced below[15].

Figure 3. Kenyan total off-net traffic and related retail prices H2 2010



Average retail prices for both on-net and off-net calls came down and off-net traffic increased significantly.

It is noted in the cck annual report 2010 – 2011[16] that following the reduction in MTRs and the ban on retail price discrimination[17] there was a "50.5 percent reduction in retail price, on average, for

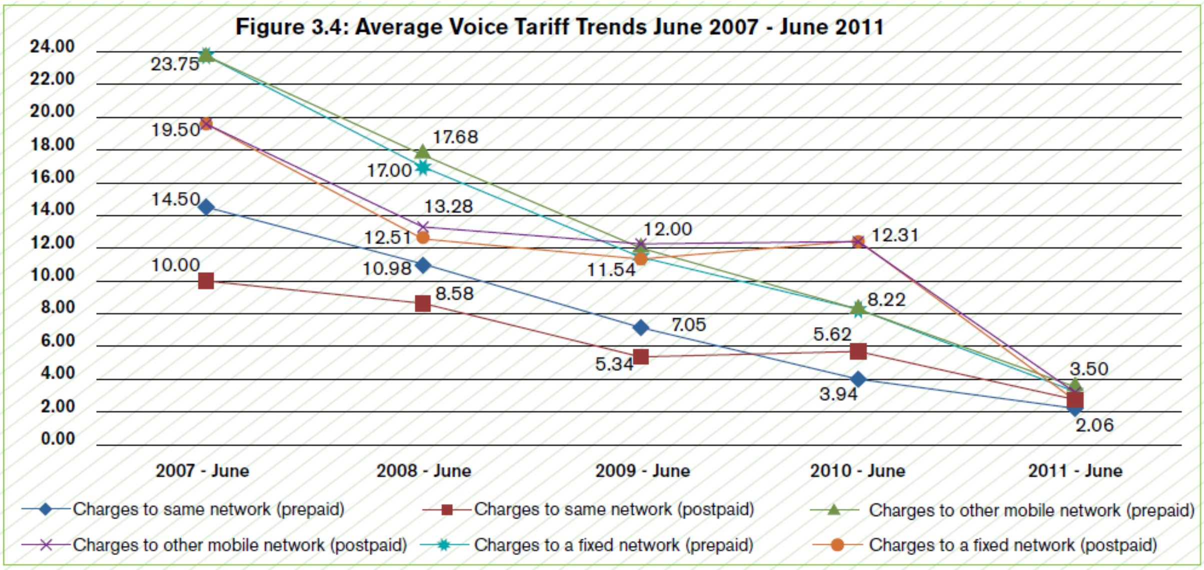
[15] http://www.ictregulationtoolkit.org/en/Section.3585.html

[16] http://www.cck.go.ke/resc/publications/annual_reports/CCK_Annual_Report_2011.pdf

[17] Cck determination no.2. 2010 which determines: "That any operator, upon being designated as a dominant/major telecommunication operator in either the mobile or fixed retail markets shall implement a price cap for off-net call prices to the level of their on-net prices".

calls within the same network while the retail off-net tariffs declined by 68.3 percent during the year under review" indicating that average prices reduced dramatically given the new regulatory regime and both on-net as well as off-net retail prices fell.

Figure 4. Snapshot of Kenyan retail prices taken from cck annual report 2010-2011



Source: Communications Commission of Kenya

However, as pointed out by Digicel in its submission Figure 3 (which should be redrawn given that we have established that Digicel has misrepresented the scale of its off-net premium), the Kenyan market has suffered a competition setback as operators, in particular the dominant operator Safaricom no longer abides by the 2010 regulation, indeed the Kenyan President intervened personally on its behalf to prevent the implementation of recommended reductions in MTRs following intense lobbying by Safaricom[18]. The issue of MTRs is again making news headlines this month as the fight (and Safaricom's dominance) continues.

The important point to note is that prices fell rather than increased as a result of the initial regulatory intervention, regardless of the political stouch now taking place.

