

The impact of telecoms access on rural livelihoods

DFID KaR study in India (Gujarat),
Mozambique & Tanzania -
Tanzania case study

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Introduction to multi-country research project

Professor David Souter



Purpose of study

- ❑ to identify the impact of telephony and other ICTs on the livelihoods of people in rural communities in three research countries
- ❑ to assess the policy implications of this research and make recommendations to governments, international agencies and other stakeholders

❑ Research locations:

- ❑ India (Gujarat)
- ❑ Mozambique
- ❑ Tanzania



Organisation of study

- ❑ Funded by:
 - ❑ UK Department for International Development
- ❑ UK research team:
 - ❑ ict Development Associates Ltd (research coordination)
 - ❑ Gamos Ltd (data analysis)
- ❑ Project Management:
 - ❑ Commonwealth Telecommunications Organisation
- ❑ National research partners:
 - ❑ India (Gujarat):
 - ❑ Indian Institute of Management (Ahmedabad)
 - ❑ Mozambique:
 - ❑ Eduardo Mondlane University
 - ❑ Tanzania:
 - ❑ Commission on Science and Technology (COSTECH)

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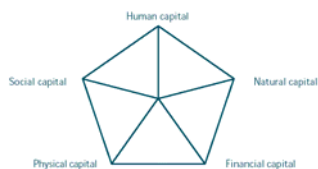
Research methodology

- ❑ Field survey of about 750 households per country,
- ❑ based on:
 - ❑ focus group discussions
 - ❑ extensive (one hour) individual questionnaires
- ❑ Focus on household heads and senior household members
- ❑ Five key areas of questioning:
 - ❑ household characteristics
 - ❑ communications flows and channels
 - ❑ use of telephony
 - ❑ attitudes towards telephony
 - ❑ use of Internet

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Sustainable livelihoods approach



- ❑ Focus of study on:
 - ❑ Vulnerability (emergencies)
 - ❑ Social capital (family and networks)
 - ❑ Financial capital (assets and income)
 - ❑ Human capital (knowledge and information)

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Statistical presentation of research findings

Dr Nigel Scott, Gamos Ltd



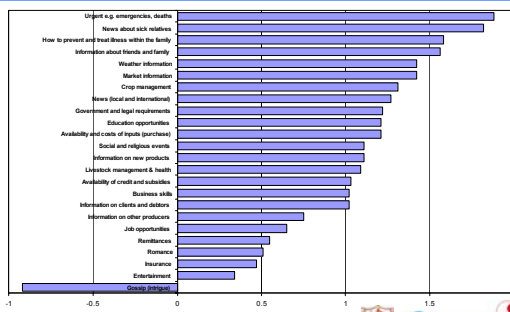
Statistical presentation of research findings

1. Communication flows
2. ICT and telephone ownership and use
3. Impact of telephone use (perceptions and correlations)
4. Other findings

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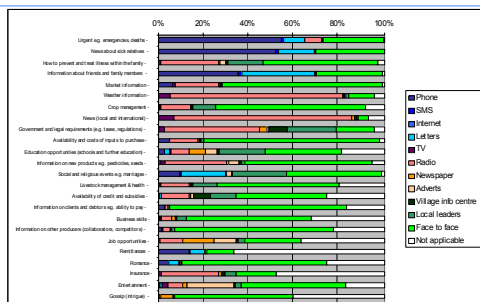
Types of information: importance



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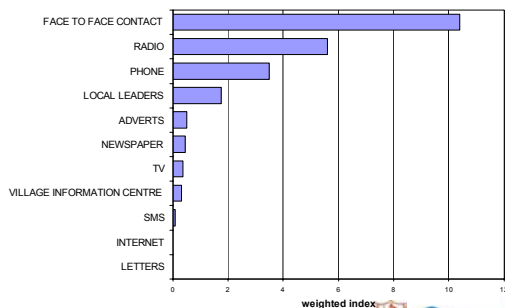
Types of information: primary means



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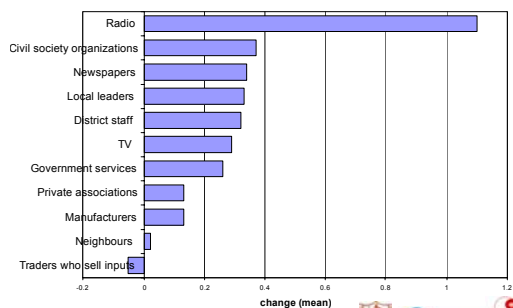
Weighted importance of means of communication



