

DOCUMENTO DE INTERESSE 1

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Mobile Opportunities: Poverty and Mobile Telephony in Brazil

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This country research report is part of a larger comparative multinational research project carried out by the Inter-American Dialogue of the Information Society (DIRSI) on “Mobile Opportunities – Poverty and Access to Telephony in Latin America and the Caribbean.” which involved the design, implementation and analysis of a unique survey on the mobile telephony (hereafter MT) usage patterns of urban, low-income populations in eight countries: Argentina, Brazil, Colombia, Jamaica, Mexico, Peru and Trinidad & Tobago. The project’s main goal is to collect original data and analyze it in order to understand how the, urban, bottom of the pyramid segments of the population make use o MT. A guiding hypothesis is that MT is a useful tool for wealth generation and social network development. A user is defined as a person who made use of MT in the previous three months.

A first major finding is that among bottom of the pyramid urban respondents in Brazil, 53% have used a mobile phone to make or receive phone calls in the three months preceding the interview. The figure is lower than overall MT teledensity (61%) but higher than that for the lower socio-economic groups (43%) found in other studies. However, when mobile use is looked across geographic regions one finds a mixed picture. Those showing the highest rates of mobile use are not necessarily those in cities with the highest per capita income in Brazil. The metropolitan region of São Paulo, the richest city in the country, has the lowest usage rate (46%) whereas the Recife metropolitan area, one of the poorest areas in relative terms, has the third largest.

Most users (78%) owned a mobile and the near totality of user owners owns a prepaid mobile, while only a tiny minority owns a postpaid. Moreover, the vast majority of owners within each income group have a prepaid (above 90%). A closer look, nevertheless, reveals that the option for prepaid

increases with decreasing income. Surprisingly, there is little difference in user ownership across the low income groups.

Amongst owners of a mobile phone, the average price paid for a mobile was US\$146.13, the minimum price paid was US\$ 52 cents and the maximum was US\$ 518.00. Looking at the price paid across income groups, the maximum price follows the income gradient: the higher the income the higher the maximum price paid for a mobile. One of the main reasons (38%) for choosing a prepaid over postpaid is cost, but 52% find it more adequate for controlling expenditures. Curiously, in the lowest income group 78% chose a pre-paid because it is perceived as a better way to control expenditures, followed by far by cost concerns.

Findings seem to confirm that low income segments direct a disproportionate amount of income towards MT expenditures and that this share of expenditure drops rapidly as the income of the respondent increases. Yet, from a monthly expenditure perspective, we observe that income groups 3 and 4 had a monthly recharge expenditure of US\$ 7.77, whereas income group 1 value was almost one-third of that and group 2 about two-thirds. Comparing these values with the average value of a monthly postpaid bill, a large gap emerges with recharge accounting for 18.7% of the bill in income group 4 and going up to 30% in group 2. It is also interesting to observe that the majority of recharges are under US\$ 10.00, signaling a limited expenditure in this form of communication by low income MT users.

The top strategy employed by MT users in Brazil to cut cost is to use the mobile only to receive calls, followed by not answering calls, making calls only when fees are cheaper and using the mobile only for messages. This result is convergent with previous ones pointing out that users spend a large time without service credit.

Much of the public policy debate around access to ICTs in developing countries centers around issues of substitution among different technologies, with some more recently recognizing that there may be a certain degree of complementarity involved as bottom of pyramid users develop strategies based on their interpretation of price signals, income and needs. As expected, the rate of fixed telephony ownership amongst MT users is low, 37%. The rate is a bit lower than that of the overall sample. However, the vast majority of fixed telephony owners are also users of MT, indicating a strong complementarity component. Income is a determinant of this ownership rate, with less than 30% of users in income group 1 owing a fixed telephone, against over half in income group 4.

The main barrier to the adoption of MT is price, followed far by lack of need. The price factor decreases as income rises. By contrast, need runs in the opposite direction. Price is also main factor against MT adoption for adolescent and the single most significant for elders. Mobile high price is the preponderant factor for all work status, but particularly for commissioned workers or employer. The second most important reason for not buying a mobile phone across genders is the perception of not recognizing it as a real need. Mobile high price is also the preponderant factor for non users belonging to the lowest education levels, but not for those in the two highest education levels.