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[18] **See for example:** http://www.telecompaper.com/news/kenyan-mobile-termination-rates-to-fall-38-from-july

Kenyan mobile termination rates to fall 38% from July

Wednesday 30 May 2012 | 13:13 CET | News

The Kenyan government has announced that mobile termination rates will fall by 38 percent to KES 1.60 a minute from July from KES 2.21, Business Daily reported. The rate had been due to drop to KES 1.44 in June 2011 before President Mwai Kibaki froze it for one year following lobbying by Safaricom and Orange.

International examples suggest retail prices will fall and not rise

Digicel state as fact[19] that the RSD will itself cause higher on-net prices for more than 70% of customers. This is no more than scaremongering and it has been used by incumbents around the world when responding to regulatory intervention designed to impose fairer competition on markets. We assume NICTA is fully aware of this. It is simply not logical for a dominant player in any market to react to greater competition by increasing prices.

Furthermore, this hypothesis is not borne out by the experiences of other countries. As we have already seen, in Kenya prices for all calls came down sharply following regulatory retail price discrimination intervention and a similar pattern has been seen in the other comparator countries.

Namibia;

The Namibian Communications Commission imposed a price cap on off-net retail prices and published a report in March 2011[20]. The retail price impact is shown in the snapshot below:

[19] Para 133

[20] Namibian Communications Commission; Price Cap on off-net retail prices March 2011 http://www.researchictafrica.net/countries/namibia/NCC%20Retail%20Price%20Regulation.pdf

Figure 5. Namibian retail price reductions following off-net retail intervention

Estimated Impact on Consumers

The amended tariffs submitted to the NCC and approved by the NCC on 14th March al comply with the price cap and calls to other networks or fixed-lines cost now the same as on-net calls. The lead to lower retail prices on average. MTC's average price per minute dropped from N$ 1.39 to N$0.94 for postpaid and from N$ 1.99 to 1.37 for prepaid products.

