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Information Ecosystems of Policy Actors – Reviewing the Landscape

Simon J. Batchelor

Executive Summary

This is a draft report to share some interim findings from the study – 'Information Ecosystems of Policy Actors – reviewing the landscape.' This report is for general circulation on the understanding that it is a work in progress. The research was part of the Mobilising Knowledge for Development programme based funded by DFID (UK). The programme is based at IDS and works with a range of partners and collaborators to strengthen the knowledge intermediary sector.

The interim findings report on face-to-face structured interviews with 368 policy actors in 4 countries – Ethiopia, Ghana, Nepal and India. The study presents data to inform key research questions. With each chapter the report makes recommendations for the knowledge intermediary sector.

What Information and Communication Technology (ICT) do policy actors have access to?
Although many countries have challenges over their use of modern ICT, policy actors as a part of the elite of the country have an equivalent access to the average American household.

For the overall sample, 90 per cent have a computer desktop either at home or the office, 88 per cent have a laptop for use in either the office or home. The report makes a comparison with USA statistics to illustrate that policy actors in these countries have a technological ownership comparable with the average household in the USA. Tablet use among policymakers in the South among the sample was comparable to average use among USA households, at 12 per cent. Almost all respondents had a cellphone, and 40 per cent had smartphones. Of these 8 per cent had iPhones, 12 per cent Blackberries and 31 per cent were 'other' smartphones. In some countries there was a considerable ownership of multiple handsets.

Early adopters of the newer forms of ICT are changing their behaviour and searching for information in new ways. Knowledge intermediaries need to adapt their mechanisms and pathways to ensure they provide content for such emerging patterns of behaviour. About 40 per cent of policy actors are already using smartphones, and the development of mobile apps that assist research communications is appropriate.

Do policy actors use traditional media to inform their work?
Policy actors do use the traditional media to update themselves about their work, but there are considerable issues of trust, and its use a primary source of local information is diminishing.

By 'traditional media', we mean newspapers, radio, television and other public forms of broadcasting. Policy actors do engage with the traditional media and while we have seen that they currently have very negative perceptions of the media's performance, nevertheless a significant proportion of them are engaging with the media day by day. There is therefore a role for the knowledge intermediary to assist the 'translation' of research and evidence into the media.

Do policy actors rely on being given information, or do they search for it themselves?
The data seems to support conventional wisdom – that the presence of computers in an office environment is reducing the need for policy actors to be given face-to-face briefings.

There is an assumption in knowledge intermediary work that senior policy actors may not be searching for information directly themselves, and that they are presented with information. The information ecosystem is changing. While this may remain the case in the poorer more formal countries, it is less so in the mid-range countries. The implication is that where connectivity is improving, policy actors will look for information themselves. They will spend a significant amount of time looking for information, and they will be 'persistent and curious'.

When policy actors engage with the internet, what do they do?
Over 70 per cent of Respondents undertook three conventional internet-related activities; engage with emails, obtain official information and read online news. Less than 50 per cent had undertaken internet-based phone calls (in the last three months).

Where intermediaries intend to use the internet to communicate summaries of research and evidence, it is important to ensure that they can be seen through Google. While ranking across all search engines is important, the data confirms the dominance of Google (at the moment). In terms of existing websites that specialise in development information there was a reasonable awareness across the respondents. There is room for improvement.

How do policy actors value different origins of research?
International research is still trusted more highly than local research. But in India and Ethiopia local research is thought to be as relevant as international research.
We can see that useful data like NGO surveys, and desk summaries of government policies, are accessed relatively frequently. This suggests it is the utility of the information that encourages frequent access. How can we make our research intermediation focus on usefulness to policy actors?

The report continues to present the data against a number of smaller questions. What does the survey tell us about the demand for 'evidence' (facts and figures)? What does the survey tell us about the demand for 'information' (are policy actors persistent)? Does Technology lead to information satisfaction? Do policy actors use libraries? Are the policy actors cost sensitive regarding research information? Do people prefer to print out or read on screen? What is the influence of children on policy actors?

Future use of the new ICT services
Finally the report uses the Theory of Planned Behaviour to investigate the future use of the new ICT services. These include Social and business networking, Twitter, instant messaging, Audio Online, Video Online and smartphone use.

In general positive attitudes towards the new ICT services, reinforced by positive social referents, and with very few limiting control factors, are all linked to a positive intention to use. It is likely that policy actors will be increasingly using the new ICT services in the coming year.

Keywords: Research uptake, Policy environment, Information and Communication technology (ICT), ICT4D, Knowledge intermediary, Mobile Phone, Cellphone,

Simon J. Batchelor has over 30 years experience in development. Starting in agriculture and water provision in the 80's, he, in the 90's, designed and implemented an innovative programme of social mobilisation in Cambodia – which saw considerable impact over a ten year period. From 2000 onwards he has been researching the role of ICT in poverty alleviation and has been a champion of mobile phone enabled payment systems among other ICT innovations. A practitioner at heart, he is currently Director of Gamos Ltd, which undertakes action research and learning on the social factors influencing development programmes, and has been seconded to the Institute of Development Studies to lead the Impact and Learning Team..

Contents

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- L. Adams, independent consultant, Ethiopia;
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- Organisation Development Centre Inc., Nepal;
- The Centre for Internet and Society, S. India;

and all the individuals within IDS and INASP who contributed time to shape and complete the study.

Acronyms

BDT	Bangladeshi taka
BSNL	Bharat Sanchar Nigam Limited
CEO	Chief Executive Officer
DFID	Department for International Development
DVD	Digital Video Disc
EDGE	Enhanced Data Rates for GSM Evolution
ETB	Ethiopia Birr
GB	Great Britain
GDP	Gross Domestic Product
GHS	Ghana cedi
HDI	Human Development Index
HIV	Human immunodeficiency virus
ICT	Information and Communication Technology
IDI	ICT Development Index
IM	Instant Messaging
INASP	International Network for the Availability of Scientific Publications
IP	Internet protocol
ITAD	International Training and Development Ltd
ITU	International Telecommunications Union
Kbit/s	Kilobits per second
Kbps	Kilobits per second
KSh	Kenya Shillings
M & E	Monitoring and Evaluation
Mbps	Megabits per second
MK4D	Mobilising Knowledge for Development
Mps	Megabits per second
MTNL India	Mahanagar Telephone Nigam Ltd
NGO	Non Governmental Organisation
OS	Operating System
PC	Personal Computer
RAM	Random-access memory
RS	Indian rupee
Telco	Telecommunication Company
TOBP	Theory of Planned Behaviour
UNDP	United Nations Development Programme.

Introduction

This is a working paper to share some interim findings from the study – 'Information Ecosystems of Policy Actors – Reviewing the Landscape.' This paper is for general circulation on the understanding that it is a work in progress. The final version will complete each country dataset to 100 respondents and add respondents from Bangladesh and Kenya.

The research was part of the Mobilising Knowledge for Development programme funded by DFID (UK). The programme is based at IDS and works with a range of partners and collaborators to strengthen the knowledge intermediary sector. As a part of this work, the programme includes background contextual studies to inform and direct the work. This study was developed as a part of the process of background research and harmonising surveys that contribute M&E to the programme.

Information ecosystems are changing the world over. This is true for policy actors in every country in the world. Even those actors in countries with poor connectivity are experiencing dramatic changes in the way they as decision-makers access technology and use it. In this report we use the term policy actors to encompass all those involved in significant decision-making – including those linking policy and practice, and those engaged with civil society and private sector policies as well as government.

In particular, because of the work of MK4D we acknowledged that a part of the information ecosystem is guided by knowledge intermediaries. Our study was intended to provide a current view of how policy actors engaged with information systems, and where knowledge Intermediaries could best add value.

The study was structured around three key research questions:

- What is the current information ecosystem of actors engaged in the Research Policy Praxis?
- What are the possibilities that there will be a behaviour change towards the new services available through the newer wireless ICT?
- Can researchers and/or research intermediaries use the existing and/or the anticipated ecosystem to better place research-based evidence that might inform policy actors, to design effective strategies of engagement?

Within this overarching work, other more specific research questions and models of behaviour were explored. Regarding hypothesis and modelling, eight predictor variables were proposed. The data was tested for significant differences between:

- *Countries* – we suspect that responses may be influenced by connectivity, the bureaucratic culture and the relative cost of technology;
- *Institutions* – for instance, we expect research institutes to focus on more formal research publications. We suspect that donors have a greater exposure to technology than, say, local government;
- *Executive responsibility* – the literature suggests that technology access may be affected by executive responsibility. There have been documented anecdotes from 5 years ago of computers being placed in the director's office and managers being unable to access them. Were these isolated incidents and if not, does this pattern of behaviour remain true?
- *Engagement in policy/knowledge brokering/research*;
- *Early adoption*;
- *'Facts and Figures'* – those who answer more positively to statements about 'needing facts and figures';

- *'Persistence of enquiry'* – those who identify themselves as persistent in enquiry;
- *Gender*.

Details of these variables and the hypothesis and models behind each of them is available in the main report.

The full planned dataset is of almost 700 respondents from six countries (Ethiopia, Kenya, Ghana, Bangladesh, Nepal and India). The methodology is given in the main report – in brief, each respondent gave a face-to-face interview with the partner, and answered a structured questionnaire, which included qualitative contextual data. All respondents worked in the policy environment, and had varying degrees of responsibility for decision-making, knowledge brokering or research.

This interim report is based on a sample of 368 respondents, who were available in the last quarter of 2011.

1 Country Descriptors

The data referred to in this working paper was collected from a sample of approximately 40 to 150 actors in each of four countries between August and December 2011. It is part of a larger dataset which covers six countries and the timespan August to April 2012.
Other than seeking countries engaged in poverty alleviation, the countries were chosen for their distribution across several variables:

Table 1.1 National indicators for study countries

	Connectivity as ranked by IDI/ITU[1]	Geographical location (Africa/Asia)	Governance ranking[2]	HDI score[3]
India	116 2.01	Asia	55.0 39.2	0.519
Ghana	120 1.90	Africa	55.5 54.0	0.467
Nepal	134 1.56	Asia	25.5 24.4	0.428
Ethiopia	150 1.08	Africa	42.5 21.0	0.328

India has been subdivided into North India, focusing on policy actors in Delhi and Dehradun, and South India, focusing on Bangalore. The sample in North India has a higher proportion of government actors including local government, while the sample in the south has a focus on civil society.

The countries in Table 1.1 are presented in order of the ICT Development Index (IDI), a measure of connectivity derived by the International Telecommunications Union. The expectation is that responses to ICT, given other factors to be equal, might be dependent on the connectivity.

[1] http://www.itu.int/ITU-D/ict/publications/idi/index.html
[2] http://info.worldbank.org/governance/wgi/index.asp 2010. We have extracted government effectiveness and Regulatory Quality as proxy measures for bureaucracy. Percentile rank among all countries ranges from 0 (lowest) to 100 (highest) rank.
[3] http://hdr.undp.org/en/statistics/ 2010.

We include a ranking of government effectiveness and regulatory quality as proxy measures for bureaucracy, also with the expectation that this may influence information-seeking behaviour through ICT. The Governance ranking follows the IDI ranking with the exception of Ethiopia which has a very high government effectiveness. The poverty of the country is captured in its HDI ranking developed by UNDP, and it is noted that this more or less follows the IDI ranking.

The research has been built around a set of face-to-face interviews with actors in the Research Policy Praxis. A purposive initial sampling approach was taken, in which local survey managers identified actors engaged with the policy environment across a range of sectors, based on their own connections into the policy environment. Subsequent actors were based on cascade referrals.

1.1 Respondents' Descriptors

Table 1.2 Number of respondents in this report (Jan 2012)

	Ethiopia	Nepal	Ghana	N. India	S. India
Number of respondents	101	81	87	43	97

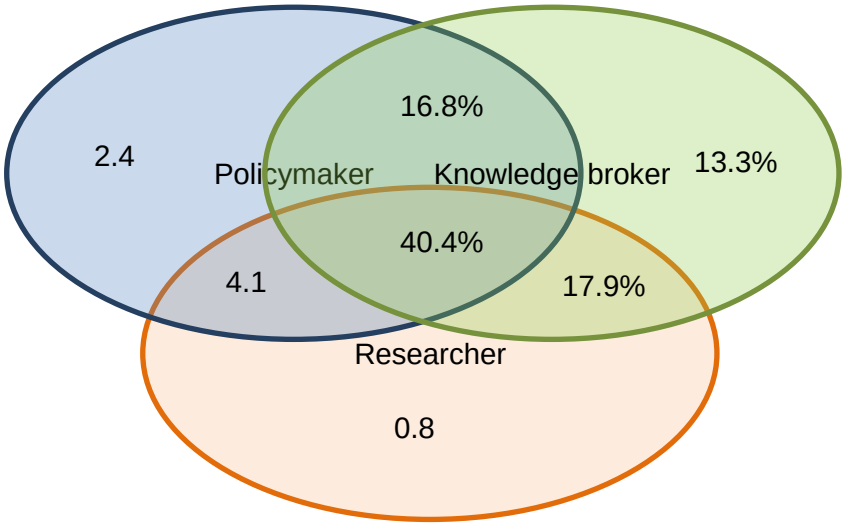
The respondents were asked to state whether they were engaged with policymaking, research or knowledge brokering. Given that some people describe themselves as engaged in more than one of these activities, this self-classified description breaks down as follows:

Table 1.3 Percentage of respondents indicating that they are involved with policy/knowledge brokering/research

% 'yes'	Ethiopia	Nepal	Ghana	N. India	S. India
Self-described as involved in policymaking	21.8	86	60.9	86	75.6
Self-described as knowledge broker	99	85	75.9	86	77.9
Self-described as researcher	62.4	57	59.8	67.4	61.6

For the whole sample the overlap between categories is as follows:

Figure 1.1 Distribution of respondents by self classification



As the responses above indicate, many policy actors see themselves as knowledge brokers. We also note that only 22 per cent in Ethiopia state they are directly involved in policymaking; however, qualitative data suggests a narrower interpretation of 'policy' than in the other locations.

