Africa E-Access & Usage Index

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About Research ICT Africa!

Why a network of researchers?

- To satisfy the growing demand for information and analysis needed for appropriate policy formulation and effective regulation
- To provide a coherent research database on the African continent that informs policy-makers
- To establishing the needs of countries and groups within them, and to conceptualising approaches that are likely to be effective in resolving country-specific problems
- Supported by the Canadian IDRC.

RIA! members

Each member institution represents that country's nodal point:

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Hosted by the LINK Centre, University of the Witwatersrand, Joburg, South Africa.

•Advisor on E-Index, Aki Stavrou

Evolution of the E-Access & Usage Index

Evolved out of 2 baseline studies conducted in 2003:

- ICT Sector Performance Review
  - Sought to assess national policy objectives against outcomes in the ICT sector in terms of delivery and performance
- The Fair Access to Internet Report (FAIR)
  - Sought correlations between ICT policy regimes and regulatory practice, pricing of telecommunications and Internet services and Internet penetration.
  - While significant these factors overwhelmed by other factors.
  - Supply side analysis too limited on its own to provide a useful understanding of ICT development.

E-Access & Usage Index

- What the E-access & Usage Index seeks to do is measure what is happening in the ICT sector from the lens of users, consumers and those marginalised from services and to analyse access, demand and usage patterns in response to services delivered as a result of operators' responses to policy and regulatory frameworks

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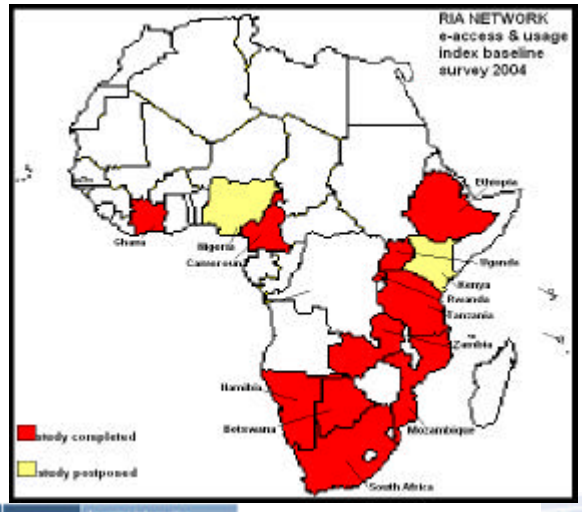
Participants in the E-Access & Usage Index



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Logistics

- Collective questionnaire development
- Pilot
- Questionnaire revision
- Development of survey manual
- Training and pilot in country
- Survey
- Data capture in country and centralised
- Analysis

Methodology

- Cost effective methodology based on the World Health Organisation's Expanded Programme on Immunisation (EPI)
- In order to meet the requirements of a scientific probability sample, there were features common to all countries:
  - Use accepted probability sampling methods at every stage of sample selection;
  - Select a nationally representative sample;
  - Ensure that the field implementation was faithful to the sample design;
  - Ensure that the sample size was sufficient to achieve reliability requirements.
  - The most recent population census was used as the sampling frame.
- The sample was segmented into three unique spatially defined strata: the capital city, other urban areas and rural areas
- Intended that 675 clusters be surveyed in the 14 countries and a total of 20250 household interviews. In fact around16 500 surveys of household in nine countries were finally undertaken.

Sampling

Country	Population	Diversity	Clusters	Questionnaires
			Targeted	Targeted
Botswana	1,601,913	Low	30	900
Cameroon	16,024,854	Medium	45	1,350
Ethiopia	67,872,710	Medium	75	2,250
Ghana	20,913,268	High	45	1,350
Mozambique	18,945,114	Low	45	1,350
Namibia	1,971,274	High	30	900
Rwanda	7,938,017	Low	30	900
South Africa	43,313,670	High	75	2,250
Tanzania	36,838,286	Low	60	1,800
Uganda	26,166,407	Medium	60	1,800
Zambia	10,430,092	Low	45	1,350
Kenya	32,262,077	Medium	60	1,800
Nigeria	136,408,161	High	75	2,250

Questionnaire

- Module 1 - **sampling details** and information on **number of visits**, whom was interviewed.
- Modules 2/3/4 - **demographics, vocation, income and mobile and internet address** information for every member of the household being surveyed.
- Modules 5 and 6 - **household attributes, water, sanitation, waste disposal and postal infrastructure and services** used by the household, as well information on various appliances, including household computers.
- Module 7 - **private non-mobile household phones** and administered only if such were found in the surveyed household.
- Module 8 - usage of **public and office telephones**
- Module 9 - **owned or used a mobile phone** and the information collected is to reflect their own personal situation only.
- Module 10 - **cybercafe and internet usage**