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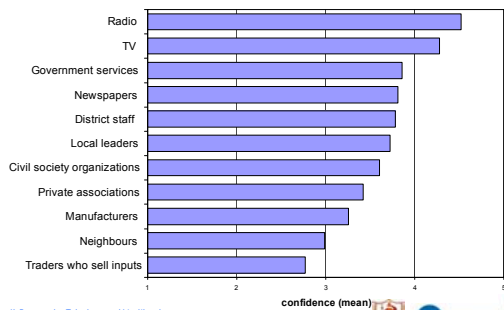
Perceived change in information channels over past two years



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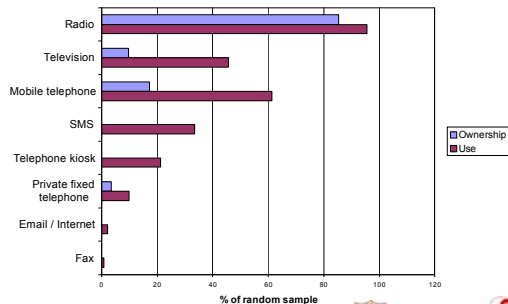
Perceived confidence in information channels



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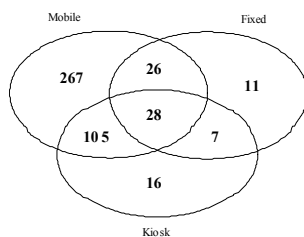
ICTs - use and ownership



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Telephone access



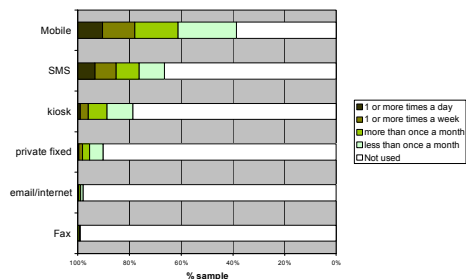
- 59.6% of interviewees who did not own a phone considered it likely or very likely that they would own one within a year
- (29.3% very likely)

Fixed refers to private fixed lines; mobile includes various means of access

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Telephone frequency of use



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Primary, secondary and tertiary uses of mobile telephony

	Mobile phone			Fixed phone		
	Primary	Secondary	Tertiary	Primary	Secondary	Tertiary
Business	12.7	7.8	4.4	2.0	1.0	1.2
Advisory information	0.4	2.0	4.9	0.1	0.4	0.8
Social (friends and family)	12.0	29.6	10.8	2.9	6.1	1.2
Gaining new knowledge	0.3	0.5	0.8	0.0	0.0	0.1
Emergencies	37.7	14.6	5.0	8.2	3.0	0.5

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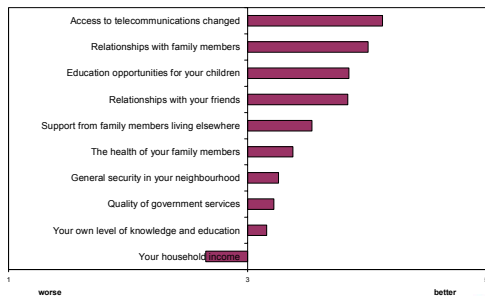
Telephone expenditure

	N	Total spend TZS/month	Income TZS/year	% (mean)
Poorest	43	3100	330000	13.9
poor	78	3700	590000	9.5
medium	87	5900	2210000	7.1
rich	85	10500	5500000	5.7

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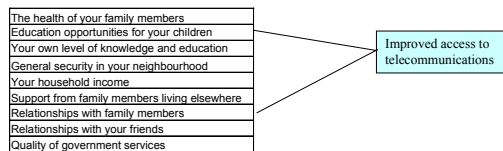
Perceptions of change in household context



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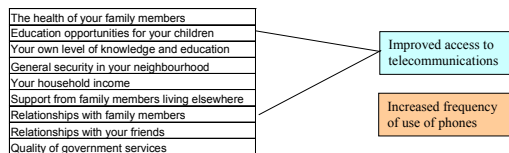
Correlations between perceived livelihoods perceptions and change in frequency of use of telecoms



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Correlations between perceived livelihoods perceptions and change in frequency of use of telecoms



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Access correlates more with changes in livelihoods more than frequency of use

		Change in access			Frequency of use		
		Financial	Social	Human	Financial	Social	Human
Coverage	Low						
	Low Mobile						
	High mobile	*	*	*			
	High						
Age	Youngest	*	*	*			
	Young	*	*	*			
	Middle						
	Old	*	*	*			
Gender	Male	*	*	*			
	Female						
Education	None						
	Primary						
	Post primary	*	*	*			
Econ index	Poorest						
	Poor						
	Average						
	Rich	*	*	*			
Occupation	Unskilled						
	Skilled	*	*	*			
	Farmer	*	*	*			
	Salaried/business	*	*	*			
Phone category	User	*	*	*			
	owner	*	*	*			