Approximately one third of respondents were female. The educational status of the respondent was not captured – these are senior people, and it was felt that it was a question that may have been 'a question too far'.

An open text question asked for the respondents to give an example or describe their policy, knowledge brokering and research work, enabling a content analysis and a more nuanced typology after the fact. The content analysis is not included in this report.

Respondents were categorised according to their ranking in their organisation – leading to creation of an executive responsibility variable. Leadership was taken as the CEO of an organisation or high-ranking officer in the government, including ministers and parliamentarians. 'Managers/senior' were those that had implementing responsibility for programmes or were relatively high-ranking civil servants. 'Practitioner/support' were those who were mainly researchers, or field staff for NGOs or government departments – with responsibilities but who were on a lower pay grade.

Table 1.4 Percentage of respondents disaggregated by executive responsibility

Per cent	Ethiopia	Nepal	Ghana	N. India	S. India
practitioner/support	63.4	29.6	62.1	37.2	37.2
management/senior	27.7	23.5	27.6	25.6	32.6
leadership	8.9	45.7	9.2	37.2	30.2
Total	100.0	98.8	98.9	100.0	100.0

A typology was also created to represent the types of institutions that actors belonged to (see Table 1.5).

Table 1.5 Percentage of respondents disaggregated by institutional type

Per cent	Ethiopia	Nepal	Ghana	N. India	S. India
National gov't	9 18.8	10 19.8	11 19.5	12 32.6	13 2.3
Local government				25.6	
NGO	13.9	3.7	4.6	9.3	8.1
Donor (high level)	5.9	29.6	11.5	2.3	53.5
Private sector	10.9	8.6	1.1	2.3	5.8
Research	30.7	9.9	28.7	9.3	19.8
Media	19.8	9.9	26.4	2.3	10.5
Total	100.0	4.9	2.3	83.7	100.0

Note: As discussed above, there is lower proportion of government representatives in the South India sample. The North India sample was the only one disaggregated to distinguish local government from national government. In North India local government here means state level, which is not too different from national in some smaller country contexts.

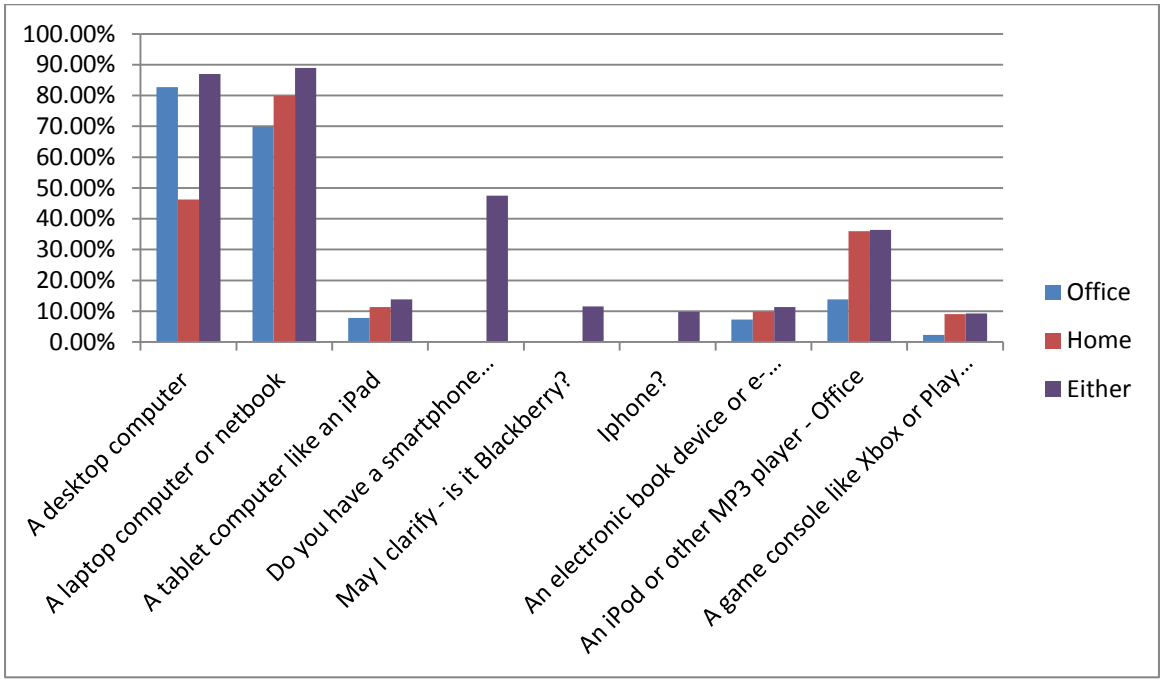
2 What Information and Communication Technology (ICT) do policy actors have access to?

Although many countries have challenges over their use of modern ICT, policy actors as a part of the elite of the country have an equivalent access to the average American household.

2.1 Yes, they have a computer

For the overall sample, Figure 2.1 illustrates that 90 per cent have a desktop computer either at home or in the office, and 88 per cent have a laptop for use in either the office or home. Tablet computers have emerged in the last two years, and have become popular in the Northern economies. The Pew Internet & American Life Project Survey, (June 2011) suggests that use of tablets across the USA has risen to 8 per cent over the last 12 months. Tablet use among policymakers in the South is slightly higher at 12 per cent. Perhaps interestingly but unsurprisingly, desktop computer and laptop use among policy actors is considerably higher than the USA general public average, which stands at 58 per cent and 52 per cent respectively.

Figure 2.1 Access to new technology, at the office, at home, and 'either' (i.e. either home or office)



Note: Y axis = proportion of respondents.

For comparison, consider the ownership of devices in the USA.

Table 2.1 Adult gadget ownership in USA (Pew Internet Survey 2011)

Cellphone	88%
Desktop computer	55%
Laptop computer	57%
Mp3 player	44%
Game console	42%
Ebook reader	19%
Tablet computer	19%

Tablet computers have emerged in the last two years, and become popular in the Northern economies. The Pew internet survey (June 2011) suggests that use of tablets across the USA rose to 10 per cent over the last 12 months, and up to 19 per cent in the last six months. Tablet use among policymakers in the South among the sample was at a comparable 12 per cent. Perhaps interestingly but unsurprisingly, desktop and laptop use among policy actors in the South is considerably higher than the USA general public average which stands at 55 per cent and 57 per cent respectively.

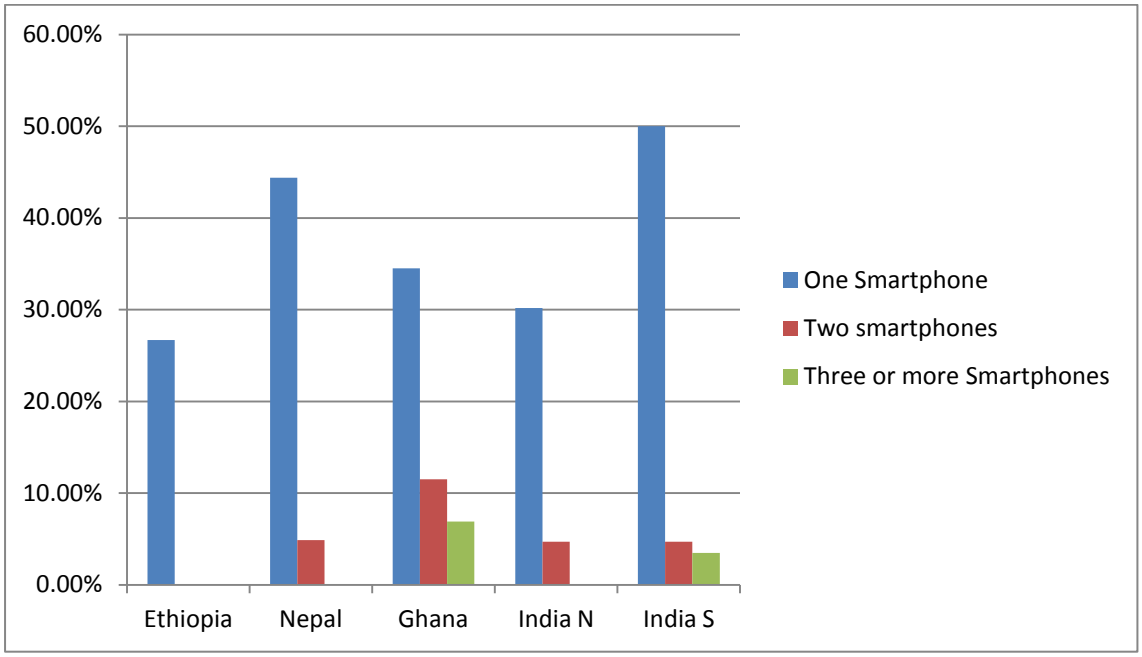
2.1.1 Yes they have a cellphone[4], and many have a smartphone

Almost all respondents had a cellphone, and 40 per cent had smartphones. Of these, 8 per cent had iPhones, 12 per cent BlackBerries and 31 per cent were 'other' smartphones. In

[4] The questions were asked with the word "cellphone". We acknowledge the more usual United Kingdom term is Mobile phone, but we have used cellphone to be faithful to the phrasing of the question.

some countries there was considerable ownership of multiple handsets. In Ghana for instance, there are quite sizeable differences in the tariffs of each Telco and this is compounded by a relatively weak regulation of the cross-carrier tariffs. This means that there are significant savings to be made by using one handset to call a group of other users on the same carrier, and keep another handset for making calls to others on a different carrier. In Ghana, 11.5 per cent had two phones, and 7 per cent had three phones or more.

Figure 2.2 Access to smartphones



Note: Y axis = proportion of respondents.

2.1.2 Some are exploring other devices

About 9 per cent had an e-reader. Again this is similar to the situation across the whole of the USA where the figure is 10 per cent. Of the respondents, 30 per cent had an iPod or MP3 player for entertainment. This is slightly lower than the USA which stands at 47 per cent ownership of iPods or MP3 players. Game consoles among the families of policymakers is down at 8 per cent, whereas unsurprisingly given the considerably different demographic, game console ownership in the USA stands at 42 per cent.

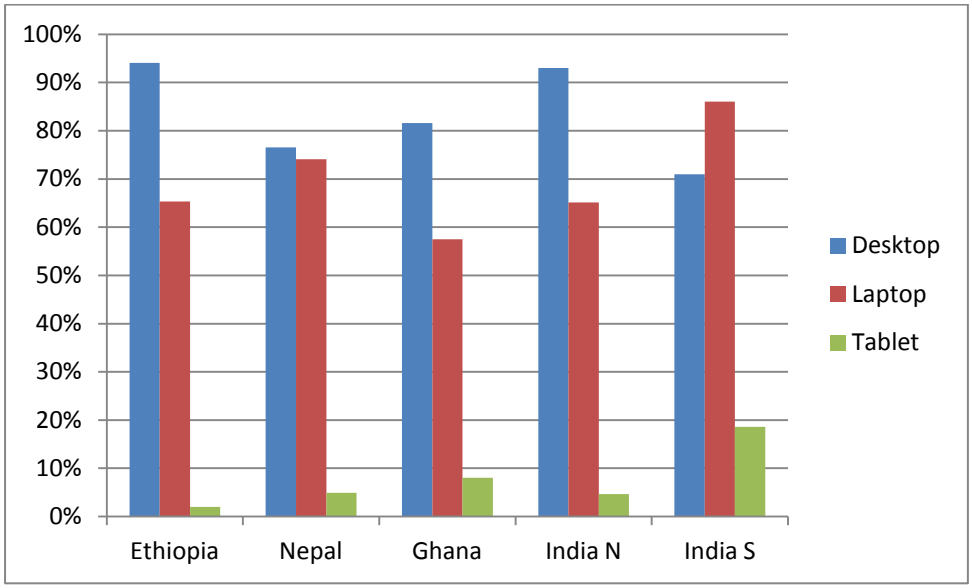
2.1.3 Digital divide overcome?

We have made a comparison with USA statistics to illustrate that policy actors in these countries have a technological ownership comparable with the average household in the USA. Indeed, in terms of productive devices such as smartphones and desktop/laptop computers their ownership is higher. While the 'digital divide' may still be strong for the general population of these countries, the subset of policy actors have the wealth, interest and capacity to bridge the divide.

2.2 Personal computers

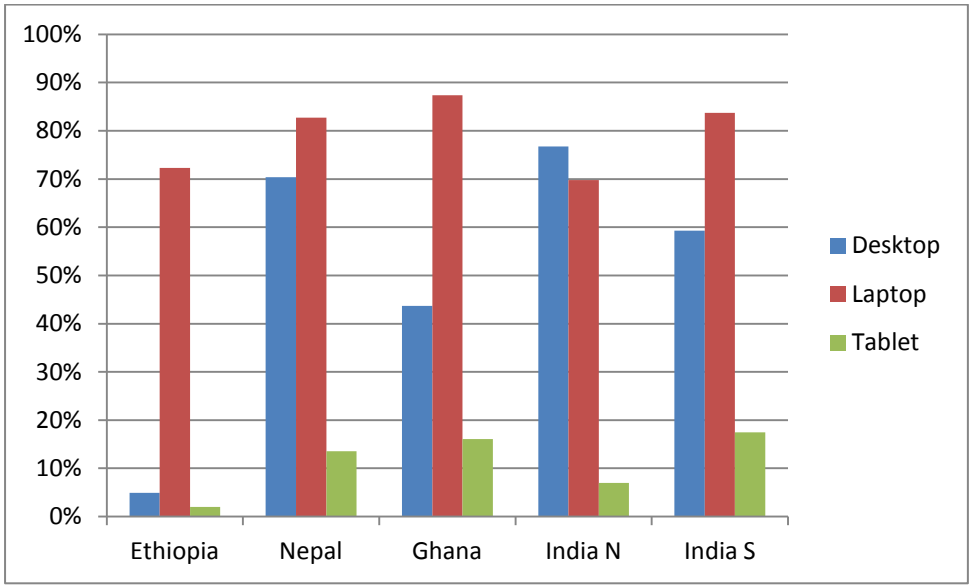
Figures 2.4 and 2.5 present the access to desktops, laptops and tablets for each country at the office and home respectively.