Mapping

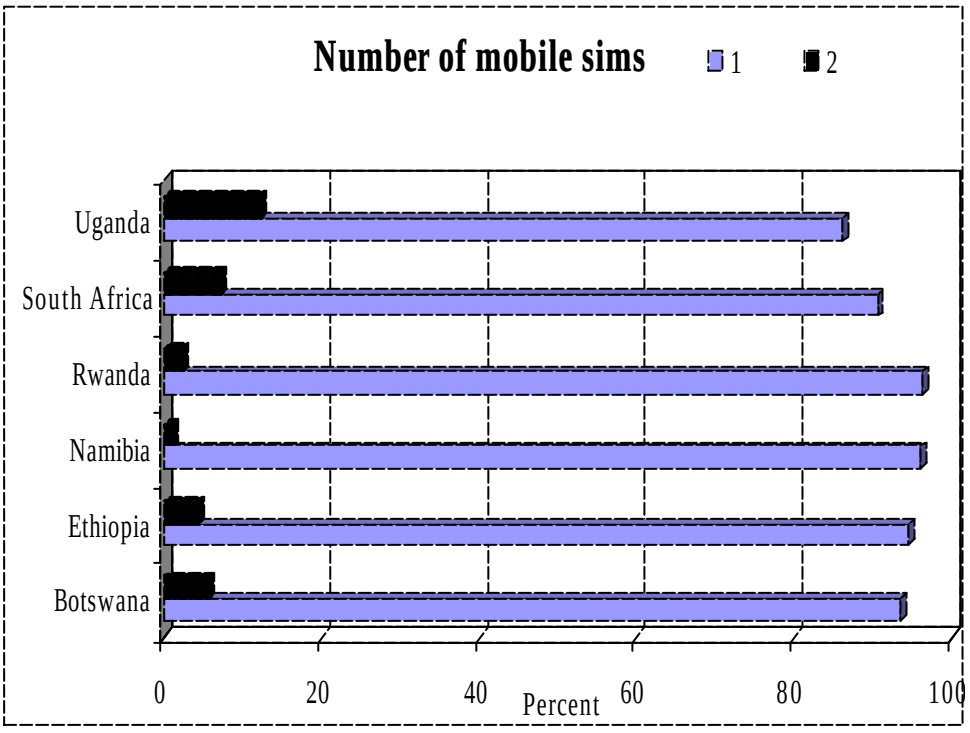
URBAN

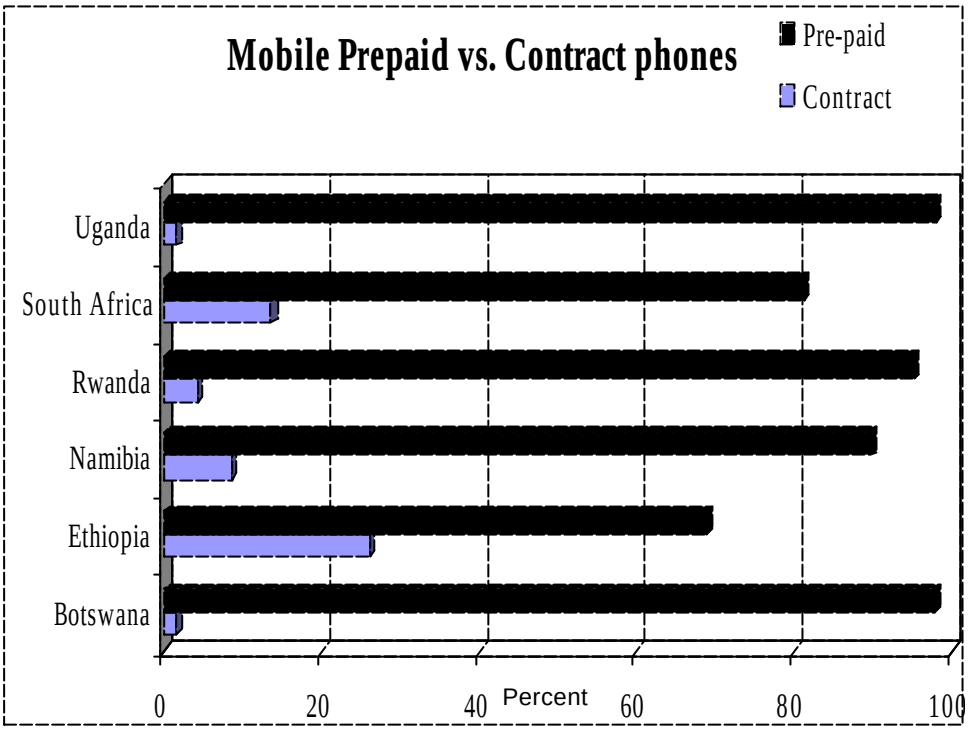
RURAL

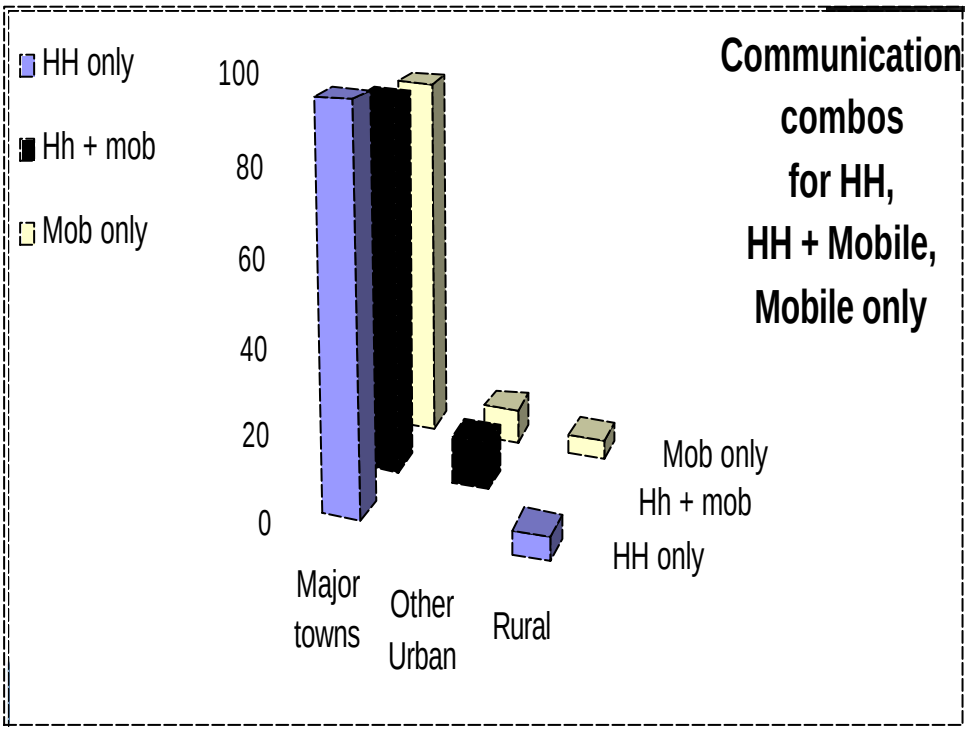
	Population	Poverty (% of population below $1 a day)	Adult literacy rate (% ages 15 and over)	Urban population (% of total population)	GDP per capita	Surface area
~~General~~						
Botswana	1.7	n/a	78.9	49.9	2939.0	582.0
Ethiopia	67.3	81.9	41.5	16.2	96.0	1104.0
Namibia	1.8	n/a	83.3	31.9	1523.0	824.0
Rwanda	8.2	n/a	69.2	6.4	210.0	26.0
South Africa	43.6	n/a	86.0	58.4	2293.0	1221.0
~~Uganda~~	~~23.4~~	~~26.8~~	~~68.9~~	~~14.9~~	243.0	241.0