In a recent interview on the occasion of the Internet Governance Forum in Rio de Janeiro, Vint Cerf, one of the so-called fathers of the Internet, suggested that mobile telephony is the fastest way to give Internet access to the estimated 3 billion users by 2010 (out of the 5.5 billion people without access today), including in Brazil. In his view the mobile is the entry door to the internet coupled to other devices like the computer and the TV. The results presented above give weight to his considerations, particularly in regard to the bottom of the pyramid urban population, which make up the vast majority of the poor in Brazil. They seem to confirm for this population segment that the rate of diffusion of mobiles is much faster than other types of telephony, particularly public telephony which appears to play the critical role of mobile service complement, given the high costs of tariffs and ICT services, as found in other recent research.

Right now a small majority of this segment uses mobiles, but one third of non users plan to acquire one. Moreover two-thirds of users own a prepaid mobile, the majority having purchased it. This seems to indicate there is still considerable room for policy measures and regulator incentives to both increase the number of users in this segment and to fulfill the potential of the mobile telephony service among current users. For the results of this study clearly show that although mobile users are willing to spend more on the service they generally do not yet recognize it as a tool for the consolidation of social capital and to bootstrap their own economic advancement. The results also show there is an immense opportunity for government to take a quantum leap in the provision of services for increasing citizenship by promoting the expansion of mobile services, accompanied by the right incentives and appropriate education of mobile users.

As tariffs are still very high, including for SMS, reform in the tariff structure would also increase the use of MT by his segment users and would probably add a substantial number of new users to the market. According to a Merrill Lynch survey (2007), Brazil has the next to last lowest use of

mobiles with 79 minutes/month, behind Peru and just ahead of Marocco. So far MT service provider business model has been focused on high-end services for the richer segments of the population. Unfortunately, this picture is unlikely to change in the near future as government delayed until the end of last year the auctioning of 3G spectrum. The spectrum costs coupled to the required investments to deploy it will most certainly make them leave their current business model untouched in the near term. On a positive note, however, portability will become mandatory by August 2008 and may service provider change may increase from the current 25% rate.

Government digital inclusion policy continues to be trapped in a tunnel vision, focused on lowering the cost on computers, even though the public telecenter model has revealed its inherent limitations. The computer-centric policy is plagued by multiple mission policy syndrome as it is partly justified as needed to spur local hardware industry and, more importantly in the eyes of policymakers, indirectly the semiconductor industry, one of the four industrial policy priorities. The relative success of the policy can be assessed by the decline in computer prices and the boom in the market, helped by credit expansion, but hits a diffusion limit at the bottom of the lower middle class. Internet access is yet another main barrier to the fulfillment of digital inclusion in Brazil, one which is said to be approached through a state-centric broadband solution. In fact, just recently in April 2008, the government indicated that digital inclusion would become an objective of the country's second phase industrial policy (PITCE). In this context it announced the Broadband for All Program with the goal of having 25% of households and 100% of public schools with broadband access by 2010, increasing access and reducing regional disparities.

This sketchy policy context seems to be adverse to the expansion of volume and use of MT among at the bottom of the pyramid. Yet, emerging local and regional developments in the promotion of mobile government services could rapidly force a change in this picture from the bottom up. Since local and federal taxes account for between 46 and 76% of tariffs, a level similar only to that of Uganda and Turkey according to the mobile industry executives, and since as this research has shown there's a strong correspondence between cost of service and use expansion in scope and scale among the urban low income segments of the Brazilian population, tax reduction could be a more efficient mechanism for increasing overall MT use. And particularly among the neediest, as it was shown above that if the monthly cost of the phone service could be cut in half, over one-third of the lowest income group would double consumption. It could be argued by some that rising incomes among the lower socio-economic classes due to the renewed growth sustainability of the Brazilian economy over the last couple of years could play the same role in promoting use

expansion at the bottom of the pyramid. However, an important finding presented above is that doubling user's monthly income would result, for the vast majority of lowest income group keeping the same spending pattern, an income gradient that declines to 40% for the highest income group.

This coupled to a concerted effort to increase the scope of government m-services and adequate industrial policy mechanisms to drastically lower the cost of internet access-enabled new generation 3G devices and to promote its rapid diffusion as an accelerator of device price and service cost reduction, could be a part of a more significant policy agenda. In the end, as many others in the past, technological revolutions that significantly alter the lives of the poor, empowering them as citizens and bootstrapping them into a sustainable income generation, usually come from the periphery of the system. The results of this study will help frame this emerging agenda and the terms of the debate, so that mobile telephony in Brazil will sooner than later become yet another example.