

Progress on social mobile communications tariffs analysis for the “needy” and impact in society

L-F Pau, Copenhagen Business School and Rotterdam school of management

lfp.inf@cbs.dk , lpau@rsm.nl

Work done since 2007 for ARCEP in collaboration with industry, NGO's and authorities, and in WG2 of COST IS605 on behalf of RSM

INTRODUCTION AND PROGRESS

- **APPROACH** :This subject links communications and media usage to social and household economics *boundaries*.
- **BACKGROUND**: In present day society , communications and media are a necessity, but not always affordable ; they furthermore open up for addictive behaviours which raise additional financial and social risks .
- **RELEVANCE** : a) Real market growth comes from the edges made of untapped potential user groups (emerging countries, elderly, etc)
b) Specific business models and risk management apply , with sometimes regulatory support
c) Mobile Internet is bound to raise risk of addiction
- **EARLIER CONTRIBUTIONS** : a) A simple and efficient methodology, compatible with state-of-the-art social and communications business statistics has been developed, which produces the residual communications and media affordability budget and ultimately the value-at-risk in terms of usage and tariffs . Sensitivity analysis provides precious information on communications and media adoption on the basis of affordability.
b) Case data were and are continuously surveyed from various countries .
c) ICT policy recommendations have been made to support widespread and responsible communications access , by retargeting classical universal service obligation modalities, towards mobile communications
d) Developed and got regulatory support in some European countries, for “social tariffs” for needy groups, supplementing and linked to essential social services for the same groups (unemployment allowances, social support, etc...)
e) Maintain national indicators in the form of mobile minutes purchasing power

WHO ARE THE COMMUNICATIONS « NEEDY » IN EUROPE: A CATEGORIZATION

- Homeless (still approx 30 % have work)
- Poor , defined as such under minimum household revenue subsistence limit
- Unemployed after expiration of unemployment and social benefits
- Isolated individuals of all ages, often subject to a social / medical fracture (39 % of age group 79-83 in France)
- Migrant workers who have or find very short term employment
- Elderly alone with home care on low pensions (under subsistence limit) (89 % of 79-83 age group in France)
- Displaced populations due to war or national disasters or growing climate change effects
- Some immigrants (total immigrant workers in Europe 190 M send 400 Beur home/year)
- Many disabled (deaf, etc..)

In addition : some categories of sick persons (hard to analyze)

ROUGH ESTIMATION : 95 M people in EU (2010) , 180 M in areas part of Council of Europe (Eurostat, poverty level defined at 60 % of national median income))

RECENT RESEARCH: ADDITIONAL CATEGORY OF SEASONAL WORKERS

- It is proposed to add to categories of communications needy, seasonal workers (agriculture, tourism, social services, etc) ; often they had precarious employment contracts (or none) and then work for a while far from their home basis, leading to additional communication needs (on top of incremental transport expenses)
- Case France (Source : Survey in 2009 by Jeunesse ouvrière chrétienne amongst 322 seasonal workers aged 15-30):
 - * 74 % must find temporary housing incl. campings costing too much (30 % spend for it over 50 % of gross income, while that income is destined for later living expenses; leads often to stopping studies / education)
 - * 62 % of young people have had summer jobs, of which 56 % were seasonal workers ; 28 % did it to pay for their studies ; 25 % were not paid for additional work hours ; 14 % had no employment contracts
 - * Work is often 10-14 H /day and most often 7 days a week
 - * Communications traffic double over normal days in the year, and peak before getting back
 - * Reference: www.forumsociauxaisonniers.com

WHY ARE THE « COMMUNICATIONS NEEDY » IMPORTANT ?

- Culturally in Europe : solidarity should still apply , by Constitution, according to faith, and/or by traditions
- Socially : for social cohesion, and their health , as well as in view of the heavy share inside the budget burden for unemployment, health, additional pension benefits, or emergency help
- Politically : as they justify or drive some political or ideological currents , and as voters
- Economically : the needy often are a welcome buffer for labour, and regional development in less affluent areas , besides being key customers for low cost distribution and housing
- Health policy: equal rights to medical care and sometimes protection apply

THE POOR'S HUNGER FOR TECHNOLOGY

- Bottom-of-the-pyramid markets cannot be addressed without advanced technology , and those markets have the same hunger for it
- Source: C.K. Prahalad, The fortune at the bottom of the pyramid: eradicating profits through profits, Wharton Univ Press, 2004