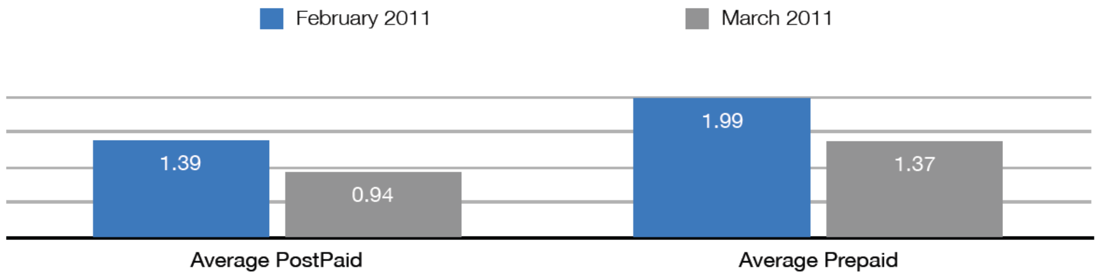


Figure 3: MTC's Average Tariff for a voice minute

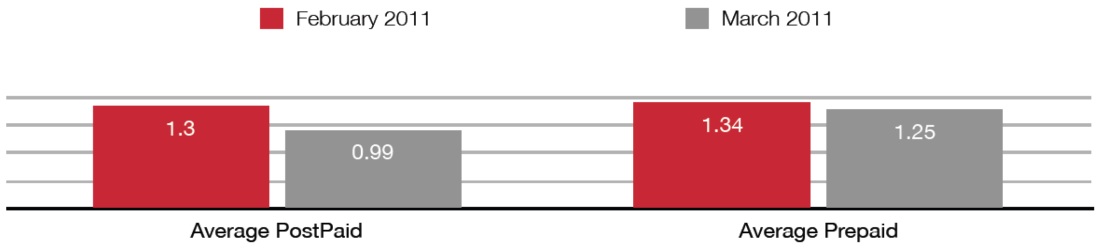
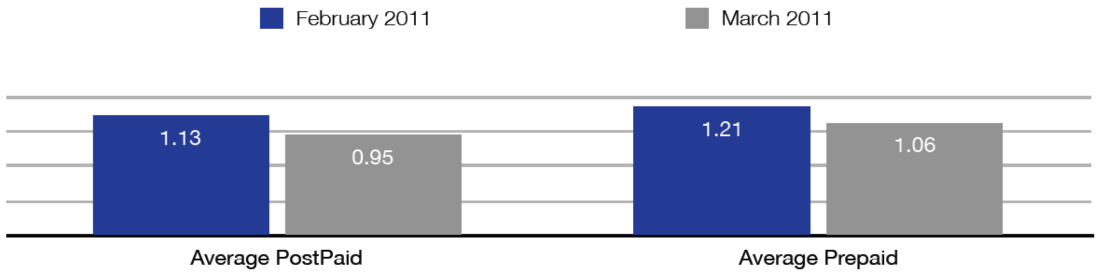


Figure 4: Leo's Average Tariff for a voice minute

Leo's average voice tariffs dropped from N$1.3 to N$0.99 for postpaid and from N$1.34 to N$1.25 for prepaid. Telecom's Switch is now also cheaper with average rates dropping from N$1.13 to N$0.95 and N$1.21 to N $1.06 for postpaid and prepaid respectively.



As is evident from the report, retail prices for both off-net and on-net calls decreased as a result of the intervention. When concluding, the NCC stated "*The new retail prices approved by the NCC show that consumers benefit immediately. The revenue impact for operators will be small if any. First, most calls are on-net and only off-net and fixed-line prices were affected. Second, the reduction in off-net and fixed-line prices will increase the number of calls across networks and is likely to expand the market further.*"

Turkey:

An example of a regime that has remained successful in introducing a retail price discrimination ban ruling is Turkey. We have analysed the market before and after the regulatory intervention and it can be clearly seen that prices have come down, usage has gone up and consumers can now connect to people on any network far more easily.[21]

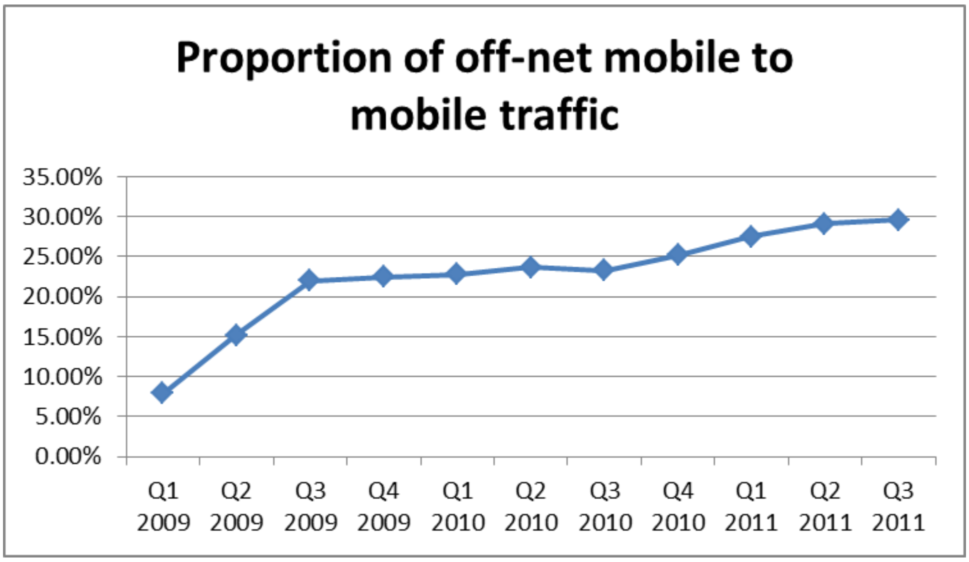
Turk Telecom's 2010 Financial results[22] stated:

"In mobile communications market, off-net traffic having a market share of 10% in 2008 increased to 28% in 2010 thanks to "all direction" tariffs that became wide-spread due to increased competition and decrease in interconnection fees.