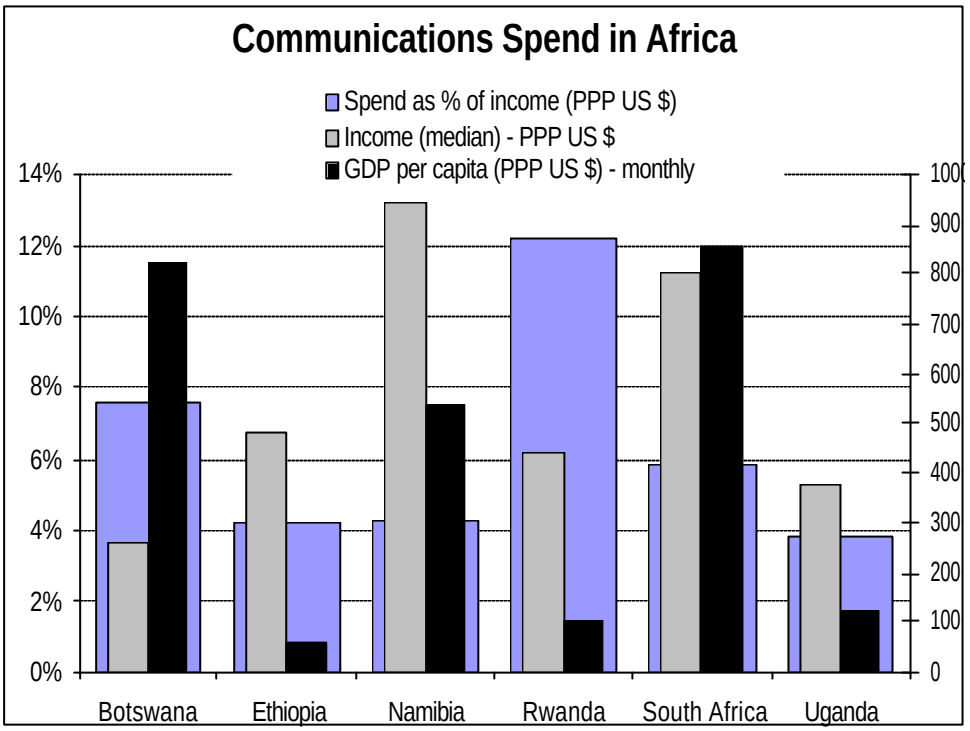
Sources: Development Data Group, World Bank
ITU World Telecommunications Development Report, 2003

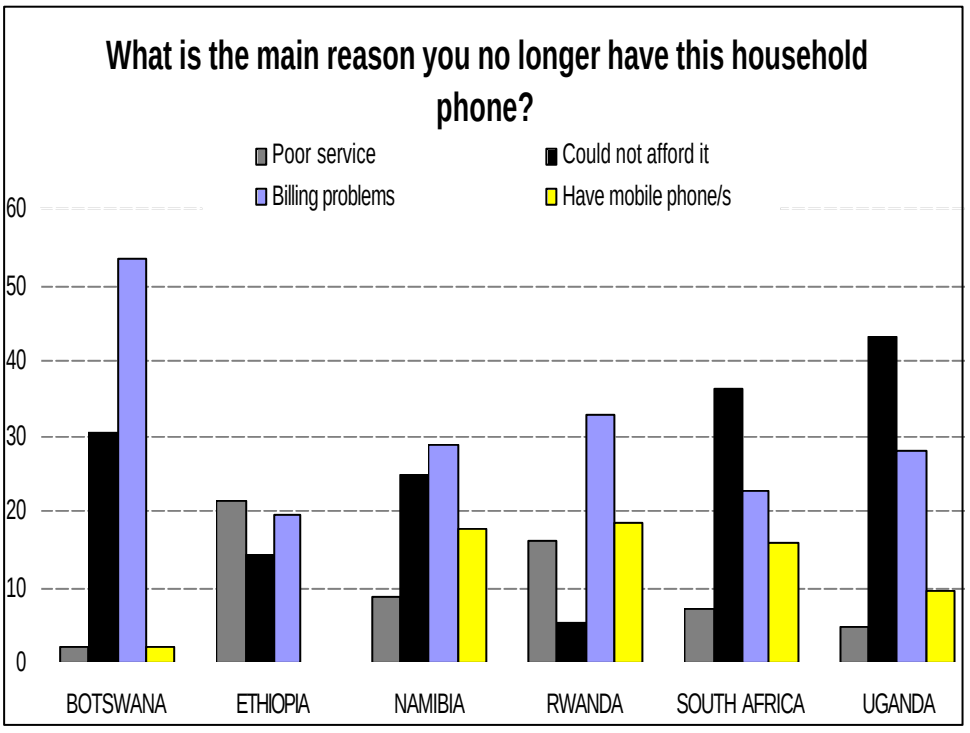
ICT ACCESS	Botswana	Ethiopia	Namibia	Rwanda	South Africa	Uganda
Fixed line penetration (%)	22.4	5.2	13.2	4.3	22.1	0.8
Mobile penetration - prepaid (%)	23.3	0.4	12.1	8.3	32.7	3.0
Email penetration - subscribers (%)	3.2	0.1	1.6	6.4	5.7	0.4
Payphone % (used in the last 3 months)	23.4	20.8	83.0	15.8	47.3	27.8