SUMMARY OF AFFORDABILITY ANALYSIS AND DECISION METHODOLOGY

- **Residual communications and media affordability NA** : uses residual income and access terminal density D
- **Payments to communications and media suppliers NR** :
If the household accrues several usage subscriptions (post paid or prepaid) to communications and media, each accruing ARPU (i) average revenue per user per month:
NR = Sum (ARPU (i) *12, i=1... p) +MediaProducts
where MediaProducts is the annual sum of spot purchases of media not distributed over networks
- **Addiction vs. affordability: value at risk VaRCom**

VaRCom = NA-NR

THE NEEDY'S PURCHASING POWER in mobile voice minutes

COUNTRY	POVERTY INDICATORS (IMF www.undata.org ,2006)	MOBILE TARIFF www.erg.eu.int ,Tarifica , Intelecom	A POOR's PPP MOBILE
Mexico	-GDP PPP 14120 \$/y -2 nd Poorest quarter 92 \$/mo (30,9 % pop) -Poorest quarter 32 \$/mo (34,6 % pop)	-Entry barrier 32 \$ + min. recharge 9 \$/instance	1440
Marocco	-GDP PPP 2400 \$/y - 21 %of pop under poverty line	- 0,14 \$/min -Average -Prepaid 96 %	857
Georgia	-GDP PPP 4400 \$/y (GDP 1870 Euros) -3 Euros/month pensions for isolated seniors	0,14 Eur/min	2095
Tanzania	-GDP PPP 1256 \$/y	0,31 \$/min --50 USD handset = 1 year of savings	202
Portugal	-GDP PPP 21779 \$/y	-ERG average 0,1319 Euro/min	8255
France	-GDP PPP 33509 \$/y -7,9 M poor (INSEE, or 13,6 % of pop) (< 882 Eur/mo, 2006) ,highest in towns of > 20 000 -100 000 homeless (Fond Abbé Pierre)	-ERG average 0,0980 Euro/min -550 000 households have no possible Internet access	17096

This is a reminder of 2008 results, to highlight how difficult it will be to evolve these indicators in the presence of Mobile Broadband

** : ((GDP PPP)*0.6) / (MT*12) represents the monthly full purchasing power in mobile minutes

RECENT EUROPEAN INITIATIVES and EVENTS

- 25/9/2008 Commission launches debate on future of universal service : How can the EU achieve that all Europeans –from the North of Finland to the South of Italy, from the Western Ireland to Eastern Romania – have access to broadband Internet?
- The COST605 Lisboa WG2 meeting, Nov. 2008 on «Mobile tariffs for the needy» helped to enable an OECD action in 2010 on «Communication tariffs for the poor», rooted in regulated deployments (FR, SP)
- Conference : “Increasing social inclusion and decreasing poverty through ICT” was held 9 June 2010 - 11 June 2010 Linköping, Sweden, organized by Eurocities
- 5th European eAccessibility Forum: Benefits and costs of e-accessibility was held 28 March 2011 Paris, France
- BEREC has proposed that LTE spectrum auctions and early coverage give a priority to rural areas and pockets of poverty in Europe
- The EU programme for employment and social solidarity, – PROGRESS (2007-2013), is also subject to a review. In this context, DG Employment, Social Affairs and Inclusion invites is crafting a successor instrument. PROGRESS was established to support financially the implementation of the objectives of the European Union in employment, social affairs and equal opportunities

EVOLUTION OF EU’S UNIVERSAL SERVICE (since 2010)

- **Affordability, tariffs and quality**

In order to ensure access to services for people with special social needs or on low incomes, Member States may provide tariff options or packages different from those normally offered to consumers on a commercial basis. Moreover, users should be able to monitor and control their expenditure by benefiting from special facilities such as itemised bills, the possibility to selectively block certain calls, for instance high-priced calls to premium services, means of pre-payment or payments phased over time. However, consumers must support some of the costs of the service. Moreover, while those who do not pay their bills can be protected from immediate disconnection in particular cases (for instance during a dispute over high bills for premium-rate services) they cannot expect to keep a phone line indefinitely. Quality is another key element monitored by national regulatory authorities, which may take measures where deemed necessary.

- **Financing**

*Providing a basic set of communications services to all end-users comes at a cost. Therefore, the Universal Service Directive allows providers to be compensated either from public funds or through a cost-sharing arrangement between providers if it is demonstrated that by complying with the universal service obligations they incur a loss or suffer net costs that exceed normal commercial standards.

*Member States are free to go beyond the minimum requirements laid down in the Directive, the only stipulation being that any additional obligation cannot be funded by a levy on telecom providers.

