

Status quo and emerging challenges in ICTs for Papua New Guinea

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Introduction

Papua New Guinea (PNG) is witnessing an onslaught from information and communication technology (ICT) services, courtesy of Digicel, a new and dominant player in PNG's telecommunications services market. Digicel has a major market share of more than eighty per cent combined for mobile phones and mobile data in PNG supplied via an extensive network of 1100 towers across the country (Morley, 2014). Digicel has recently moved into other areas of telecommunications, acquiring companies in television broadcasting and narrowcasting also with keen interest for fiber-optic infrastructure (O'Brien, 2014).

Digicel's monopoly, already problematic, is going to intensify in a range of new ICT sectors. This creates a huge regulatory challenge that to date is not being met. Meeting it is essential to ensure that the potential of ICT for the development of PNG is realized. This in-brief discusses emerging challenges in ICTs with respect to interconnection arrangements, infrastructure sharing and number portability between operators in PNG. These aspects require regulatory diligence to prevent market abuse (Punaha, 2012). Lack of competent regulations may lead to a regulatory vacuum where operators and citizens may be subject to the whims of the incumbent – in this case, Digicel.

Regulatory regime

In the midst of a restricted telecommunication market, competition was endorsed through NEC decision 257/2005 in 2005 paving the way for Digicel's entry. Competition greatly increased access, and reduced price, for example SIM cards were sold for \$20 as opposed to the previous monopoly price of \$80 and call rates dropped by 70 per cent (Stanley, 2008). From the very beginning of the deregulation process there have been controversies as the regulator grappled with increased demands in managing and allocating frequency spectrum and numbering resources required for the installation and operation of network (Moros, 2013).

A few months into Digicel's operations, National Information and Communication Technology Authority (NICTA), the regulator attempted to revoke Digicel's license, probably acting under political pressure. The action demonstrated lack of regulatory independence as seen in Figure one, NICTA is directly subordinated to the minister's department. The action by NICTA had other possible implications, such as investor insecurity which may have been the cause that the third licensed operator, GreenCom, failed to rollout. However, Digicel using its experience from thirty-three markets, expeditiously provided widespread coverage and made available cheaper mobile phones, garnering public support to keep its license.

Currently, there are three mobile operators; B-mobile, Citifone and Digicel and as shown in Figure one, Digicel holds more than eighty per cent of the market share, with an effective monopoly. B-mobile has presence predominantly in urban areas with cheaper rates for calls made within the network. However, making calls between Digicel and B-mobile rates are higher, causing customer complaints. Some claim that it is cheaper calling the United States from PNG than calling Digicel users from B-mobile (Ramamurthy, 2013). Irrespective of whether such claims are true or not, ongoing investigations to monitor and act on any discrepancies are the *raison d'être* of ICT regulations. There are issues with the status quo which may give rise to adverse outcomes, from cost shifting to monopolistic and predatory behavior.

Interconnection in the mobile phone market

Fair and non-discriminatory interconnection arrangement between operators is critical in ensuring that citizens enjoy a full range of services at fair prices. Technical standards concerning interconnection should be enforced diligently so that quality of service is maintained between all networks. Intentional non-compliance on standards of interconnection may lead to lower quality of service with more serious aspects being lower value in choice and price. Intentionally lowering the quality of interconnections by dominant operator can lead to increased dropped calls.

Infrastructure sharing in the mobile phone market

The sharing of critical infrastructure such as towers and sites can have benefits for citizens and may contribute to the overall economy by enabling all operators to be able to extend their coverage (Ramamurthy, 2013). Rents for infrastructure such as towers and repeater sites should be fair and based on efficiently incurred costs. The objective should be to achieve non-discriminatory access to infrastructure by all operators while at the same time ensuring that cost on installation and ongoing maintenance are equitably shared between operators.

Number portability

Number portability is critical to ensure that citizens can keep the same number regardless of the operator with whom they are subscribed. For businesses, this is important as customers need only to remember the same number even when the business changes their service provider. In terms of numbering resources, number portability leads to efficiency in that numbers are scarce resources. The status quo where each operator is allocated a certain million numbers for customers is wasteful because loss of numbers simply leads to issuance of a new number.