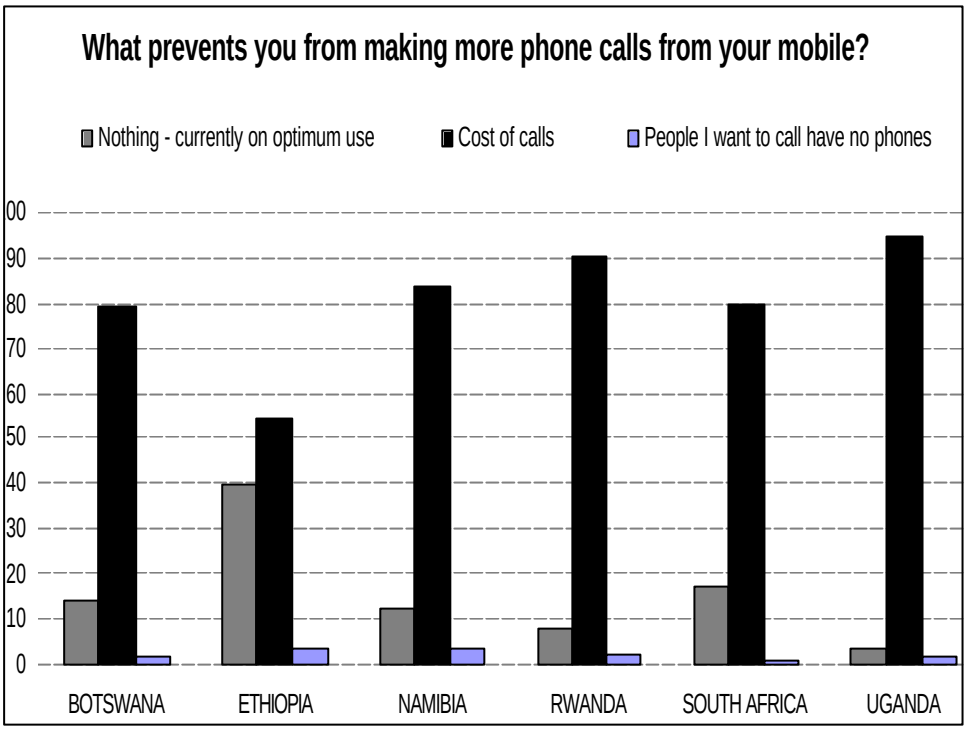



Mobile Prepaid vs. Contract phones
Pre-paid
Contract
Uganda
South Africa
Rwanda
Namibia
Ethiopia
Botswana
0
20
40
Percent
60
80
100

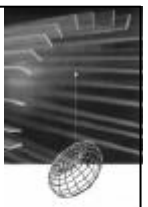

HH only
Hh + mob
Mob only
100
80
60
40
20
0
Major towns
Other Urban
Rural
Mob only
Hh + mob
HH only
Communication combos for HH, HH + Mobile, Mobile only

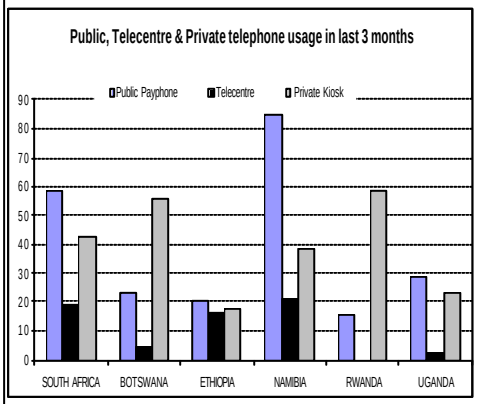

Communications Spend in Africa
Spend as % of income (PPP US $)
Income (median) - PPP US $
GDP per capita (PPP US $) - monthly
14%
12%
10%
8%
6%
4%
2%
0%
100
900
800
700
600
500
400
300
200
100
0
Botswana
Ethiopia
Namibia
Rwanda
South Africa
Uganda

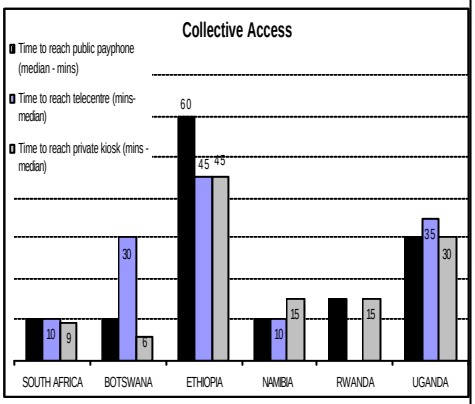

What is the main reason you no longer have this household phone?
Poor service
Could not afford it
Billing problems
Have mobile phone/s
60
50
40
30
20
10
0
BOTSWANA
ETHIOPIA
NAMIBIA
RWANDA
SOUTH AFRICA
UGANDA