Figure 2.3 Available forms of PC at office



Note: Y axis = proportion of respondents.

Figure 2.4 Available forms of PC at home



Note: Y axis = proportion of respondents.

There are statistically valid differences between the countries; however, such differences seem to bear little relation to our country parameters. Perhaps unsurprisingly, in the office most people have access to a desktop computer. However, the prevalence of laptops in the office seems to reflect the global shift to laptops, and as we have observed above, a small (but perhaps emerging) use of tablets.

Desktop computers at home in Ethiopia seem to be almost unheard of, and there is a clear reliance on laptops. This likely reflects the high price of a computer in Ethiopia and the requirement for a device to be flexible and portable. Where countries experience power outages, a device with a battery, for example, a laptop or tablet, becomes useful.

2.2.1 Cost comparisons for laptops

The difficulty with relating the findings to the costs in each country is that few of the official government sites offer clear views on the customs and taxes on computer products. In an attempt to make a comparison, the internet was used to 'purchase' in each country a laptop of near equivalence. 'Near equivalence' itself has some difficulties – branding can make a difference, and there are often differences such as whether software is included. Table 2.1 presents the output of a small exercise to compare what the consumer may face in each country. The online price was used as a proxy for what local shops may be offering. Totally comparable systems were not available – with the main differences being the balance between processor, RAM and hard disk. We can see that even in the UK, there is a considerable spread – between the Acer and Dell brands, and with Dell offering a discount that particular day, dropping the system with an i7 processor from £1,182 to £799.

While at first sight the exercise seems to show a comparable price in Ethiopia, the advert does not state what software, if any, is sold with the hardware. Since a genuine copy of Windows and Windows Office can add £70 to £160 to a bundled price, we need to adjust the price accordingly. In practice qualitative data from Ethiopia suggests that open-source software and software that is not genuine is likely to be provided or is easily available from other sources. The presence of official Microsoft alternatives (open-source and pirated) in some situations may effectively bring the price paid for a laptop to within a similar range as Europe or the USA. The customs and tax on hardware may be mitigated by the low-cost software.

Nepal, which again does not explicitly state the software included and, as with Ethiopia, has a strong informal economy around pirate software, seems to have a higher hardware cost. However, we did not investigate where the technology was purchased, and many of the policy elite in Nepal and local businesses can access goods from North India.

Table 2.2 Benchmark laptop – 4GB RAM and 5–600GB hard disk

Country	Price in local currency	Price in UK Pounds	Processor	Basic Windows offered	Adjusted price equivalence[5]
Ethiopia	ETB 12,989.00[6]	£480	core i7,	No	£490
Nepal	US$.1,149[7]	£718	core i7,	No	£718
Ghana	GHS 1,428[8]	£552	core i5,	Yes	£552
N. India	RS 32,600.00[9]	£405	core i5	No	£485

[5] Adjusted for OS software, processor power and any extras. Assumptions i7£70>i5>i3£70, Win7Prof£40>Win7Home£70>None.
[6] www.felega.net/Detailpage.php?recordID=142 (accessed 2 December 2011).
[7] www.netfornepal.com/catalog/product_info.php?products_id=12622&cPath=28_638 $2,022.99 when accessed 2 December 2011; however; $1,149 when accessed 2 January 2012.
[8] www.usanotebook.com/ghana/ntb.php?id=3103 (accessed 2 December 2011.
[9] www.helpingindia.com/index.php?main_page=product_info&cPath=35&products_id=1197 (accessed 2 December 2011).

S. India	RS 44990[10]	£559	core i5	Yes	£559
Kenya	KSh 73,000[11]	£517	core i3	Yes	£587
Bangladesh	BDT 80,000[12]	£663	core i7	Yes	£553
UK		£449[13]	core i5		£449

2.2.2 Tablets

Regarding tablets, most of the online computer sites consulted did not offer tablets. This is likely to change quickly as tablets begin to substitute for laptops. In September 2011, the *Times of India*[14] carried the story announcing that the computer allowance for MPs had been raised from Rs 150,000 to Rs 200,000. The extra Rs 50,000 was specifically to obtain a table device such as an iPad or Samsung Galaxy, powered by Android. 'Owning a tablet is mandatory for all MPs, officials said.' The article states that 'over 125 members from the total 245 have already bought the tablets'.

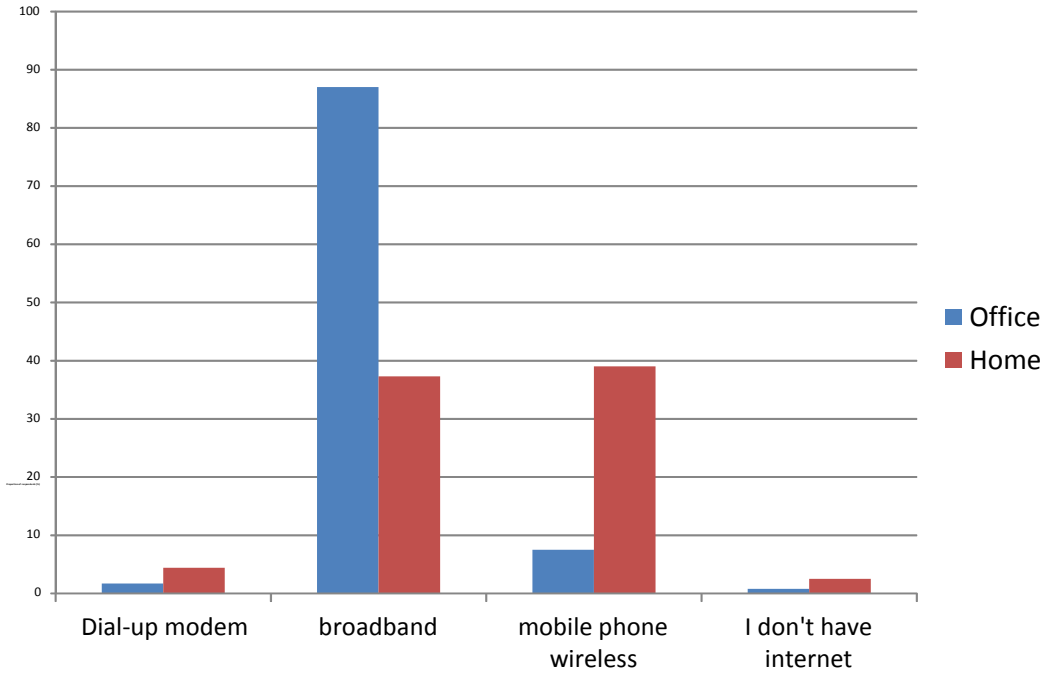
The research as outlined elsewhere suggests that most policy actors who have obtained a smartphone know how to use apps and go beyond voice and text. This suggests that the Indian MPs will not only have access to tablets but will use them!

2.3 Connectivity – are they able to connect to the internet?

Connectivity is a big issue in many of the countries studied. In comparison with Northern economies, they have very low-ranking IDI scores. However, in the same way, can policy actors (who by definition are economically above average and can therefore afford hardware), have 'above average' connectivity?

[10] www.computerwarehousepricelist.com/viewProdDetails.asp (accessed 2 December 2011).
[11] http://arcticcomputershop.com/laptops/c/4 (accessed 2 December 2011).
[12] www.velki.com/market/catAds.asp?cat_id=5 (accessed 2 December 2011).
[13] http://configure.euro.dell.com/dellstore/config.aspx?oc=n00q1512&c=uk&l=en&s=dhs&cs=ukdhs1&model_id=inspiron-15r-n5110 (accessed 2 December 2011).
[14] http://timesofindia.indiatimes.com/tech/news/hardware/Tablets-become-must-for-MPs/articleshow/9897820.cms (accessed 2 December 2011).

Figure 2.5 Means of accessing internet



Across the sample, 85 per cent have access to broadband in their office, and 39 per cent have broadband at home. Qualitatively interviewees in some of the lower ranking IDI countries complained about the connectivity, stating that power cuts and poor quality lines, as one respondent put it, 'limited the fluidity of their experience'. It is perhaps important to note that some respondents had wireless broadband. This is not the same as mobile wireless. For instance, in Nepal a desktop runs a cable up to an aerial on the roof which connects it wirelessly direct to the internet service provider. This system currently offers speeds up to 1mps. We have put these systems into 'broadband'. Mobile phone wireless is where the user is either using their phone directly or plugging the phone or a dongle into the internet device to access the internet through the phone network – the rates of connection vary considerably. Ethiopia for instance, offers such a connection through its EDGE network and can deliver around 400kbit/s.

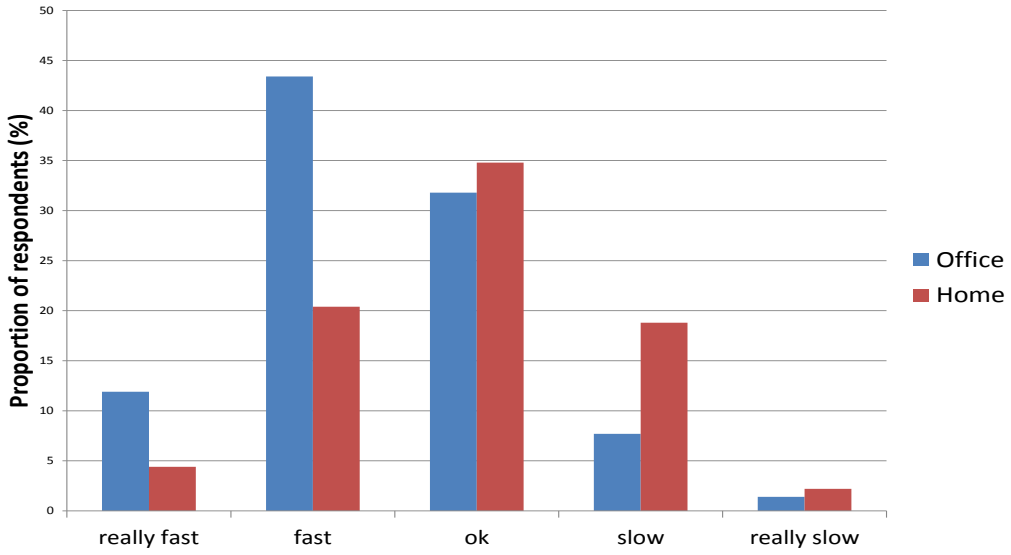
There is also the issue of quality of service and the throughput Kbps.[15] Studies by LirneAsia suggest that broadband advertised at 2mbps by Airtel in Bangalore and Mumbai India actually delivers at around 400Kbps for a download from an international server. On the other hand broadband advertised at 512kbps by MTNL in New Delhi consistently delivers above its advertised rate at around 6 to 700kbps for the same download benchtest, and surprisingly in Bangalore, broadband advertised at 256kbps by BSNL sometimes delivers at over 1Mbps. This variation makes comparison of policy actors' broadband experience difficult! The differences between companies are further clouded by the task. Airtel in Mumbai reached their stated 2Mbps while downloading from a local server. However, when the download is local, the BSNL advertised at 256kbps reaches 2Mps (LirneAsia 2011).

[15] Referred to as i. the 'actual amount of useful data sent on a transmission'. ii. Defined by the ITU as 'an amount of user information transferred in a period of time' (ITU-T X.641 (97), 6.3.3.16), more commonly referred to as download or upload speeds. ITU 2010

Such benchmark data is not available for Africa.

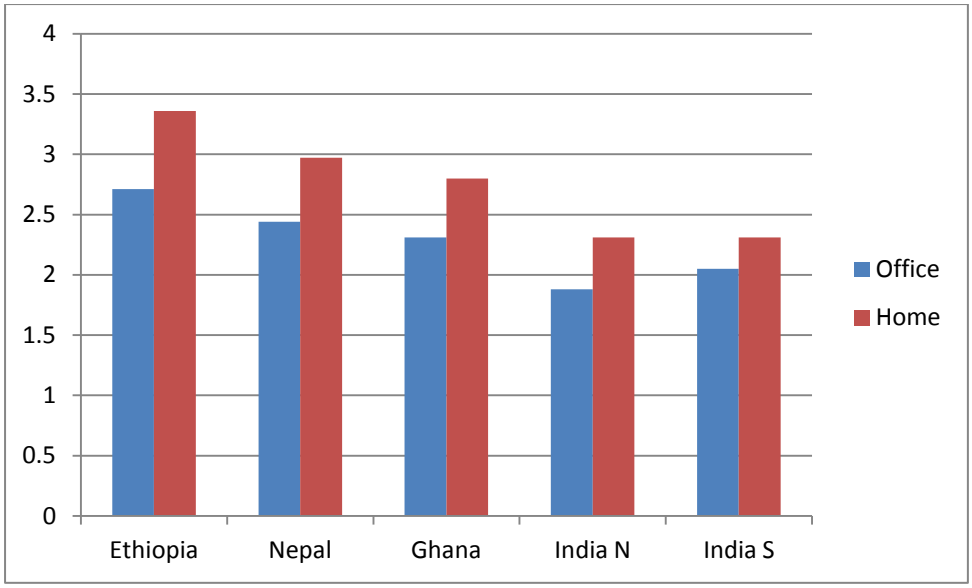
Since the actual speed of connectivity is not necessarily what is advertised, and is changing so rapidly, we followed the precedence set by the Pew Internet & American Life Project and asked for the *perception* of speed – on the assumption that perceptions might affect behaviour. This perception of speed is captured in Figure 2.7.