"One of the most significant developments in the sector in 2010 was the decision of BTK; pursuant to this decision which would take effect on 1st April 2010, average 52% discount in mobile call completion fees and average 38% discount in off-net maximum fees have been made and TL based pricing system in prepaid mobile lines has been started."

The Turkish Regulatory Authority (ICTA) publishes a Market Report and operators publish quarterly reports of traffic. These sources show that in Turkey the proportion of on-net traffic has increased markedly since the effective introduction of retail price discrimination constraints in Q2 2009:

Figure 6. Proportion of off-net mobile traffic in Turkey 2009 - 2011

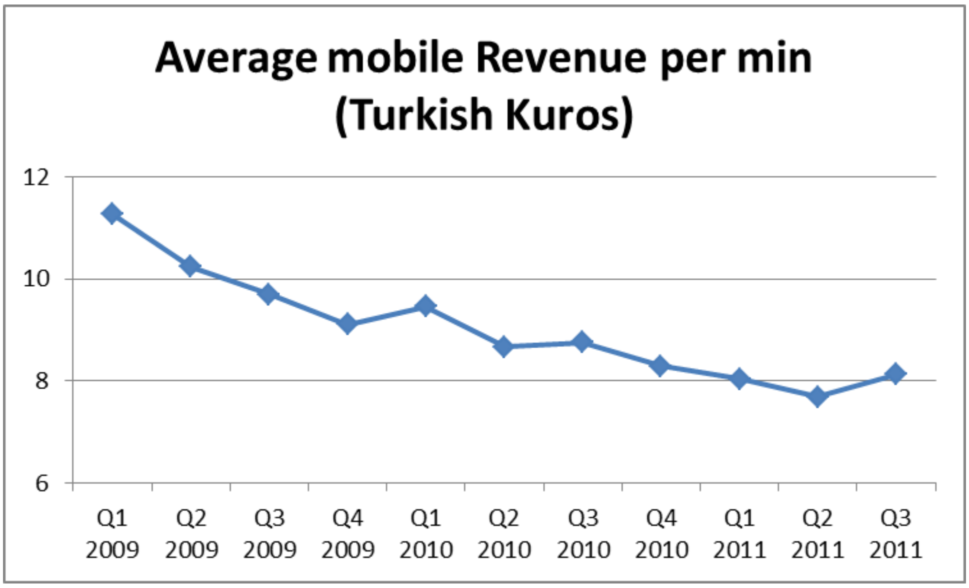


The retail price also came down as shown in Figure 7 below.

[21] In addition to the retail intervention, number portability was introduced to the market and MTRs were reduced over the period shown. The proportional relevance of each cannot be known.

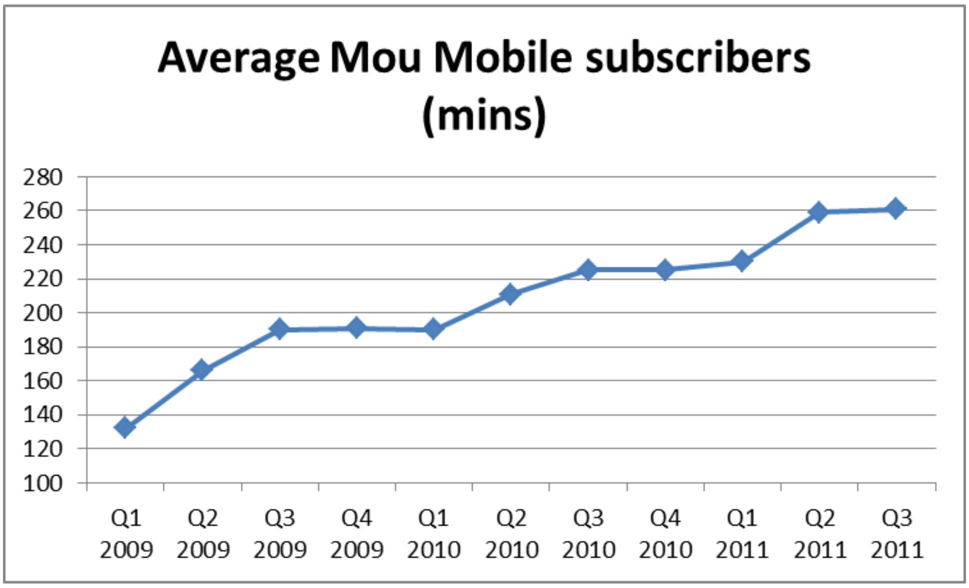
[22] Turk Telecom Annual Report 2010: http://ttannualreport.com/2010/en/turk-telekom-group-and-turkish-telecom-sector-outlook/default.aspx