Digicel's expansion

Digicel's monopoly is extending beyond mobile phones services by buying into other ICT businesses. As Figure 1 shows, Digicel now has access to five of the six ICT sectors in PNG. Its dominance in the mobile market means it is likely to also dominate the additional sectors over

time. This means that Digicel will effectively control the ICT industry in PNG. In this light, consumers will not benefit from the competition the deregulation process was meant to introduce, with associated likely impacts on price and choice, as we arguably see in the mobile phone market currently.

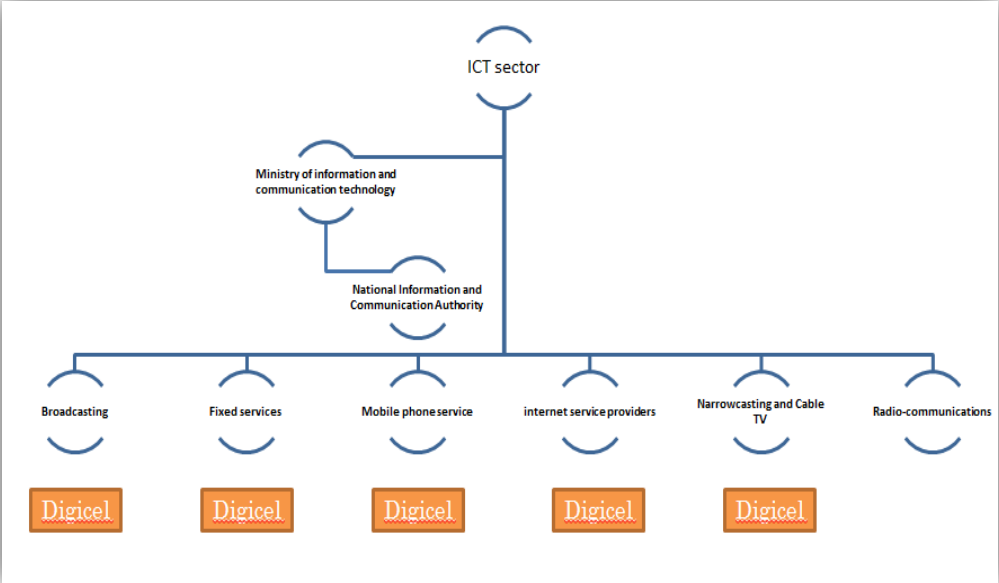


Figure 1: Status quo in ICTs.

The broadcasting and narrowcasting portfolios have thrived with a number of participants both with commercial and non-commercial purposes. Narrowcasting offers multimedia content to narrow audience mainly in urban centers. Digicel has recently acquired Hitron (narrowcaster) and Channel eight, a long time cable television service provider. This is in addition to the acquisition of Remington, a company supplying very small aperture terminals (VSAT) to afford ICT connectivity into rural areas of PNG. Other acquisitions are likely on the way, noting that Digicel is expanding in the mobile market, the ISP, broadcasting and narrowcasting which are now offered through DigiTV.

Conclusions

Citizens have embraced the availability and accessibility of mobile phone services, although affordability remains an issue (Moros, 2012). The expansion of Digicel into other ICT portfolios has the potential risk of cost shifting between portfolios which may decimate competition. The new monopoly with international experience may mortgage interconnection, infrastructure sharing and number portability issues for market abuse, leading to predatory prices on citizens who may be denied value in choice and price.

To safeguard against potential market abuse, the regulator needs to up-skill itself through training and in-house research to better understand and action issues. Research and development are intertwined (Rogers, 2003). While lessons can be learnt from foreign jurisdictions, research on regulation specific to PNG's specific regulatory needs and capacities should be a priority. Regulation is the priority for ICT to lead development. Coupled with specific training and research, better understanding of issues will result in competent interventions.

Author notes

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