Figure 2.6 Perceived speed of internet connections – office and home



However, this data from the whole sample masks a statistically significant difference in perception between the countries.

Figure 2.7 Average perceived speed of internet connections – office and home – for each country

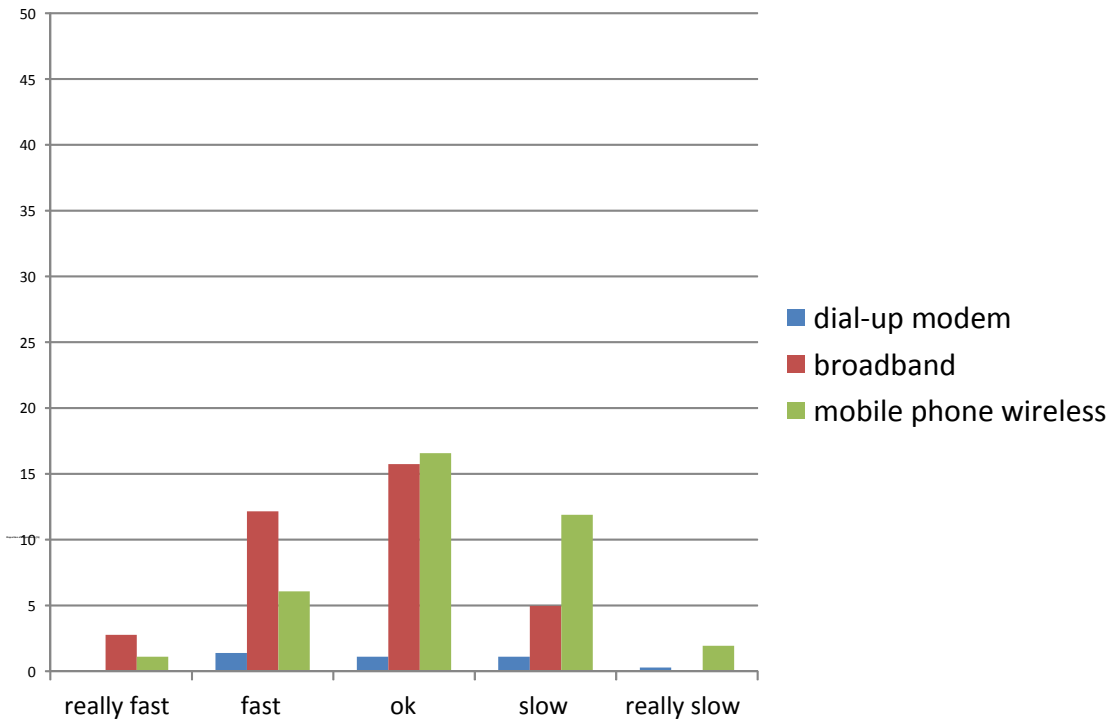


Note: Y axis, 0 = really slow to 5 = really fast.

The average perceptions order the countries in the same sequence that the IDI rankings do, which suggests that policy actors experience the same internet frustrations that the country as a whole experiences.

The perceived speed is of course, influenced by the type of connection. What became clear from the data is that the perceptions of mobile wireless at home suggest that it is not that dissimilar to true broadband – in the minds of the consumer.

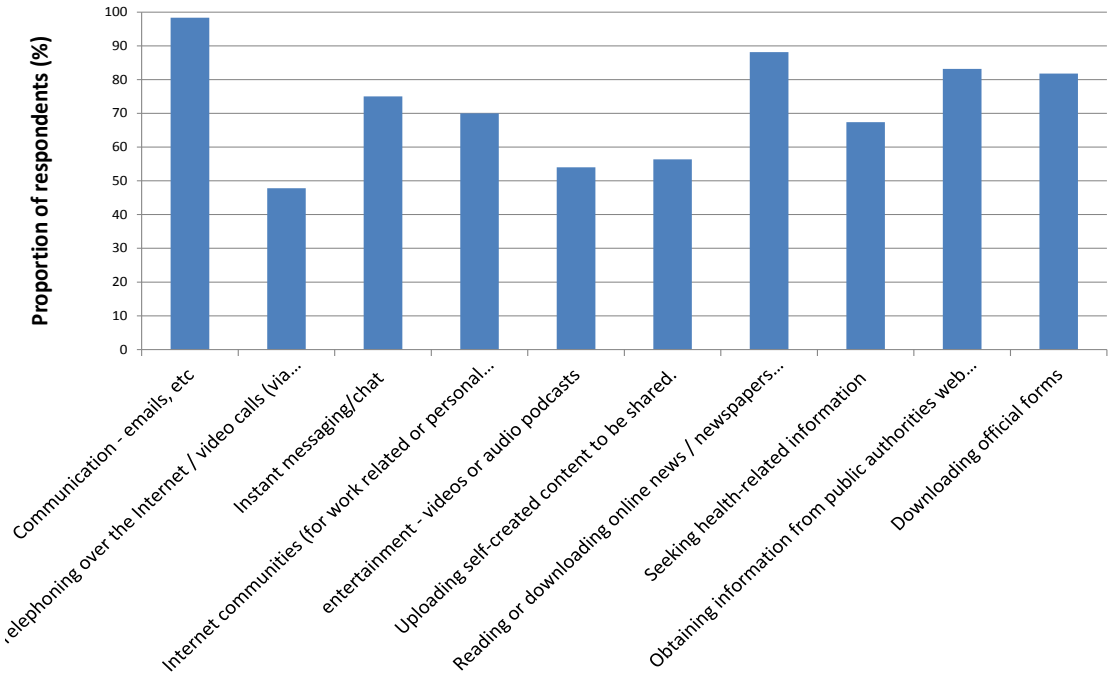
Figure 2.8 Perceived speeds of types of internet connection – home



2.4 Connectivity and behaviour

We will discuss in another chapter the use of the internet to find information, what else it is used for and the growing use of smartphones, but to end this section Figure 2.10 illustrates the breadth of use – it is much more than just collecting emails.

Figure 2.9 Use of the internet (for private or official purposes)



Connectivity does make a difference to the 'behaviour' of policy actors. The data also highlights the following relationships:

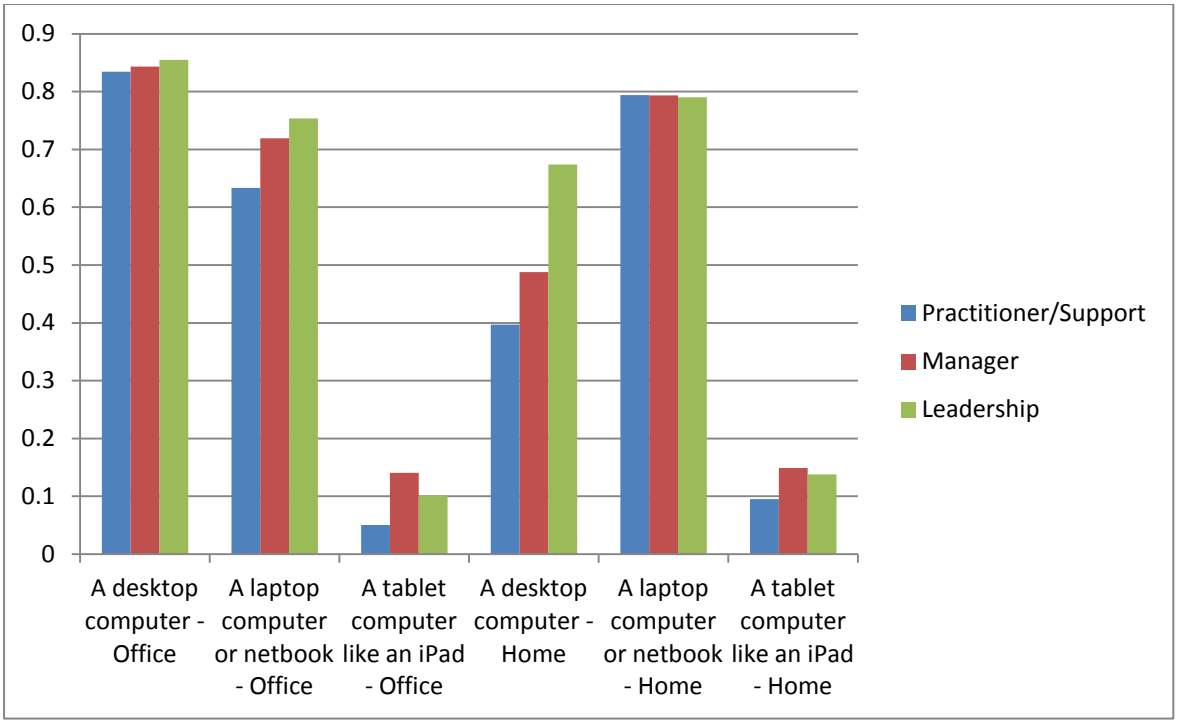
- Smartphone use (ownership) is linked to ICT connectivity;
- Intensity of computer use is not linked to connectivity;
- Propensity of policymakers to search online is linked to connectivity;
- Discovering relevant information when searching for information is linked to connectivity;
- Satisfaction with access to information correlates strongly with ICT connectivity.

2.5 Do some policy actors have more access to technology than others?

With the overall high access to computers at the office and at home, there is little to be found in disaggregating the data for access.

There is a statistically significant difference across 'executive responsibility' for the sample as a whole, where those in leadership have a greater access than managers or practitioners.

Figure 2.10 Access to new technology by executive responsibility



Note: Y axis proportion of respondents.

However, as the figure above suggests, it is managers that are the first to explore tablets. In South India, Nepal and Ghana, managers are statistically much more likely to have a tablet.

Perceived speed of the internet is a leveller among the sample, and there are few responses of note. Researchers in Ethiopia significantly perceive their internet as faster than non-researchers, and managers in Ethiopia perceive their internet as significantly slower than the leadership and practitioners, and given that researchers are part of the practitioners/support group, this is consistent.

In contrast, managers in North India perceived their internet speed as significantly faster than the leadership or practitioners. This observation needs to take into account the variance in advertised speeds and company data.

2.6 Conclusions for section

The presence of technology in the workplace and home of policy actors is comparable with the USA general public averages. Most policymakers have ready access to either a personal computer or laptop, and very often both. Only in the country with the lowest IDI score, Ethiopia, is there a noticeable absence of desktop computers at home. However, this is often made up by the presence of laptops.

Cellphones are ubiquitous, as is well documented in other surveys. However this survey also documents the presence among policy actors of smartphones – 40 per cent of the sample had at least one smartphone, that is, phones that are gateways to email and the internet.

The average use of iPods and MP3 players among the respondents is lower than USA averages, and this seems to reflect the focus on functional technology rather than

entertainment. It could also be an expression of cultural differences. However, policy actors are exploring new devices such as tablets and e-readers.

There are statistically valid differences between countries on technology use, and these differences seem to correspond with the core IDI data. The acquisition of the more innovative technologies does seem to be constrained by cost, where cost is often dictated by customs and excise. However, even where the cost of the hardware is high (due to import taxes), the presence of pirated software can often mitigate the cost of the whole system to the user. Costs of comparable laptops are not that different for the range of countries (with the exception of Nepal).

While the variations on software cost can mitigate total system cost, and the higher salaries of policy actors enables their households to afford the system, yet as they are a subset of the population there is little policy actors can do about the quality of service for broadband provision. As we have seen from the LirneAsia data, actual downloads can vary quite considerably from advertised rates, and therefore what becomes important is the perception of speed. Perception of speed potentially influences information-seeking behaviour. Overall, the majority of policy actors are experiencing ok or fast broadband speed, even via mobile services.

Few differences of note were identified by disaggregating the data for executive responsibility. This lack of difference suggests that the paradigm of eight years ago (Oyelaran-Oyeyinka 2004) where the leadership was said to have access to a computer and the managers did not have access except with explicit permission from the leadership, is now gone. All policy actors have a measure of technology and connectivity, and variations between them are based on personal choices and their local institutional context.

Finally, the data was disaggregated for early adoption of technology. Ethiopia stood out with a large number of variables showing significant differences. It was hypothesised that since Ethiopia is the poorest of the research countries, those who have obtained the latest equipment, and use it regularly through expensive connections, will want to make the most of it. The early adopters in Ethiopia are all the more likely to be technophiles, and to explore their connections the most. This contrasts with say, India, where technology is more available at a lower cost, and differences between the behaviour of early adopters and non-adopters are fewer. The hypothesis is that early adoption of technology in some of the countries with low IDI has become a status statement, rather than an expression of 'technophilia'. This hypothesis requires more exploration.

2.7 Implications for intermediary work

Since one of the seminal studies on how policy actors seek information[16] which showed that ‘Senior policymakers are too busy to search out information themselves, and rely on others to do it for them’, some knowledge intermediaries have assumed that senior policy actors may not be searching for information directly themselves. The study from 2000 was in the earlier days of the internet and some seem to have assumed that this statement remains true for those policy actors that have restricted connectivity due to their country’s poor IDI ranking. The information ecosystem is changing. Policy actors do indeed have access to the latest technology, and the proportion of early adopters among the policy actor subset is approximately the same as the averages of the general public in the USA.