Figure 7. Average retail price per minute in Turkey 2009 - 2011.



And usage increased significantly in the period after the regulatory intervention as shown in figure 8.

Figure 8. Average Minute of Use per subscriber. Turkey. 2009 - 2011



Digicel's assertions that retail prices will increase as a result of the proposed RSD are not borne out by the impact of similar interventions in the comparator countries. In fact, quite the reverse is true and retail prices have fallen as competition has increased.

Qatar:

ictQatar was contacted by us in the course of writing this cross-submission and unfortunately they do not analyse the traffic distribution, competition and retail price changes that have come about as a result of its decision to ban retail price discrimination so we cannot illustrate what has occurred in the market. Nor do they have a market review due for some time. However, ictQatar seemed extremely confident that competition was better off as a result and had no plans to reverse its decision.

Digicel's claims that investment incentives will fall away are without merit

Digicel also claim that investment incentives will suffer (and therefore work against ICT policy).

Again, this is spurious. We note from the press release that accompanied the Annual Telecommunications Monitoring Report published by the New Zealand Commerce Commission in May 2012[23] that "*Most notably we've seen a fall in market concentration in all sectors which indicates that competition is becoming more intense...[..].. said Dr Ross Patterson, Telecommunications Commissioner*". Going on to list the key findings of the report which included that "*investment increased from $0.92 billion in 2008/09 to $1.24 billion in 2010/11*".

It is well understood that investment will be undertaken, at least by competitive firms, so long as the expected return of the investment exceeds its expected cost. It is counterintuitive to therefore suggest that increased competition will lead to less investment.

In a similar but admittedly not identical scenario, the argument that reducing MTRs harms investment incentives has also been made by a number of incumbent operators in Europe and been similarly rejected by the EC, which considers that the reduction of MTRs:

"…can be expected to lead to enhanced competition and lower retail tariffs across the range of consumers, while still facilitating efficient cost recovery and appropriate investment incentives."[24]

The real danger for the investment story is best illustrated again by the example of Trilogy International Partners dated 27 July 2009 to the New Zealand Commerce Commission which not only sets out clear evidence of the effects of closed-net pricing based on the experience of new-entrant "Vega" in the Slovenian market but also shows how foreclosure adversely impacts investment at a time when investment was sorely needed for the nation.

We summarise the key points from the Trilogy submission below:

(a) The Slovenian incumbent restricted competition and retained market share by cross-subsidising on-net calls with high off-net call prices.

(b) For incumbent subscribers on the carrier's four most popular calling plans, making a peak call to a new entrant customer cost between two and eight times more than a call another customer of the incumbent.

(c) The large cost differential discouraged Slovenians from signing up with the new entrant as they knew that incumbent subscribers would be reluctant to call them due to the higher cost that would be incurred.

[23] http://www.comcom.govt.nz/telecommunications-media-releases/detail/2012/competition-becoming-more-intense-in-telecommunications-market-annual-monitoring-report

[24] European Commission, Explanatory Note Accompanying the Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU, p 16.

