

Until the second half of 2007, information and communication technology (ICT) services in Papua New Guinea (PNG) were limited to urban centres under the monopoly operator, Telikom PNG (Mitchel 2008). Thereafter, Digicel entered the mobile market and expanded mobile signal coverage across the country enabling connectivity to many people — the mobile phone penetration rate now stands at approximately 41 per cent (ITU 2014), marking a substantial change in the communications landscape. This *In Brief* provides an overview of a survey of mobile phone users in PNG. The survey was administered to 727 respondents across seven provinces and focused on three main themes. It sought to investigate aspects of mobile phone use in healthcare and school systems and income-earning activities in PNG.

Health and Education

Survey respondents identified an array of positive uses of mobile phones in the education and healthcare sectors. Where other forms of ICT services have been limited to main centres in PNG (Hayward-Jones and Copus-Campbell 2009), mobile phones serve as an indispensable internet portal for many. Students used short message service (SMS) to coordinate group work and to contact teachers and parents. Teachers used mobile phones to arrange substitutes when incumbents were unable to take classes and to contact headquarters. Outside Goroka, Eastern Highlands Province, a healthcare worker captured images of injuries on a mobile phone for distribution among colleagues through Bluetooth for their assessment before dispensing medication to patients. Phones were also used to disseminate healthcare tips via SMS (Watson 2011) and to source medical drugs from provincial centres. These examples illustrate that mobile phones are used in supportive roles for school and healthcare systems in PNG (see also Erbs 2012).

Market Activity

In the past, lack of availability and timely access to relevant information contributed to missed income-earning opportunities for people (Sowe 2009). This survey found that local farmers use mobile phones to coordinate delivery and sale of local fresh produce in markets. For example, in highland areas, farmers use

mobile phones to coordinate potato production and transportation to attractive markets in the coastal cities of Lae and Port Moresby. Mobile phones help farmers to identify prices and demand conditions at major towns, and to finalise logistic decisions and supply quantum to those centres. West New Britain Province hosts large oil palm plantations employing many hundreds of labourers from all over PNG. Extended families from the oil palm blocks venture into poultry and piggery projects, while others grow garden food for personal consumption and sale. Mobile phones are often used by both buyers and sellers from the oil palm plantation communities, or from nearby Kimbe town. Oil palm fruit harvest and sale to New Britain Palm Oil Company occurs every fortnight, providing income to communities who then engage in trading of local produce. One hundred and forty-five respondents claimed that mobile phones enable negotiations between producers and consumers in and around these oil palm blocks.

On Bougainville Island, the main cash crops are cocoa and copra, whose prices fluctuate in response to external supply and demand conditions. Producers rely on market information gained via mobile phones to decide to which upstream buyer to sell their wet and dry beans. Upstream buyers also use mobile phones to attract producers by disseminating information on prices and incentives such as free nursery and packing bags among other accessories they offer. This exemplifies bi-directional use of mobile phones by downstream and upstream cocoa and copra traders using up-to-date information, ensuring better deals. Research on the use of mobile phones in cash crop practices in sub-Saharan Africa and rural Bangladesh shows similar activity (Cohen 2001; Donner and Escobari 2010).

Reducing Business Costs

Access to services and markets through mobile phones has also reduced basic business costs. Survey participants in Bougainville and in the highlands reminisced about the 'pre-mobile-phone' days where they incurred high transport costs to towns wanting to use public payphones, which were regularly out-of-service. Many spent time and money but returned to their villages without making any phone call. Some foregone calls were

to distant relatives in other provinces but many were supposedly to government offices to check up on school selection results, while others were business related such as checking up on awards of local contracts. With mobile phones, access to an array of services in PNG is now being experienced. A Bougainville businessman described how he now coordinates the ordering of cargo from Tropicana in East New Britain Province without the need for expensive physical trips.

Mobile phones were perceived both as an enabler of business and as a direct means of income through sales of mobile phone handsets, call credits (known as prepaid cards) and other accessories. Respondents also used their phones for mobile banking, including checking of balances, transferring funds, paying bills and topping-up phone credits over the internet. In this way, the PNG experience is similar to studies conducted in Kenya and South Africa (Donner and Tellez 2008).

Evidence of mobile phones being used for job or contract opportunities by members of the surveyed communities was clear. Many respondents reported using mobile phones to be referred for jobs or business opportunities. Such use of mobile phones manifests similar connotations with examples in Bangladesh (Yunus 2007). In contrast, there were certain negative perceptions about mobile phone usage in activities deemed incongruent with customary norms of PNG.

Conclusion

This survey shed light on mobile phone usage in market access and price opportunities negotiation for local producers where they are able to assess demand and seek better prices for their produce. It showed that the expansion of mobile phones has ably supported business and access to markets for ordinary villagers. Survey respondents also identified other benefits through improved supportive roles in healthcare and school systems where mobile phones are becoming an indispensable internet portal. SMS use in school systems and by health agencies to promote awareness was evident. SMS usage was also evident in mobile banking and income-generating activities such as accessing price information for fresh produce.

Mobile phones have positively affected income earning among the populace in PNG, in particular after the entry of Digicel. Mobile phone use now covers urban and rural areas predominantly through Digicel. There is

an emerging monopoly in these areas presenting lack of choice in price and value to users. With lack of choice in price and value, people may be charged high tariffs. In this connection, competent policy and regulatory interventions may be required to ensure that tariffs are fair and healthy growth of the ICT sector is promoted.

Author Notes

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