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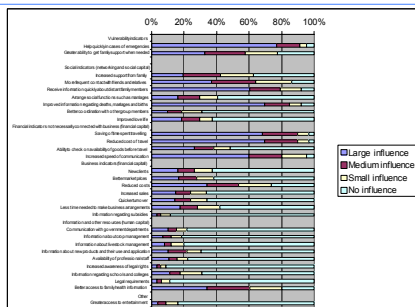
Perceived benefits of telephone use (highest and lowest perceived benefit)

	Livelihood asset	Mean (range 1 to 5)
Help quickly in cases of emergencies	S	3.45
Reduced cost of travel	F	3.39
Saving of time spent travelling	F	3.38
Improved information regarding deaths, marriages and births	S	3.28
Increased speed of communication	S	3.25
Information about livestock management	H	1.73
Greater access to entertainment options	S	1.71
Information regarding subsidies	F	1.62
Increased awareness of legal rights, e.g. re water and land	H	1.61
Legal requirements	H	1.61

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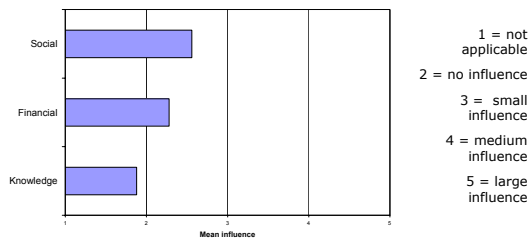
Perceived benefits of telephony



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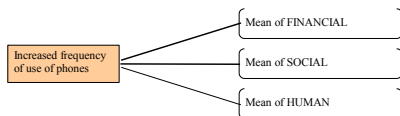
Perceived benefits - livelihoods categories



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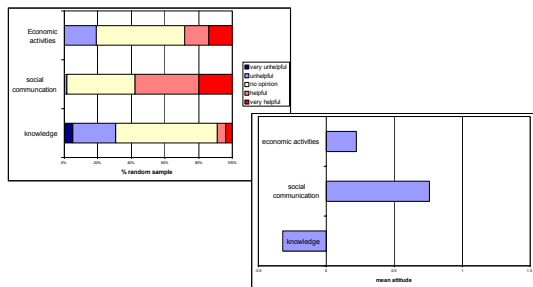
Correlations between perceived benefits (categories) and frequency of telephone use



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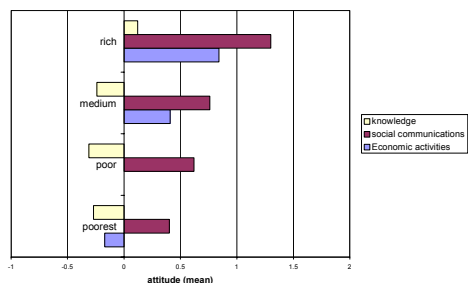
How helpful has your investment in the use of a phone been for ...? (perceptions)



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How helpful has your investment in the use of a phone been for...? (perceptions by economic group)



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Perceived value of telephone for economic activity

Question: If you were unable to use a phone any more, how would this impact your economic activities?

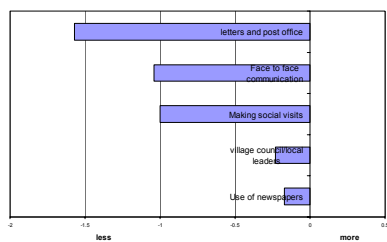
	Frequency	Percent
Would not be able to continue	11	1.5
Would continue but with difficulty	178	24.3
No opinion	73	9.9
Not much difference	112	15.3
No difference	111	15.1
Total	485	66.1
Missing	249	33.9
Total	734	100

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Impact of telephone use on other means of communication

Question: Has your use of other means of communication changed since you started using the telephone?



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Telephones and travel

- ❑ Few of the sample now travel to access phones - reduction since introduction of mobile
- ❑ Link between perceived travel savings and intensity of use (kiosks and mobiles)
- ❑ link between change in need to travel with change in access to telecommunications - certain groups
- ❑ Weak link with intensity of use
- ❑ No differences in change in need to travel between phone owners, users, and non-users

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Use of Internet

- ❑ Of 734 interviewees:
 - ❑ 16 reported that they had ever used email
 - ❑ 11 reported that they had looked at websites

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Analysis of findings

Overview findings

Professor David Souter
and Dr Nigel Scott



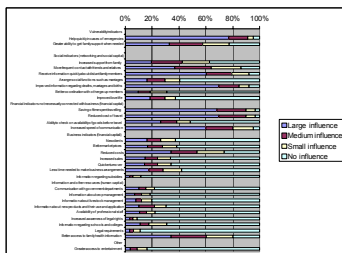
Overview findings - 1

- ❑ Understanding communication flows is crucial to understanding the impact of communication technologies:
 - ❑ what and why are people trying to communicate?
 - ❑ what communications means are most effective for delivering their objectives?
 - ❑ face-to-face communication is preferred for many communications
 - ❑ telephony is differently valued for different purposes
 - ❑ important factors seem to include:
 - ❑ degree of knowledge of interlocutor
 - ❑ saliency of circumstance
 - ❑ habituation to telephone use