While much intermediary work is digital, a debate continues as to whether it is the best pathway for getting research communication in front of the key people. In the next section the paper explores some of the information-seeking behaviour of the policy actors, but in

[16] MacDonald, L (2000).

terms of *potential digital access* the data confirms that policy actors do have access. Their devices are updated and can handle graphics – there is no longer an explicit need to create lower bandwidth portals to communicate research. The potential for accessing research is there (although the emergence of mobile internet will create a new demand for low bandwidth mechanisms).

Connectivity in developing countries does lag behind western connectivity, and even the privileged subset of policy actors cannot ensure high quality and consistent broadband. Surfing the internet is still a challenge in some locations. However, the need to make low bandwidth internet pages is diminishing, and the need to provide mobile-friendly digital information is increasing.

Early adopters of the newer forms of ICT are changing their behaviour and searching for information in new ways. Knowledge intermediaries need to adapt their mechanisms and pathways to ensure that they provide content for such emerging patterns of behaviour. About 40 per cent of policy actors are already using smartphones, and the development of mobile apps that assist research communications is appropriate. In a subsequent chapter we will explore how policy actors use their smartphones and whether an 'app' will reach them in terms of behaviour patterns. The emergence of tablets can also be seen among policy actors, and the idea of a tablet app for research communications has found its time.

3 Do policy actors use traditional media to inform their work?

Policy actors do use traditional media to update themselves about their work, but there are considerable issues of trust, and its use as a primary source of local information is diminishing.

By 'traditional media', we mean newspapers, radio, television and other public forms of broadcasting.

3.1 How do they access media?

The survey did not seek to identify systematically the number of hours spent with traditional media, such as listening to the radio or watching television. However, in 2010 Intermedia (Bowen 2010) reported on the behaviour of policy actors in Kenya and Ghana regarding listening to the radio in their cars, and reading newspapers. They stated that:

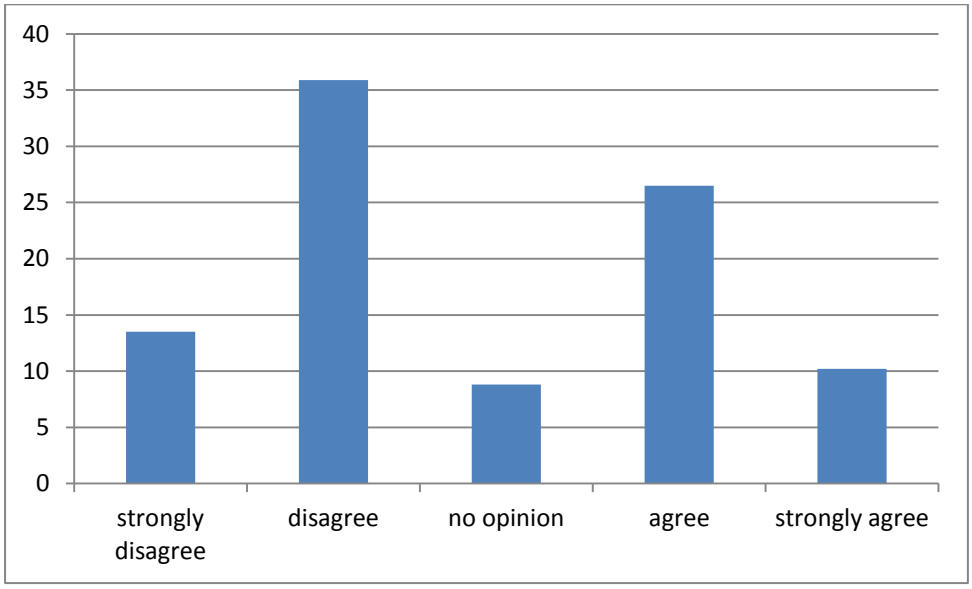
> The policy actors rely heavily on Ghanaian radio 'news headline' programs, newspapers and radio call-in shows to inform policy priorities and set agendas, even though they are frustrated with a perceived lack of accuracy and objectivity of local media.

Their research was based on a sample of 15 people. Building on their pilot research, we incorporated some questions about listening to the radio on the way to work. There was also a specific question about reading newspapers, as this was considered an important node in the information ecosystem – in order to compare time spent reading official and formal research.

3.1.1 Radio

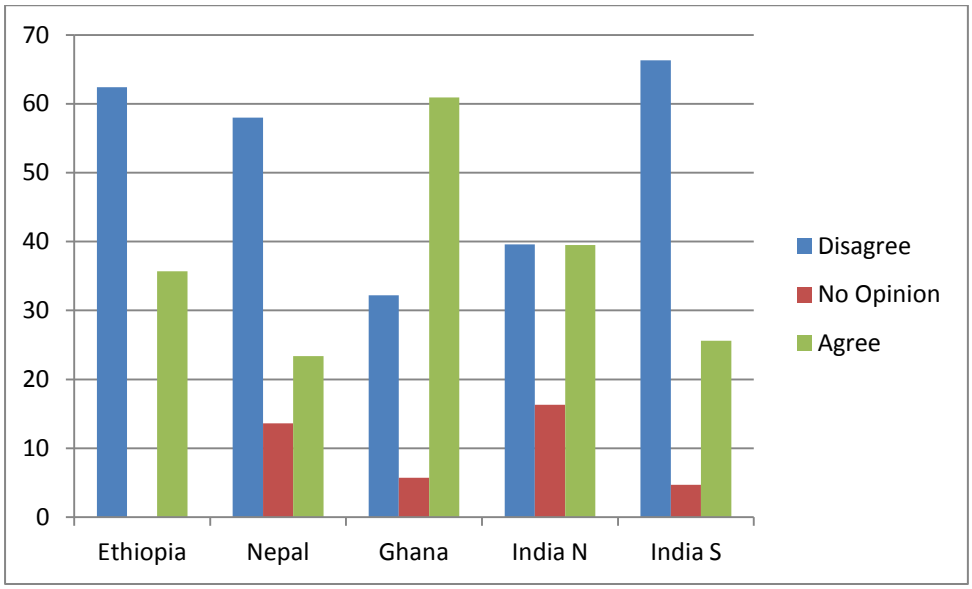
We asked specifically about listening to radio talk shows (in the car).

Figure 3.1 Percentage of respondents who agree with the statement: 'Will spend some of the leisure or drive time listening to radio talk show'



In qualitative research, Ghanaian respondents in particular commented on the traffic in Accra, and the amount of time it took them to commute. This particularly increases the potential for listening to the radio. And as Figure 3.2 suggests, about two thirds of Ghanaian respondents listened to the radio (specifically talk shows) during leisure or commuting time.

Figure 3.2 Percentage of respondents who agree with the statement 'Will spend some of the leisure or drive time listening to radio talk show'



Note: a 5 point likert scale has been reduced to a bipolar agree/disagree for clarity of graph.

However, it does not seem that the same proportions are true for the other countries. Ethiopia, Nepal and South India all report less than a third of the respondents agreeing with the statement ('I will spend some of the leisure or drive time listening to radio talk show'.

We shall return to the content of their listening and its influence on policy in section 3.2.

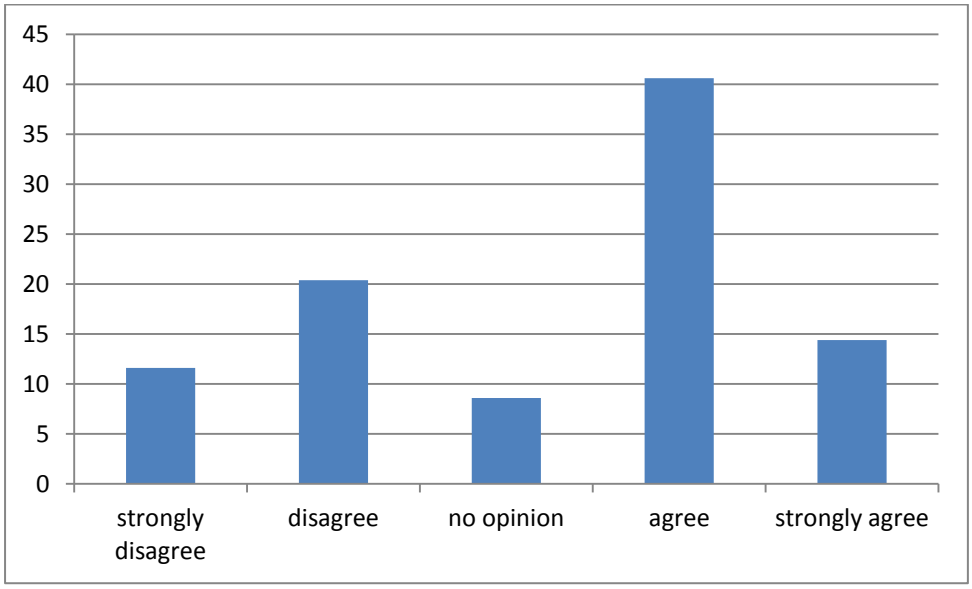
3.1.2 Newspapers

The other question we focused on was how frequently respondents read newspapers. In the AudienceScapes work they said:

> Notably, policy actors stressed that Ghanaian radio stations and newspapers play a major role in setting the agenda and are thus a central part of the domestic political debate.

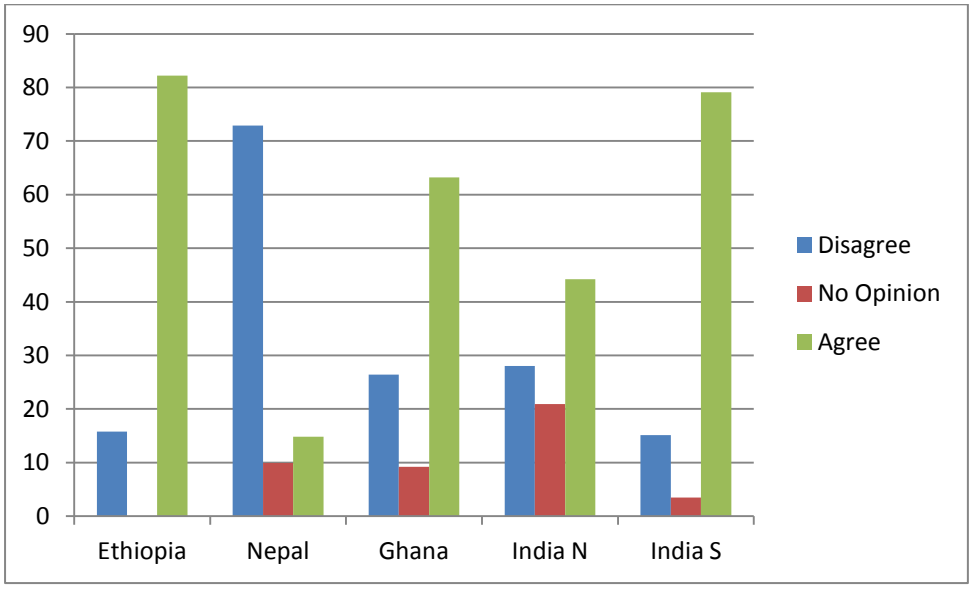
Our data confirms this Ghanaian picture as being prevalent throughout our study.

Figure 3.3 Percentage of respondents who agree with the statement: 'Will read a broadsheet newspaper most days'



The disaggregation of results by countries confirms Ethiopian and South Indian policy actors also seek to read newspapers regularly and frequently.

Figure 3.4 Percentage of respondents who agree with the statement: 'Will read a broadsheet newspaper most days' disaggregated by country



3.2 Content of media

Having established that policy actors do indeed listen to the radio and read newspapers, what are they looking for?

When we asked about the first means of seeking various types of information, the radio and newspapers were featured by only a small proportion of the respondents.

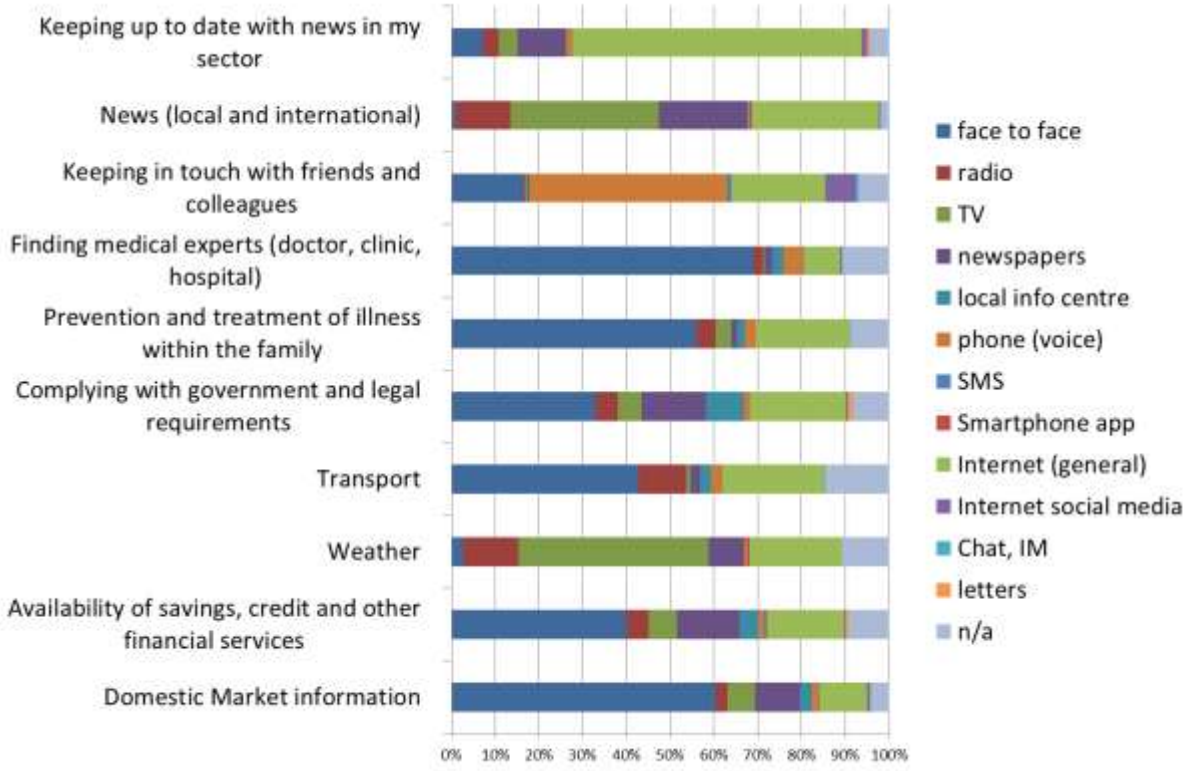
Table 3.1 Percentage of respondents who prioritise Radio and Newspapers as a source for specific information.