OECD's new indicator for well-being

- On 24/5/2011 OECD Statistics Dept announced a new well being indicator aimed at citizen's of developed countries better to measure their living conditions, inspired by the Stiglitz-Sen-Fitoussi report
- It weighs 11 criteria: housing, income, work, community, education , environment, governance, health, subjective well-being, safety, and work-private life harmony
- To protect national sensitivities, OECD provides the data but citizens can weigh them for comparisons whereby they can pressure or greet their rulers
- As penetration is not a differentiator for access to communications in that group, the affordability measures are being considered very seriously to be embedded in the community component

eINCLUSION in Hungary

- On 6 October 2008, the Hungarian Parliament unanimously voted two resolutions aimed at solving the eInclusion issue in the country.
- Deputies called for the establishment of an 'e-Inclusion Temporary Parliamentary Committee' and formulated recommendations for closing the digital divide.
- Impact ? Very little ...

MOBILE BANKING FOR e-INCLUSION

- Financial inclusion denotes delivery of financial services at an affordable cost to the vast sections of the disadvantaged and low-income groups. People in developing countries have less options for transferring money and accessing banking services, because there is less deployed formal banking structure: fewer branches and ATMs generally co-located to relieve branches, low internet penetration and easy access to fast and immediate sources of loans but at high cost.
- Branchless banking channel using mobile phones is preferable to poor people, rather than the available options like travelling to and queuing at distant branches, forgoing their daily work. It is proven fact that it lowers the cost of delivery to banks in building and maintaining a delivery channel and availability of funds to customers of accessing services.
- Hence, the developing countries around the world concentrate more on implementing the mobile banking access to the unbanked mobile users, as a tool of financial inclusion.
- **When is mobile banking in Europe to be looked at the same way ?**

TECHNOLOGICAL « EXCLUSION »

- Some research has aimed at providing indicators of e-Exclusion by measuring the harm caused.
- In UK, the National Audit Office (NAO) (2009) commissioned OII +LSE to cost the impact of digital exclusion. Indicators of financial harm as a result of digital exclusion were proposed for certain key groups: the low-income unemployed, the elderly and disabled, and the educationally disadvantaged. The economic 'benefits foregone' through the exclusion of these groups were then used to calculate the financial benefits - to individuals, government and the economy - of government intervention to tackle digital exclusion.
- Methodology:
 1. Technological forms of exclusion are a reality for significant segments of the population. Different groups experience different types of exclusion, and for some people, they reinforce and deepen existing disadvantages, such as social and economic exclusion. The team estimated indicators of financial harm as a result of digital exclusion to certain key groups: the low-income unemployed, the elderly and disabled, and the educationally disadvantaged.
 2. The methodology made use of data from the Oxford Internet Institute's biennial Oxford Internet Surveys (OxIS), which provide the most comprehensive survey of Internet use in Britain. Datasets based on multiple independent surveys conducted by the UK Office for National Statistics (ONS) and the Office of Communications (Ofcom) were used to replicate indices and analyses to validate the central findings. OxIS: [tp://www.oii.ox.ac.uk/microsites/oxis/](http://www.oii.ox.ac.uk/microsites/oxis/)
- More details are available in research carried out by the OII (with the ONS and Ofcom) for the Department for Communities and Local Government (CLG), published as: Digital Inclusion: An Analysis of Social Disadvantage and the Information Society (2008).

THEORETICAL RESULTS (I): How exclusion affects spending

- How does exclusion affect spending and consumption? RSM research shows that exclusion prompted people to spend and consume in ways that fostered affiliation.
- Specifically, exclusion increased likelihood of buying a product that would demonstrate group loyalty to a new peer (Experiment 1), caused people to shift their spending preferences to match those of a peer (Experiment 2), and increased willingness to spend on an unpleasant product (chicken feet), but only when it enhanced chance of affiliation (Experiment 3). Socially excluded people were even willing to consume illicit drugs, but only when the act of consumption was public and would lead to inclusion (Experiment 4).
- Overall, social exclusion caused people to spend and consume in an affiliative manner, rather than in a self-indulgent or impulsive fashion.
- **This result applies to social tariffs and communications spend of the needy**

THEORETICAL RESULTS (II): Pareto, and why society creates 80 % less affluent and 20 % rich

- Back in the late 1800's Vilfredo Pareto observed and recorded that by some universal phenomenon, 20 % of the population owned 80 % of assets
- Theoretical work by J-P Bouchaud. & M. Mézard (Physica A J.) expressing transactions and asset buildup akin chaotic systems theory, reach the same stationary equilibrium
- Apparently the reason is linked to the notion of taxable proportional returns with risk aversion , which implies that you earn 10 times less investing 100 than if you owned 1000, in face of speculation and risk

MOBILE SOCIAL TARIFFS

1. Eligibility for a social tariff (mobile communications)

"Qualifies as a " communications needy" a person who satisfies one or both of the conditions ;