Public access







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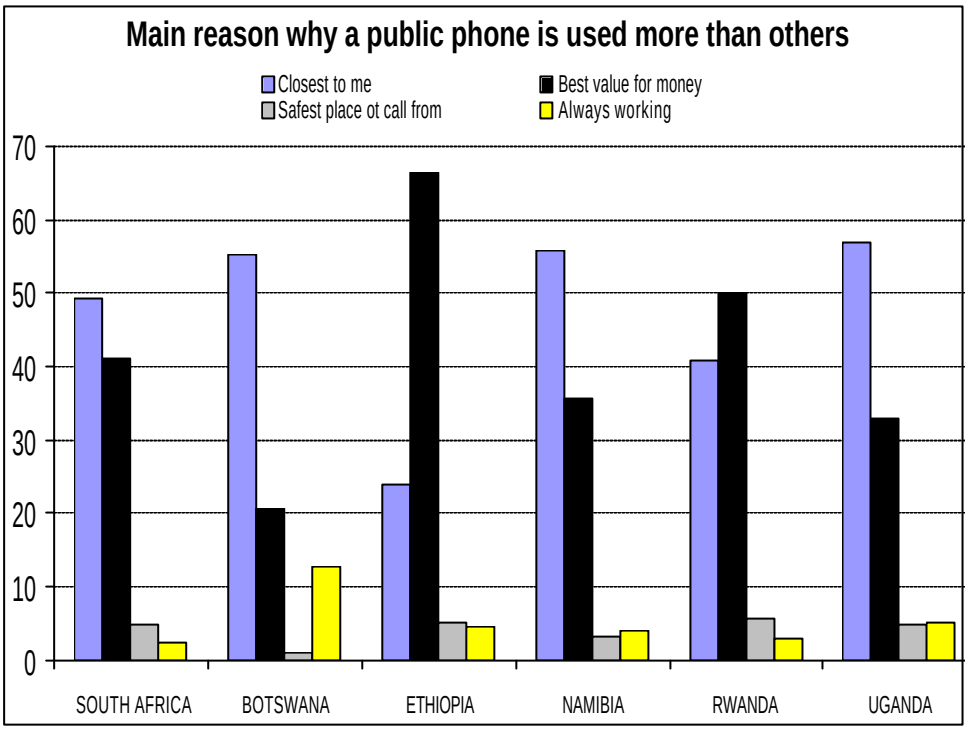
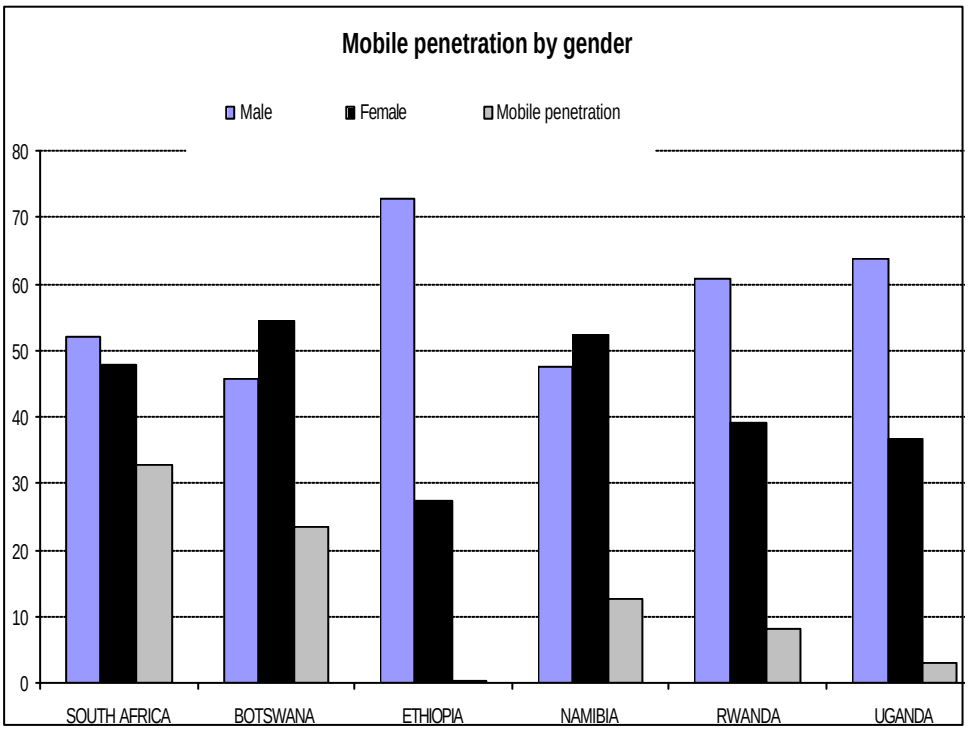