% Respondents	Radio	Newspapers
Keeping up to date with news in my sector	3.52	11.06
News (local and international)	12.56	20.10
Keeping in touch with friends and colleagues	0.50	0.25
Finding medical experts (doctor, clinic, hospital)	2.68	2.35
Prevention and treatment of illness within the family	4.27	1.26
Complying with government and legal requirements – e.g. tax information, or getting a permit of form	5.03	14.82
Transport – best routes to get somewhere, the price of buses, etc.	11.06	2.26
Weather	12.56	8.04
Availability of savings, credit and other financial services, e.g. terms and conditions and interest rates	5.03	14.32
Domestic market information e.g. the best place to buy something for your household	2.76	10.30

For the three primary types of information sought by these few respondents, the more common response for general news and weather was the television and the internet, for transport information it was face-to-face contact, and for particular news specific to their sector it was the internet.

Figure 3.5 presents the proportions of first choice across the whole sample.

Figure 3.5 Means of seeking information – first choice



3.3 The role of media in their work

We have seen above that policy actors do engage with traditional media channels for 'news on their sector'. Respondents were asked for their opinion on a number of media/policy-related statements. These statements were derived from AudienceScapes findings and pilot focus group discussions.

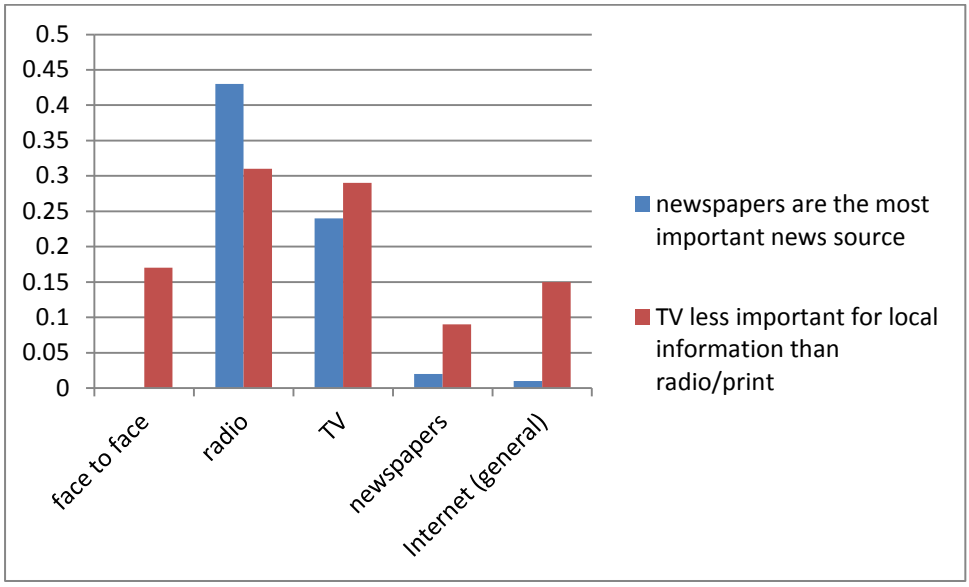
The statements were clustered around whether policy actors have confidence in the media to report effectively on news in their sector, and which they considered to be important channels (within the media, for news in their sector).

We have seen that there are a range of first choices for news in their sector. A specific question to all respondents about the comparative value of TV elicits a neutral response over the whole sample. Similarly, a question about the relative value of newspapers also gets a neutral response across the whole sample. That is: no one source of media is thought to be more important than the others across the whole sample.

However, do those who chose a particular channel for news in their sector, react differently to the core questions on source? Hypothetically we might assume that those who say that the newspaper is their first choice might be more disposed to say that newspapers are the most important source (for news in their sector). Surprisingly, it is those who put the internet as their first choice who strongly endorse newspapers. Those who put newspapers as their first choice are as neutral about their importance as the overall sample. It is those who put TV as their first choice who on average disagree with the importance of newspapers.

So do the TV first choosers agree that TV is less important than radio and print (for news in their sector)? They do not. There is a very slight disagreement with the statement, about the same as the sample as a whole, and the same as those who put internet as their first choice. Only those who put face-to-face as their first choice for news in their sector show a very mild agreement with the statement.

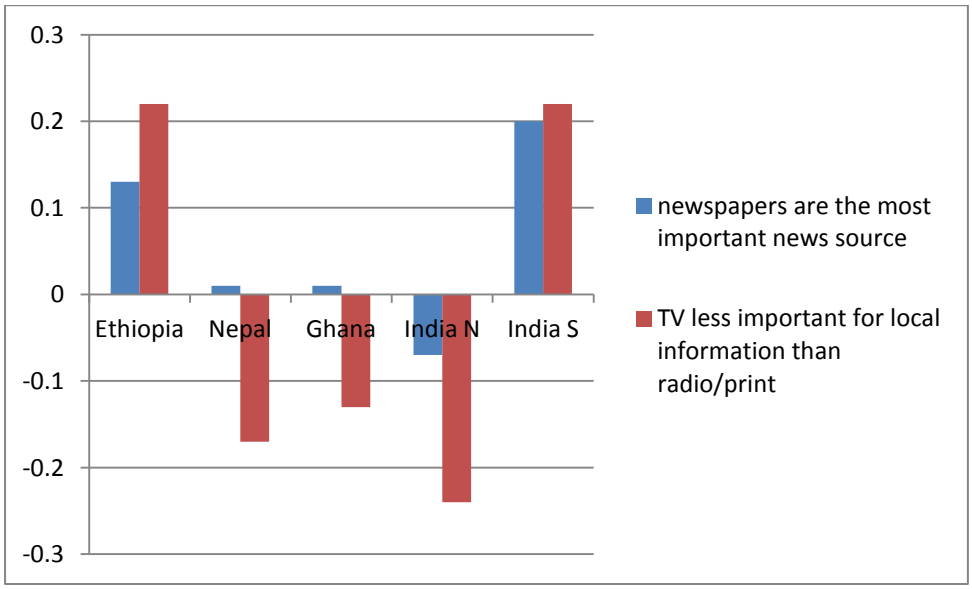
Figure 3.6 Average agreement with statements, disaggregated for first choice of channel for news in their sector



Note: scale = -2 Strong disagreement to +2 Strong agreement.

If we unpack this we see variations across the countries, and a considerable contrast between countries. Ethiopia and South India endorse the two statements that TV is less important than radio and print, and that newspapers are the most important. The others are neutral about the role of TV but reject the idea that newspapers are the most important source of news about their sector.

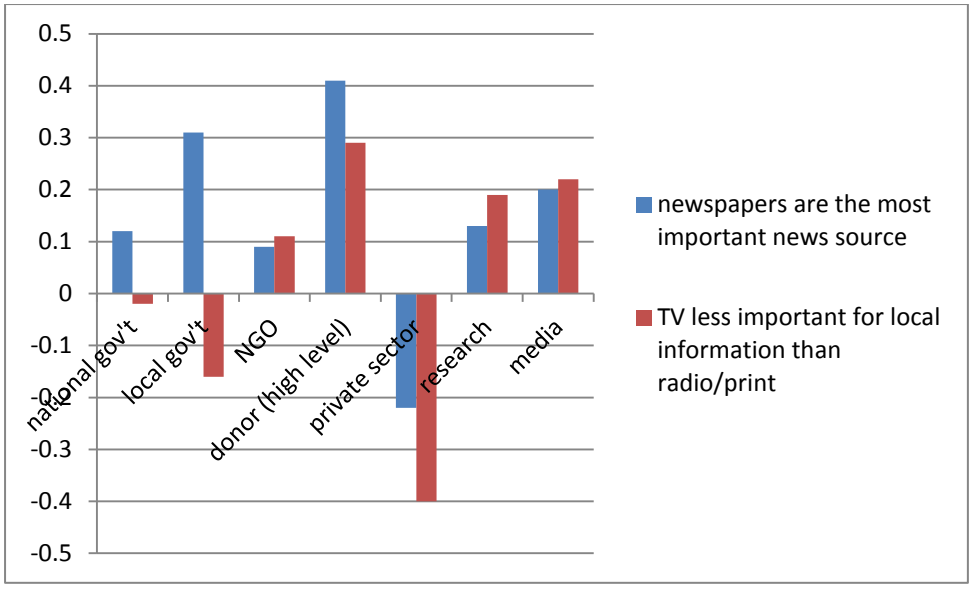
Figure 3.7 Average agreement with statements, disaggregated for countries



Note: scale = -2 Strong disagreement to +2 Strong agreement.

If we disaggregate by institutions we have another surprising set of differences.

Figure 3.8 Average agreement with statements, disaggregated for institution

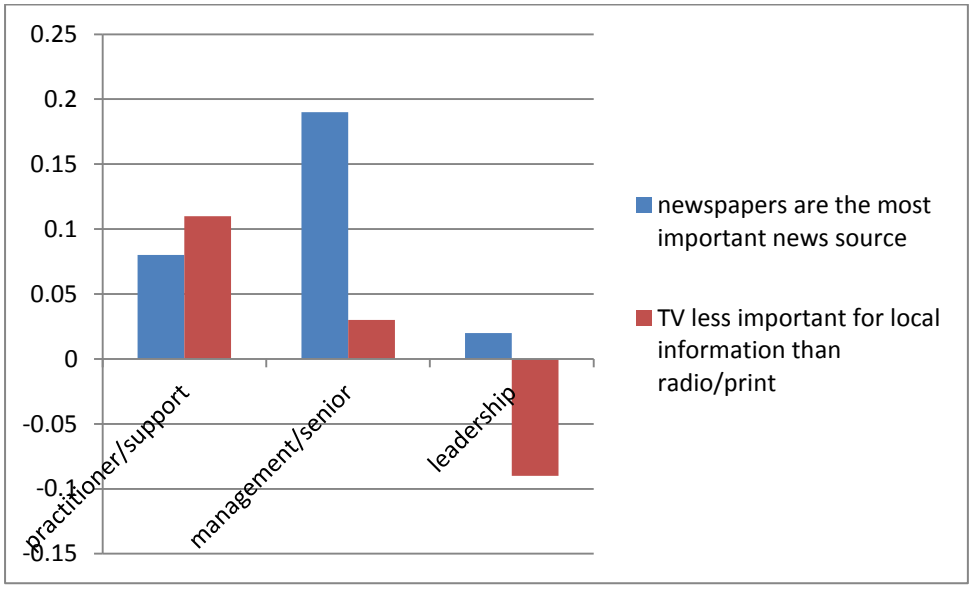


Note: scale = -2 Strong disagreement to +2 Strong agreement.

While those belonging to research institutions, the media, donor organisations and NGOs all think that TV is less important than radio and print (for getting news on their sector), the private sector rejects the idea relatively strongly. Similarly, while all others endorse the idea that newspapers are the most important news source (for their sector), again the private sector stands out in rejecting the idea.

Regarding executive responsibility, it is the leaders who mildly reject the idea that TV is less important.

Figure 3.9 Average agreement with statements, disaggregated for executive responsibility



Note: scale = -2 Strong disagreement to +2 Strong agreement.

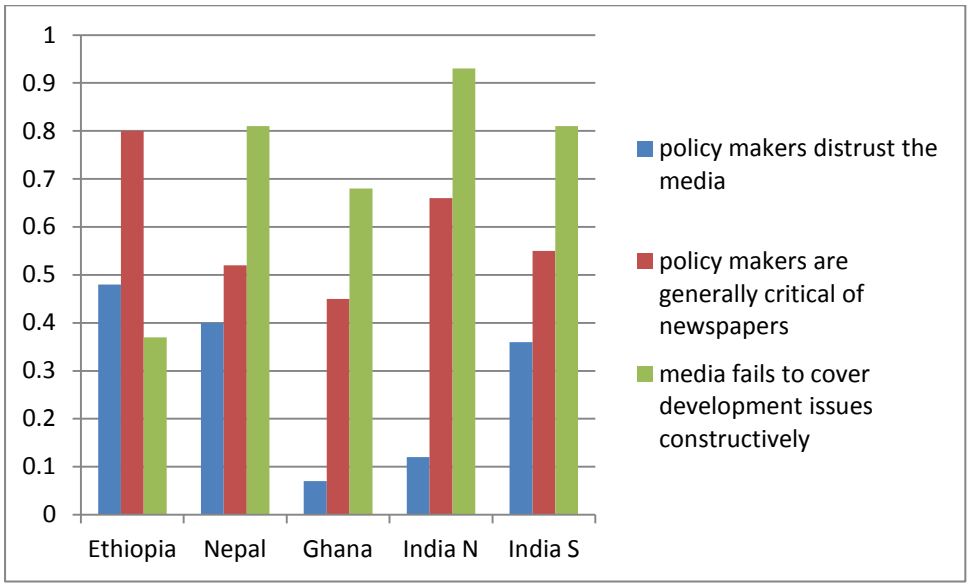
There are no significant differences between the early and non-early adopters across the whole sample for these two statements.