(d) In a 2004 paper on Slovenian telecommunications reform, faculty at the University of Ljubljana's School of Economics agreed that the large price difference between on-net and off-net calling was one of the main causes of concentration in the Slovenian mobile services market, explaining that on-net calls were being subsidised by high off-net charges.

(e) By structuring tariffs to provide a significant on-net / off-net retail price differential, the incumbent both ensured that subscribers on the incumbent's network did not migrate to other operators and encouraged migration back to the incumbent from the new entrant.

(f) As customers expected to be able to both make and receive calls, the full utility of mobile service was not enjoyed by customers of the new entrant as calls were no longer received.

(g) Calling behaviour was evidenced from on-net / off-net call balances with the proportion of minutes sent by new entrant customers to the incumbents exceeded 155% of the traffic returned.

(h) Not only was there a huge imbalance of mobile termination payments but the total cross network traffic was a tiny proportion of what might be expected in a fully functioning market.

(i) No regulatory action was taken and as a direct result the new entrant ceased all investment and exited the market.

The similarities between PNG and Slovenia are profound and this summary provides strong evidence of the real and significant risk of the Slovenian experience repeating itself in PNG in the absence of regulatory intervention. The resulting impact on competition and additional investment would be significant.

Further International examples: OECD report on Mexico January 2012

In January 2012, the OECD published an extensive review on the Telecommunications market in Mexico[25]. Professor Martin Cave is credited and thanked for his contributions to the report but to be fair to Prof. Cave, it is not clear whether he necessarily agrees with all of its findings, however, it is clearly a significant study, conducted by recognised experts from academia and leading regulatory bodies, underwent significant peer review and was published by the OECD in January 2012. Many of

[25] This study was carried out by the OECD Directorate for Science, Technology and Industry (DSTI) under the auspices of the Committee for Information, Computer and Communications Policy (ICCP Committee). It was requested by the Government of Mexico, at the behest of the Federal Telecommunications Commission (Comisión Federal de Telecomunicaciones, COFETEL), through the Mexican Ministry of Transport and Communications (Secretaría de Comunicaciones y Transportes, SCT), both being in charge of representing Mexico at the ICCP Committee.
The OECD review of telecommunication policy and regulation draws on responses by the Mexican authorities to a questionnaire and on the results of an extensive series of interviews with major communication stakeholders during a fact-finding mission in Mexico. The report was peer reviewed by the ICCP Committee on 27 October 2011, with Dr. Mónica Ariño (Ofcom, United Kingdom) and Mr. François Lions (Arcep, France) as the lead peer reviewers. It was finalised in early November 2011 and reflects developments up to that time.
The review was drafted by Mr. Dimitri Ypsilanti, Head of the Information, Communications and Consumer Policy Division (ICCP Division) within DSTI, and Mr. Agustín Díaz-Pinés, economist at the ICCP division, with the assistance of Professor Patrick Xavier, Curtin Business School, and contributions from Professor Martin Cave, London School of Economics, and Mr. Tony Shortall, Director, Telage.

the themes are relevant to PNG and conflict with Digicel's view of how competition, penetration, growth and investment manifest themselves in a market. We highlight a few of the OECD's most relevant observations here:

"OECD countries have recognised the increasing role played by the telecommunications sector as a means of improving productivity and economic growth while enabling governments to improve provision of public services. Mexico, with the lowest GDP per capita in the OECD, a high inequality of income distribution, and a relatively high rural population, needs the socio-economic boost provided by greater access to more efficient communication services, in particular high speed broadband."[26]

"The lack of telecommunication competition in Mexico has led to inefficient telecommunications markets that impose significant costs on the Mexican economy and burden the welfare of its population. The sector is characterised by high prices, among the highest within OECD countries, and a lack of competition, resulting in poor market penetration rates and low infrastructure development."[27]

OECD clearly suggesting that a lack of competition leads to poor market penetration and low investment.