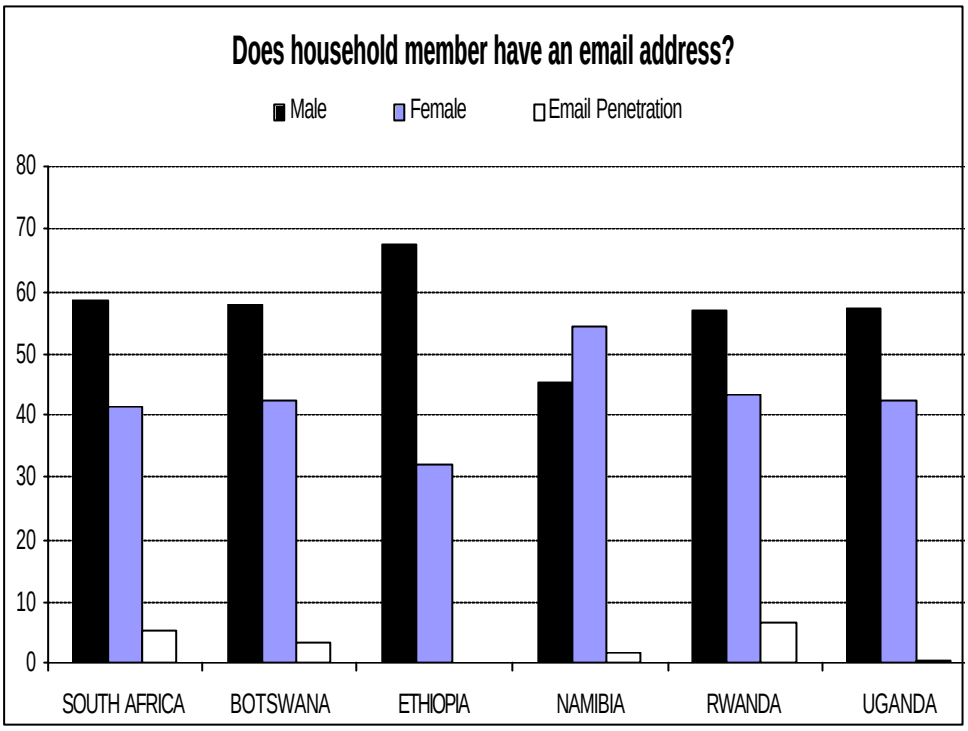
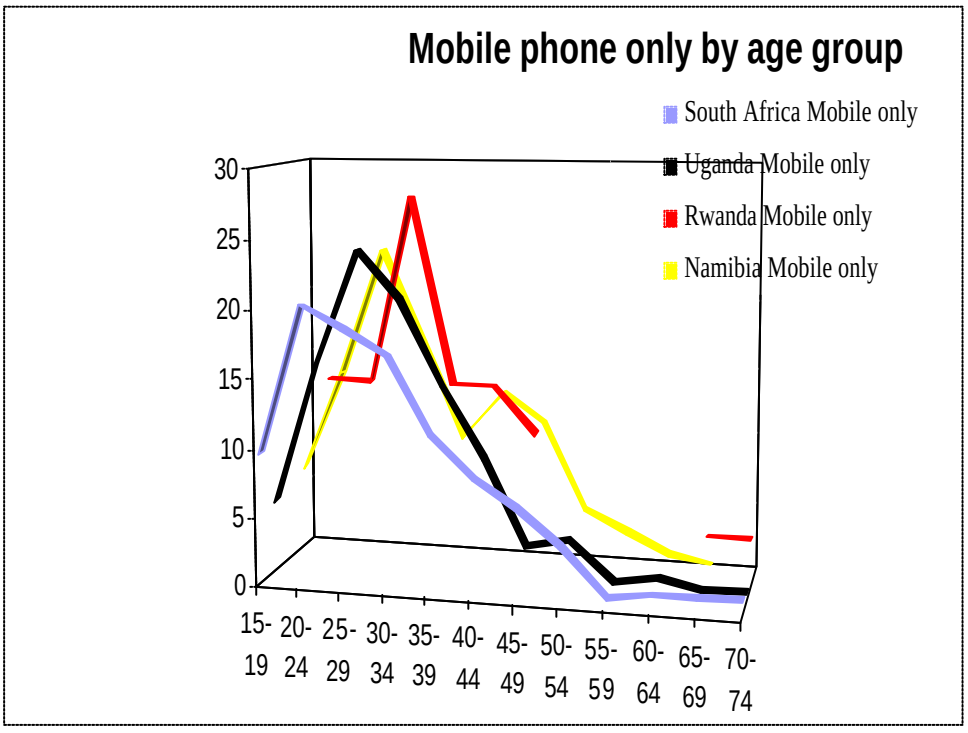
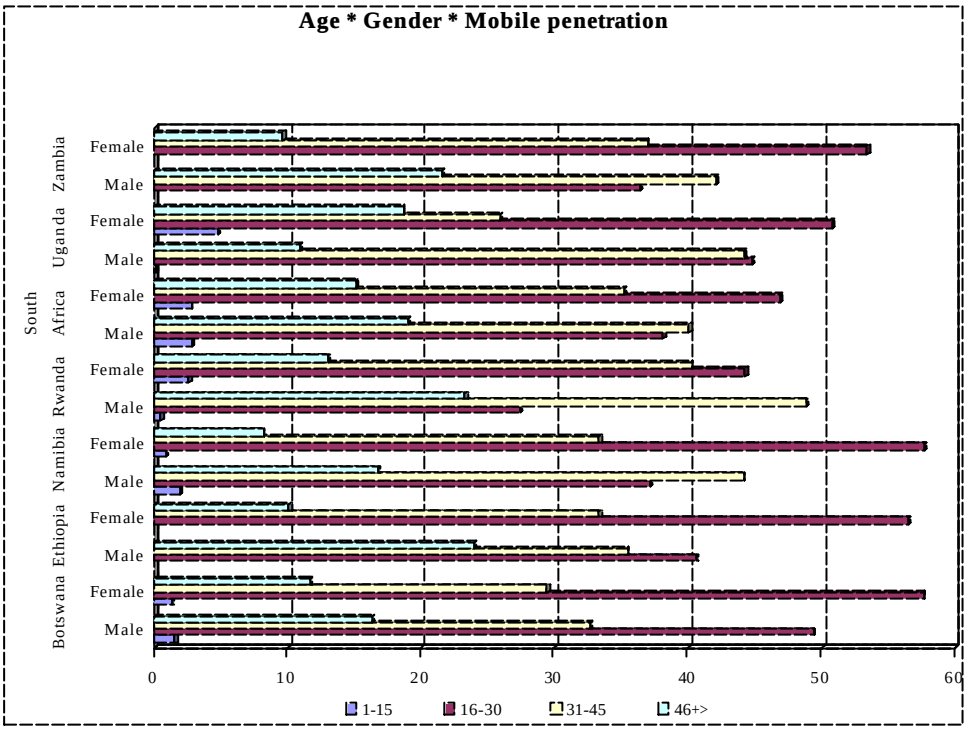