3.4 Confidence in the media

When issues of confidence in the media are raised, there is some agreement with the statement that policymakers distrust the media.

Trust however, is only one measure of confidence. When we probe further there is mild agreement across the whole sample with the idea that policy actors are generally critical of newspapers. And when we seek to enquire why they are critical, there is agreement with the idea that the media fails to cover development issues constructively.

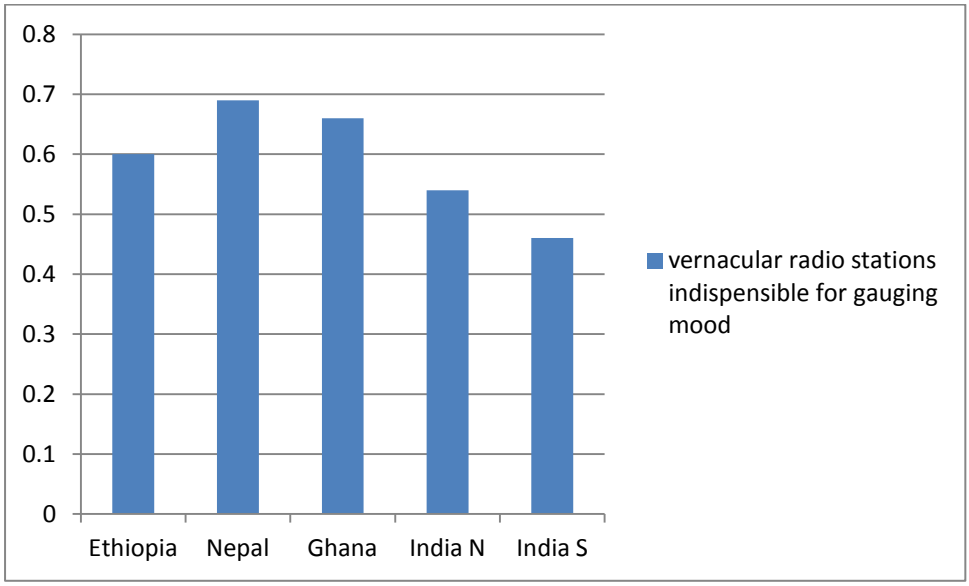
Figure 3.10 Average agreement with statements, disaggregated for countries



Note: scale = -2 Strong disagreement to +2 Strong agreement.

The exception to this lack of confidence in the media to report constructively is in vernacular radio – local radio stations in the local language. These are not so much said to report news in the sector but to gauge the mood of citizens. Indeed, there is agreement across the whole sample that vernacular radio stations are indispensable for gauging the mood of the citizenship.

Figure 3.11 Average agreement with statements, disaggregated for countries

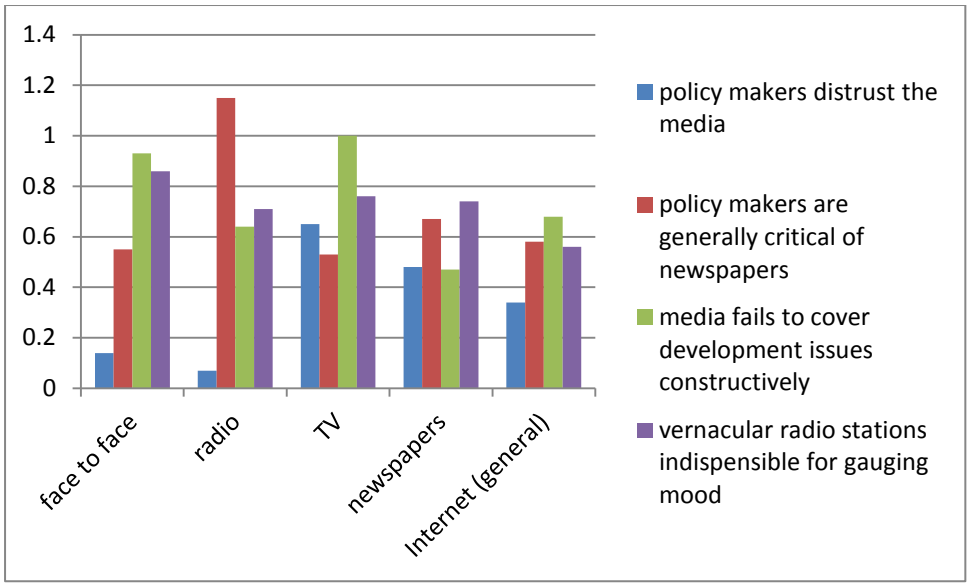


Note: scale = -2 Strong disagreement to +2 Strong agreement.

It is interesting to note that the trend across the countries with lower regard for vernacular radio seems to follow the rankings of IDI and GDP.

So what factors might influence the responses to these questions of confidence?

Figure 3.12 Average agreement with statements, disaggregated for first choice of channel for news in their sector



Note: scale = -2 Strong disagreement to +2 Strong agreement.

When we consider the first choice of means for news in their sector, we see considerable differences in the responses across the sample as a whole. Those who chose radio as their first choice strongly disagree with the statement 'policymakers distrust the media' and are mild in their agreements with 'the media fails to cover development issues constructively' and 'policymakers are generally critical of newspapers'. Unsurprisingly, they are in agreement with the idea that 'vernacular radio stations are indispensable for gauging the mood of the citizenship'.

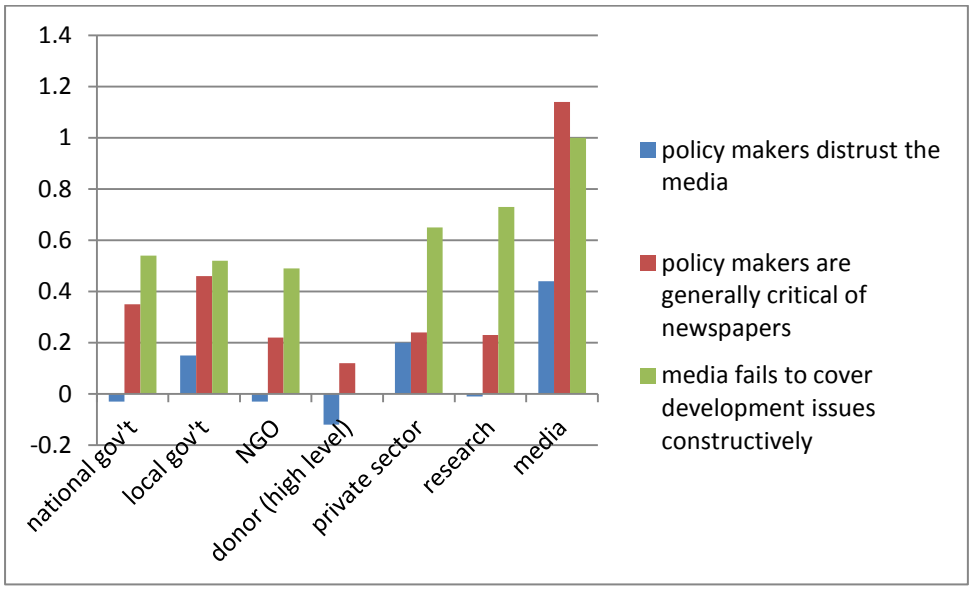
Those who put television first also disagree with the statement about distrust of the media, but are less inclined to agree with the other statements. In contrast to the radio first choosers, they disagree with the statement about vernacular radio.

Newspaper readers (first choice) are more neutral about the trust statements, although they have about the same confidence in vernacular radio stations for gauging the mood. Face-to-face first choice choosers have a similar neutrality towards the confidence questions and a similar mild agreement with the vernacular radio station question.

The internet users have a very different profile for the questions than the radio and TV first choosers. For the internet first choosers, while they are almost neutral on the question of policymakers' trust of the media, they agree with the statement that the media fails to cover development issues constructively. They also believe that policy actors are critical of newspapers, and they have a similar agreement to the others on vernacular radio stations.

Qualitative data suggests that those putting the internet as first choice, are the more active and persistent enquirers. They are seeking out their own relevant information, so it is not surprising that they do not feel that the media (pushers of information) supply their needs. Does the institutional background influence these opinions? As Figure 6.13 shows, there are some variations but in the main the opinions across the institutions are roughly the same, with the exception of the media. They 'feel' the criticism of the policy actors and have stronger agreements within the three statements.

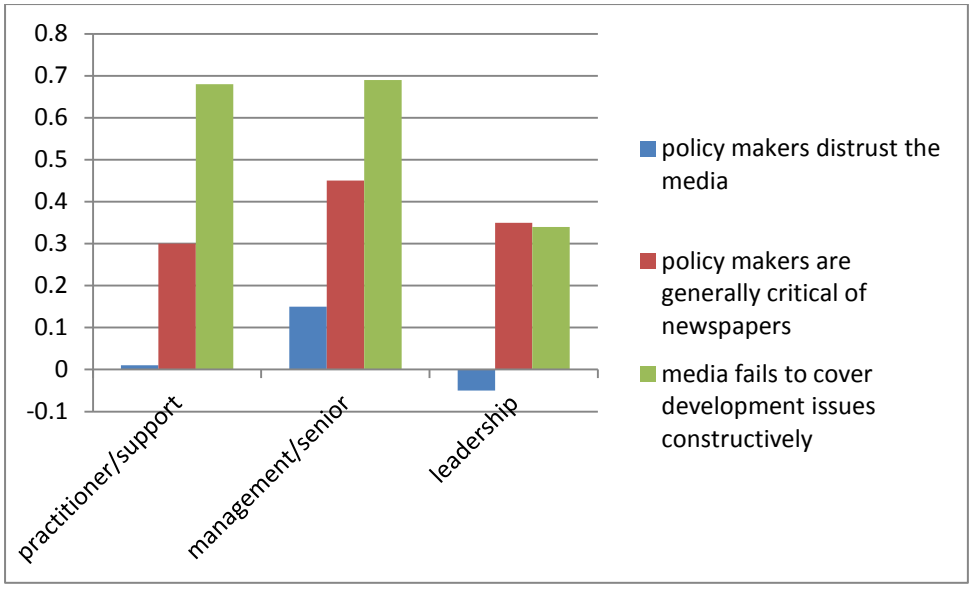
Figure 3.13 Average agreement with statements, institutions



Note: scale = -2 Strong disagreement to +2 Strong agreement.

Across executive responsibility we find general agreement between the three categories.

Figure 3.14 Average agreement with statements, disaggregated for executive responsibility



Note: scale = -2 Strong disagreement to +2 Strong agreement.

3.5 Conclusions for the section

Building on the AudienceScapes work in Kenya and Ghana, and some qualitative pilot data, the survey sought to identify policy actors' use and opinions of the media, particularly in regard to their work. Since radio had been highlighted by the AudienceScapes work as a key touchpoint with the media, we sought to identify how often policy actors actually listen to the radio. The findings suggest that it is more diverse an option than the AudienceScapes research would suggest. While just under half of the respondents do listen to the radio, the majority do not. This split of opinion can be found in each country, and only in Ghana do the majority agree.

Similarly, AudienceScapes asked about the frequency of use of newspapers. Here we found a stronger agreement across the sample. An exception to the general pattern of the majority agreeing was Nepal, where the majority disagree with the statement that they read a newspaper every day.

Radio and newspapers were shown to be the first choice for seeking information for only a very limited number of respondents, and for a limited type of information. They featured as first choice in obtaining news and to a small extent for news in their sector of work. They have a similar role in seeking information about transport and the weather and are the first choice for a smaller sample for finding medical experts, prevention of illness, complying with legal requirements and availability of finance.

However, other channels of communication feature more strongly as first choices for obtaining these sets of information. In the case of general news, TV was quoted by a larger proportion, and for keeping up to date with news in their sector, the internet was the largest choice.

The research sought to understand this role of the key traditional media outlets of TV, radio and newspapers. In the case of television, across the whole sample the average opinion about two statements, 'TV is less important for local information than radio and print' and 'newspapers are the most important news source', was neutral. However, the average

masks a number of insights. Disaggregation by country showed that Ethiopia and South India were in basic agreement with the statements while Nepal, Ghana and North India disagreed with the idea that TV was less important. Similarly, we found that while the majority of institutional types agreed with the statements, the private sector notably disagreed with the statements. Finally we found that while practitioners and managers agreed, the leadership disagreed with the statement about television. This mix suggests that all media could be engaged to promote research uptake, and a mix of media is required to cover the spread of policy actor opinions.

So do policy actors have confidence in what they obtain from the media? The findings present a relatively negative picture. While average responses to a direct statement 'policymakers distrust the media' are relatively neutral in Ethiopia, Ghana and North India, there is mild agreement in Nepal and South India. Why is this? There is mild agreement with two associated statements that 'policymakers are generally critical of newspapers' and 'the media fails to cover development issues constructively.'

This is not surprising. In 'New Media, Old News: Journalism and Democracy in the Digital Age' (2010), Fenton *et al*. explore the perceptions among journalists that negative news sells more than positive stories. 'The paper works on the presumption that negative news sells – always go for the negative line even if it isn't typical'. There is some researched evidence and substance behind policy actors' perception that the media often fails to cover development issues constructively.

Trying to understand if confidence in the media is affected by the preferred first choice of medium for those in the work sector, the data suggests that those who chose TV as their first choice tend to be more trusting of the media in general.

While donors tend to be (on average) neutral towards the questions, the respondents who were themselves working in media institutions feel strongly that policymakers are critical of them, and that they have indeed failed to present development issues constructively. Leaders are slightly more trusting of the media than managers and practitioners.

We have focused on traditional push media. Those who put the internet as their first choice tend to be those who are being proactive in their search for news on their sector.

3.6 Implications for intermediary work

We all have our own preferences when it comes to the media. I personally watch television, rarely listen to radio, and almost never listen to talk shows. My colleague sitting opposite enjoys listening to talk shows and avoids the television.