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Perceived value of telephony



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Overview findings - 2

- ❑ The telephone is very highly valued for use in emergencies:
 - ❑ i.e. for occasions of high importance/saliency
- ❑ In livelihoods terms, this equates to a high value in reducing vulnerability
- ❑ This value applies across all socio-economic groupings ...
... and is common to all three research countries
- ❑ It emphasises the value of access to all potential users

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Overview findings - 3

- ❑ The telephone is highly valued for social communications, particularly within the family
- ❑ It is less highly valued but still significantly valued for social communications beyond the family
- ❑ There is evidence that the telephone is replacing some social interaction between family members within the locality
 - ❑ this would have significant social consequences if it impacts on major social contact (e.g. celebrations) but may not have such significance if it only impacts on minor social contact (e.g. arrangements for future family gatherings, transmission of unimportant news)
- ❑ There is evidence that the telephone significantly increases contact with family members living elsewhere
 - ❑ Mozambique has the highest diaspora level in the three research countries

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Overview findings - 4

- ❑ The telephone is substantially valued for enabling savings in time and money
 - ❑ for example, getting things done quickly, savings on travelling for business purposes etc.
- ❑ This is the main functional value attributed to the telephone in responses
- ❑ While reducing the need for travel, however, it only does so in relation to a minority of occasions for travel
- ❑ Using the telephone is not the main reason for travel for any significant number of respondents
- ❑ It therefore represents an additional resource rather than a transforming resource in relation to travel
- ❑ The telephone is significantly used for arranging remittances but is not the primary means for securing these

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Overview findings - 5

- ❑ In a business context, the telephone is much more valuable (and valued) for saving money than for increasing earnings
- ❑ In other words, it helps to reduce expenditure rather than to increase income
- ❑ It is given low value as a tool for market-building
- ❑ Higher earners appear to benefit more economically from telephony than lower earners
- ❑ These findings are consistent with findings on electronic commerce for much larger businesses

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Overview findings - 6

- ❑ It is not clear to what extent use of telephony represents additional expenditure or substitutes for existing expenditure:
 - ❑ substitution expenditure is where the telephone is used instead of an established alternative (e.g. travel): the impact on overall expenditure is likely to be neutral or there may be cost saving
 - ❑ additional expenditure is where the telephone is used to do something that would not otherwise be done: this is likely to increase overall expenditure
- ❑ There is evidence that, for lower income groups, telephony can represent a financial burden
- ❑ This may grow with social expectation (i.e. it will be significant if use of the telephone for social contact becomes expected, but is not likely to be important if use of the telephone is largely confined to emergency and other high-saliency use and to money-saving activities such as replacement for travel)

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Overview findings - 7

- ❑ The telephone is regarded as of very little value for information-gathering
- ❑ Broadcast radio is much the most important channel for general information such as news and weather
- ❑ Face-to-face communication - with officials, business partners, peer groups and family members - is much the most important channel for specific information such as business-related information
 - ❑ This finding is consistent across the three research countries

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Overview finding - 8

- ❑ The Internet is not yet being used significantly by the population represented in the sample
 - ❑ Declared awareness of Internet is low
- ❑ This finding is consistent across all three research countries
- ❑ Further research on Internet use is needed:
 - ❑ it assess this from the perspective of the general population as well as from that of actual Internet users

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Overview finding - 9

- ❑ The telephone is having a substantial negative impact on some other communication channels
 - ❑ notably postal services
- ❑ Changes in face-to-face communications and social visits may reflect transition of unimportant contacts to telephony rather than of major contacts

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Overview findings - livelihoods summary

- ❑ The telephone is:
 - ❑ of most value in reducing high vulnerability (emergencies)
 - ❑ highly valued for sustaining social capital in the family
 - ❑ less highly (but significantly) valued for other social networking
 - ❑ significantly valued for saving financial capital
 - ❑ less significantly valued for obtaining new financial capital
 - ❑ of more economic value to those of higher economic status than to those of lower economic status
 - ❑ very little valued for increasing human capital (information and knowledge)

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Issues for discussion

1. Questions and comments on the findings as a whole
2. Implications for stakeholders:
 - communications businesses
 - government policy
 - development and rural development agencies
3. Recommendations:
 - policy recommendations
 - recommendations for further research

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Contact points

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