"The impact of termination rates substantially above cost has been widely discussed (e.g. Bomsel et al., 2003; Growitsch et al., 2010). In most cases they favour larger operators, especially when traffic is unbalanced in favour of incoming traffic to those operators. This puts the larger operators in a position where they can gain competitive advantage and large profits from creating a substantial disparity between on-net and offnet call prices, exploiting what are known as "club effects" or "tariff-mediated network externalities"[28]

"Telcel provides a certain number of uncharged on-net calls, which creates difficulties for other market entrants to gain market share."[29]

"it is important that the on-net/off-net price gap disappears."[30]

[26] Page 9: Introduction. OECD Mexico report.
[27] Page 11: OECD Mexico Report.
[28] Page 68 of: ORGANIZATION FOR ECONOMIC COOPERATION & DEVELOPMENT, OECD REVIEW OF TELECOMMUNICATIONS POLICY AND REGULATION IN MEXICO (Jan. 2012). The OECD states that the report was undertaken "at the behest of the Comisión Federal de Telecomunicaciones."
[29] Page 29: OECD Mexico report.
[30] Page 69: OECD Mexico report

Digicel's assertion that NICTA does not have the power to intervene is wrong

The ICCC was established by the ICCC Act 2002. The ICCC draws its powers as the general competition regulator from that Act.

Parliament in subsequently passing the later Act, the National Information and Communication Technology Act 2009 (the Act), clearly intended to establish NICTA as the ICT industry specific competition regulator.

Parliament solely charged NICTA with the authority under the Act to exercise the relevant powers pertinent to this Public Inquiry such as those under Sections 157, 159 & 230 of the Act.

Digicel is therefore incorrect in implying that the ICCC is the sole competition authority.

Digicel is also incorrect claiming that NICTA has only a supporting role (to ICCC) in respect of the promotion of effective competition.

Digicel is also incorrect in limiting the relevant part of the Act's objective to Section 2(d) as it is clear that under NICTA's function that NICTA must promote all sections of the Act's objective which includes the competition objectives of Sections 2(a)(ii) & (2(c) in which there is no mention of ICCC.

We assume Digicel is attempting to claim that Section 2(d) by the inclusion of "including by assisting the ICCC to achieve this" limits NICTA to achieving the objective set out in Section 2(d) solely " by assisting the ICCC to achieve this" on a proper interpretation of this Section when the Act is construed as a whole we consider Digicel's contention is incorrect.

It is clear from the Act as a whole that NICTA does not merely play a supporting role to ICCC in the promotion of fair and maintaining competition as erroneously claimed by Digicel but rather NICTA is the regulatory authority with primary responsibility for promoting and maintaining competition in the ICT industry charged with exercising the powers under the Act to promote this objective.

Parliament clearly envisaged, for example by the inclusion of Section 3(a)(ii) of the Act, that ex ante regulatory measures to promote and maintain effective and sustainable competition will be determined under the Act and that this will be done by NICTA.

Digicel are also incorrect to state that "NICTA should consult with the ICCC in assessing the test"[31]. NICTA is not obliged to consult the ICCC in forming its view merely "where appropriate, to facilitate the development of a consistent regulatory policy in the public interest."[32]

The ICCC along with the general public were invited to make submissions in the Public Inquiry and the fact that the ICCC has made no submissions to either the first consultation paper or second consultation paper of NICTA, would appear to indicate that the ICCC are satisfied that NICTA is effecting "the development of a consistent regulatory policy in the public interest".

[31] Digicel submission para 20.
[32] Section 3(b)(vi) of the Act

Digicel's conjecture that it does not have SMP is laughable

Despite overwhelming evidence to support NICTA's conclusion that Digicel holds SMP, Digicel considers (at para 112): "that NICTA has incorrectly concluded that Digicel has substantial market power." bemobile has previously submitted at length on the reasons why Digicel so plainly does hold SMP and we re-refer NICTA to the discussion in our previous submissions as well as the report prepared by Ms Lanigan in December 2011. However, in what follows we comment solely on Digicel's contentions that it has made in response to NICTA's 2nd discussion paper.