Main reason why a public phone is used more than others
Closest to me
Best value for money
Safest place ot call from
Always working
70
60
50
40
30
20
10
0
SOUTH AFRICA
BOTSWANA
ETHIOPIA
NAMIBIA
RWANDA
UGANDA


Mobile penetration by gender
Male
Female
Mobile penetration
80
70
60
50
40
30
20
10
0
SOUTH AFRICA
BOTSWANA
ETHIOPIA
NAMIBIA
RWANDA
UGANDA


Does household member have an email address?
Male
Female
Email Penetration
80
70
60
50
40
30
20
10
0
SOUTH AFRICA
BOTSWANA
ETHIOPIA
NAMIBIA
RWANDA
UGANDA


Mobile phone only by age group
South Africa Mobile only
Uganda Mobile only
Rwanda Mobile only
Namibia Mobile only
30
25
20
15
10
5
0
15-19
20-24
25-29
30-34
35-39
40-44
45-49
50-54
55-59
60-64
65-69
70-74



Research Limitations

- Must be recognised that there are certain limitations to the study, primarily due to scarce resources and time:
  - The viewpoints and background of the researchers inevitably shaped the research process and final findings.
  - Although respondents assured of confidentiality, it is likely that some participants were reserved in the content of their responses.
  - This research needs to be supplemented (and extended) with qualitative research methodologies to further analyse responses and findings

WIP

- Reference ready version including country reports for Botswana, Cameroon, Ethiopia, Rwanda, South Africa, Tanzania Uganda and Zambia available from 1March 2005 at www.researchictafrica.net