- ***Economic criterion : negative residual disposable purchasing power , or gross personal purchasing power under national poverty criterion, as per tax declaration or observations by independent body (incl. Registered NGO)***
- ***Accessibility criterion: the person is registered by a public authority providing this person a social or health service, in return for this person committing to meet targets set by the authority to improve his/her living conditions***

2. Social tariff

- ***The eligible person receives a certificate whereby a low cost mobile communications service bundle is provided by public operators, paid by the person, the eventual negative margin on which can be claimed by the operator against USO contributions to regulator***
- ***The person signs as an addendum to the subscription, a consent to be informed of mobile number, to allow access to him/her by the certificate issuing body at any time, and to report monthly progress towards the targets***
- ***The person also consents to controls and inspections, with at most two notices before cancellation by operator in case of abuses/fraud reported to the public authority***

FRENCH SOCIAL TARIFFS AND INITIATIVES (update 03/2011)

- ARCEP regulated bundle :10 Euros/month with 40 mn domestic voice and 40 SMS
- BernardTapie.com proposes a bundle at 7,90 Euros
- SIMYO (KPN France) in August 2011 offered a prepaid rate of 4,90 Euros for 30 min for 5,70 Euro credit and 3,70 Euro credit on a reload
- Industry Minister Eric Besson has met 3 operators for a MoU for a triple-play bundle at 20 Euros
- MVNO Alice is promoting a bundle Internet+Telephone+TV at 12 Euros

Estimated impact : 185 000 mobile subscribers at mobile social tariffs since 2009

SPANISH SOCIAL TARIFF UPDATE

- Telefonica social tariff : unemployed in Spain get a max. 20 Euro discount representing 50 % on their mobile or narrowband subscriptions/month , provided they have been clients for at least 6 months. The arrangement is called “ teayudamos” and its expected uptake is expected to reach 500 000 people

SIMPLIFYING BUNDLES : Case Telenor Denmark

- Since 18/04/2011 Telenor Denmark has removed all bundles with a mobile phone included, replacing it with an option to pay mobile phone over 12 or 24 months; in this way needy people who have received a mobile phone from an NGO only pay the real communications price
- Call termination fee is removed
- Lowest traffic onlyu mobiel bundle , with pricing according to use, is 2 hours/month for 80 Kr (approx 10,20 Euros)

UPDATES on AFFORDABILITY DATA

- See on COST 605 Web site , basic data updates v7) covering the following European countries : NL, POR, FR, UK, DK
- Data planned to be moved to OECD and/or BEREC after end of COST 605

STRUCTURAL ANALYSIS OF AFFORDABILITY DATA FOR HOUSEHOLDS (Denmark)

Sources: « Finansiell stabilitet », Nationalbanken, 2011, pp 70-78; Kvartalsoversigt, Q2-Del 1, 2011, pp 39-44

Falling affordability due to falling private consumption and fast rise in tariffs

- The growing overexposure of households towards real estate and consumer credit, has led the credit ratio (balance of liabilities/ net disposable income after taxes) to rise to 300 % , but assets (incl. Pension assets and free shares in real estate) have grown faster with a ratio of 460 % (2010)
- In liabilities, real estate mortgage is about 75 % and other liabilities 25 %
- The combination of high liabilities, illiquid assets and falling real estate prices, has increased the risk from loss of income / job and interest rate increases; a 3 % increase in interest rates ult. 2010 leads to interest payments reaching avg. 30% of net income
- Due to increases in energy and transportation costs, the private consumption ratio (disposable income net of taxes and energy) is in 2010 at 92 % of 2007
- As median mobile tariffs in Denmark have over the past 10 years grown at approx. twice the inflation rate (Q3:2011: 3%) , and 2 year subscription plans can be assimilated to a 2 year mortgage obligation, share in net disposable income has approx. doubled ; unless short term unsecured consumer loan credits were used to cover this increase, the research question is which expense items had to be reduced to accommodate mobile communications inside falling private consumption

CONCLUSION

- Mobile social tariffs and bundle redefinition, represent a concrete measure driven by social solidarity, with direct impact on many European's lives
- BEREC is taking up the issue at pan-european regulatory level on the basis of the recent redefinition of USO
- Mobile Internet and LTE are bound to increase affordability and addiction problems, requiring continuous analysis and challenge to business models and regulations
- The rise of most wireless communications tariffs at rates higher than inflation (for a given traffic) , while private consumption decreases, give added urgency to social issues
- It is to be regretted that nevertheless, social issues in telecommunications are considered unimportant and unworthy of research by some academics