Digicel points to falls in its market share in the data collected by NICTA for the period 2009 to 2011 as evidence that rivals are making progress in competing against Digicel. As explained in the bemobile submission to NICTA of 1 June 2012, bemobile's own data confidential data provided to NICTA in the confidential version of the submission indicates that this trend has ceased. In any case, Digicel's market share by any measure remains at levels that are well in excess of internationally adopted SMP thresholds.

Digicel also contends that apparent price reductions from the Network Strategies 2011 and 2012 report indicate an erosion of Digicel's position. It is not clear what proportion of the decline in the basket price is due to on-net pricing. However, it would be fundamentally flawed reasoning to conclude that the apparent reduction in price indicated an erosion of market power if it was simply reflective of an increased degree of price discrimination. It is notable, as highlighted by Haucap and Lanigan, that despite these reductions PNG prices remain high by international comparison. In particular, across the three baskets assessed by Network Strategies PNG prices are generally in the upper half of the Network Strategies sample. Looking to the future, it seems highly unlikely that consumers will continue to see price reductions if discriminatory pricing remains in the PNG market due to the crippling effect on competition.

Digicel takes issue with the use of its on-net/off-net price differential to infer SMP. As discussed in previous bemobile submissions and the expert report by Ms Lanigan, where market shares are highly asymmetric, significant on-net/off-net differentials will result in network effects which themselves create and increase the extent of market power held by the largest network. That there may be price discrimination in markets where market shares are roughly equal is essentially irrelevant, because it is not the mere use of price discrimination alone that strengthens market power, but rather the combination of price discrimination and asymmetric network size.

Digicel contends at para 106 that improved management of bemobile and Telikom in future would mean that Digicel's ability to acquire high market share in the past is irrelevant. bemobile submits that the network effects that arise from on-net/off-net price discrimination are so strong that it would be very difficult for management changes alone to allow bemobile and Telikom to effectively contest the PNG mobile market. As demonstrated by Lanigan and Haucap no matter how aggressively small networks price, if a large network engages heavily in discrimination consumers simply will not switch to smaller networks because doing so would reduce the benefits they receive from calling and receiving calls.

Digicel states that NICTA has assumed that “To compete, bemobile/Telikom must set off---net prices that match Digicel’s on-net price.” Digicel responds that its rivals can compete through their pricing of a range of services provided as part of a mobile bundle. This would depend on available margins given MTRs and the relative importance of each of those services to the customer. However, such a strategy would seem to have a low likelihood of success given that customers place a value on receiving calls and by switching away from Digicel they will receive substantially fewer calls due to the high off-net pricing implemented by Digicel.

Concluding remarks

NICTA's Second Discussion Paper and its findings are both sound and essential for the long term health of the ICT sector and the welfare of PNG and its citizens. Digicel has attempted to challenge its credibility, accuracy, the basis for its findings, the economic theory that supports it, the legal basis for NICTA's recommendations and the impact that its recommendations will have on the telecommunications market in PNG. Digicel goes so far as to use thinly veiled threats to reduce its investment and increase the retail prices it will charge its customers should NICTA follow through with its Retail Service Determination.

None of this is surprising. Digicel has reached the status of unassailable dominance by its strategic and anti-competitive abuse of off-net retail price discrimination and would undoubtedly like to retain that position. However, NICTA should not be swayed from meeting its obligation to promote and maintain competition in the ICT industry unless new evidence has been brought to bear that proves that welfare and competition would be higher through inaction by NICTA. Be under no illusion, allowing the practice to continue would harm PNG and harm growth, prices, welfare and economic development.

No compelling evidence based argument has been brought to the debate by Digicel in its latest submission to NICTA and as we have shown, not only does the overwhelming weight of economic theory support our case, so does the empirical evidence from around the world.

The objective of the Act is solely to ensure that the ICT industry contributes to the greatest extent possible to the long-term economic and social development of Papua New Guinea. NICTA therefore not only has the power to enforce this RSD, but it has the duty to do so in the long term interests of the citizens of PNG.