In the 'Intended and Unintended Consequences of a Publish-or-Perish Culture: A Worldwide Survey', van Dalen and Henkens (2012) report that writing articles for newspapers is the least appreciated element of researchers' work:

> Writing an article for a newspaper is also negatively appreciated, which fits the logic of the rational ambitious academic as it defies the theory of comparative advantages. With such a mind frame, writing a newspaper article is time ill-spent that could be better devoted to working on academic papers, a task for which the academic is more equipped.

There is therefore a role for the knowledge intermediary to assist the 'translation' of research and evidence into the media. Policy actors do engage with traditional media and while we have seen that they currently have very negative perceptions of the media's performance, nevertheless a significant proportion of them are engaging with the media day by day.

Again though, we come back to the idea that the information ecosystem is changing. In section 1 we have seen that policy actors do indeed have access to the latest technology, and in this chapter the internet is flagged as the first choice for gaining news on the work sector.

Early adopters are identifying information using new behaviour patterns, and knowledge intermediaries need to adapt their mechanisms and pathways to ensure they provide content for such emerging patterns of behaviour. About 40 per cent of policy actors are already using smartphones, and the development of mobile apps that assist research communications is appropriate. If the internet is the first choice for finding news in their sector, then intermediaries need to take into account the migration of the media from push technologies to the internet, and the internet from PC to smartphone.

4 Do policy actors rely on being given information, or do they search for it themselves?

The data seems to support conventional wisdom – that the presence of computers in an office environment is reducing the need for policy actors to be given face-to-face briefings.

4.1 Do they rely on being given information?

Three direct questions were asked regarding the use of assistants, official and unofficial channels for briefings:[17]

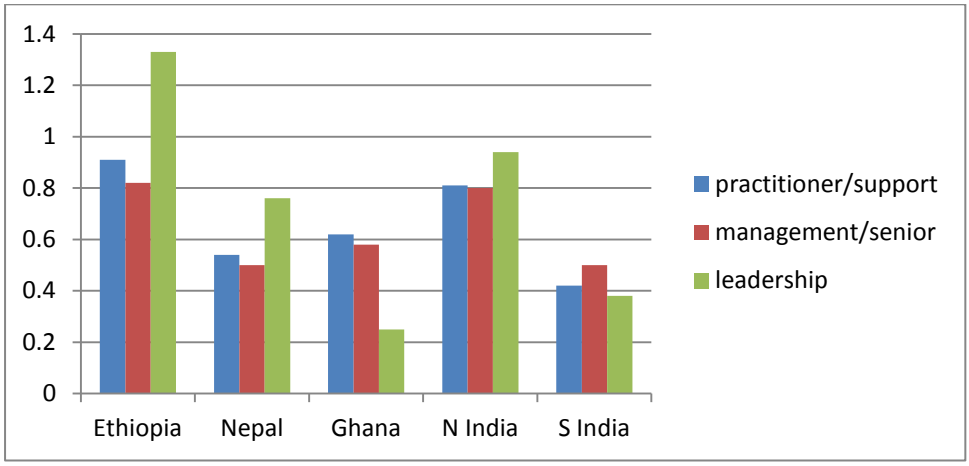
- I tend to get my briefings face-to-face officially, in meetings;
- I tend to get my briefings informally from colleagues and friends;
- I will not surf the internet directly, but will ask an assistant.

As in previous sections, respondents were given the opportunity to strongly disagree or strongly agree with the statement on a 5-point likert scale from -2 to +2. In all four countries the respondents gave a mixed response to the first of these statements, with average scores as shown in figures 4.1 and Figure 4.2.

There is a statistically significant difference between the countries in the average scores. It can be seen that those in leadership have a lower score in Ghana and South India (meaning they feel they rely even less on official briefings than the others), and a higher score in Ethiopia and Nepal. However, the difference between the executive groups is not statistically significant. Regarding the country differences we can speculate that the more formal cultures are Ethiopia and Nepal, with lower governance ranking, and also with less connectivity. It may be that formal cultures remain more in the paradigm of the civil service giving official briefings to the decision-makers. Certainly the qualitative interviews seem to support this view. The difference is also reflected in North India and South India where leadership in North India relies more on face-to-face official briefings – this may be a difference between North and South India, or it may indicate that the sample in North India includes significantly more government respondents.

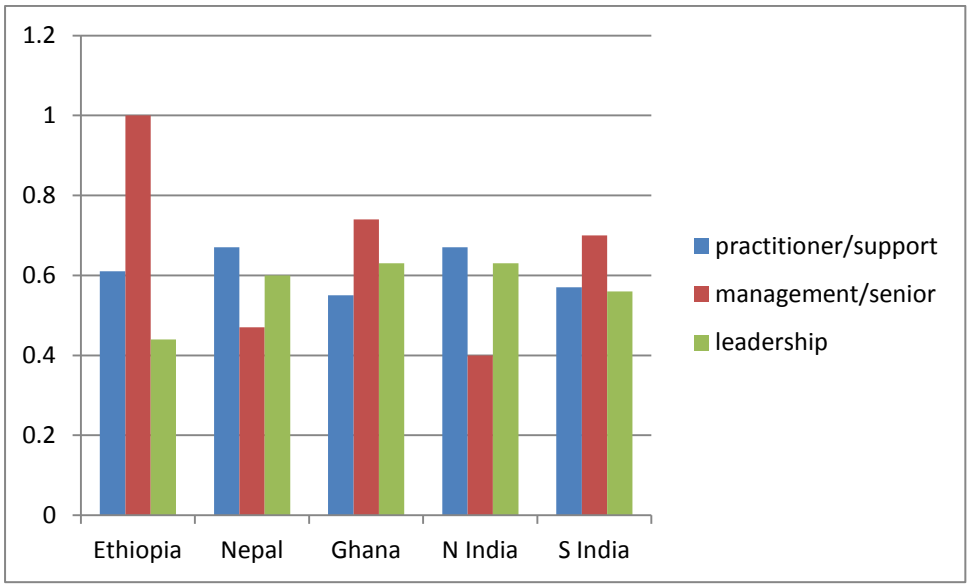
[17] Questions were posed as statements, and respondents were asked to indicate the extent to which they agreed or disagreed with the statement using a 5-point scale.

Figure 4.1 'I tend to get my briefings face-to-face officially, in meetings'. Average agreement with statement, disaggregated for countries



Note: scale = -2 Strong disagreement to +2 Strong agreement.

Figure 4.2 'I tend to get my briefings informally from colleagues and friends'. Average agreement with statement, disaggregated for executive responsibility

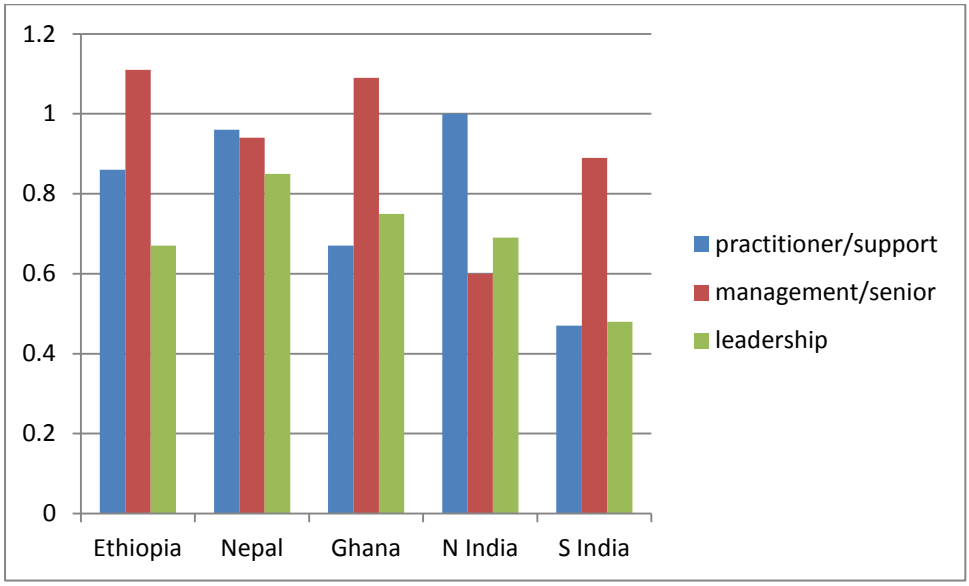


Note: scale = -2 Strong disagreement to +2 Strong agreement.

For the more informal briefings we see more parity across the groups. No longer does the leadership in the more formal countries have a visibly different score from the others. In Ethiopia and Nepal, they rely as much on their 'informal briefings' as their management and practitioner colleagues. In Ethiopia the difference between the groups is statistically significant, with management notably relying more on their informal briefings. The parity across all the groups is all the more remarkable given the difference in the proportion of government respondents in North and South India.

If we compare these answers with a question about the time they spend reading briefs given to them, there is slightly stronger average agreement than the previous questions, indicating that they do indeed spend significant time reading briefings given to them. This question does not distinguish between official and unofficial briefings. However, it is about reading rather than the verbal briefings that are implied in the questions above.

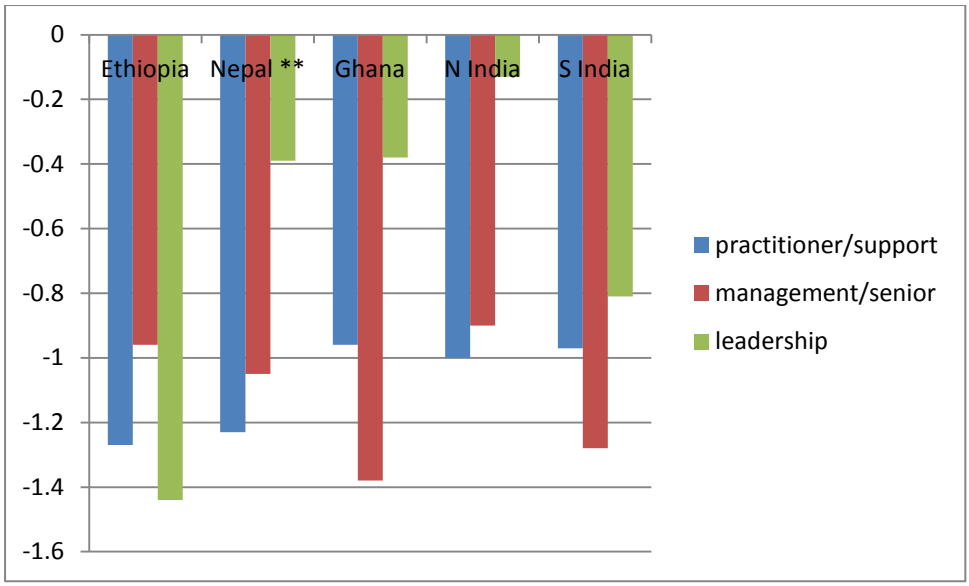
Figure 4.3 'I spend a significant amount of time reading briefs given to me'. Average agreement with statement, disaggregated for executive responsibility



Note: scale = -2 Strong disagreement to +2 Strong agreement.

So who gives them these briefings? The conventional wisdom is that senior decision-makers do not look for information directly, but will ask an assistant to generate summaries and briefings. In asking specifically about assistants we find this view is universally rejected.

Figure 4.4 'I will not surf the internet directly, but will ask an assistant'. Average agreement with statements, disaggregated for executive responsibility



Note: scale = -2 Strong disagreement to +2 Strong agreement.

Overall, respondents claim that they no longer ask assistants but surf the internet directly. While we can assume some pride is involved in these responses, even allowing for some to exaggerate their own surfing prowess, the data suggests that there is an ever increasing move away from assistants in gathering basic information. This is supported by other data on their information-seeking habits and is explored elsewhere.

We note the spread of results; in Ethiopia, leadership vehemently say they no longer rely on assistants. This stands in contrast to their earlier claim that they received official briefings –

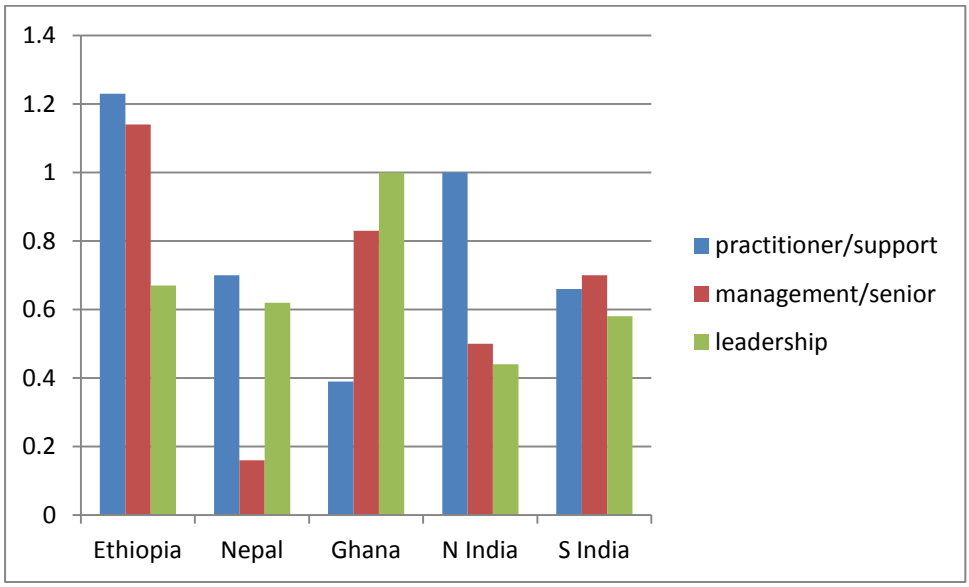
the difference may be on the basis of the 'ask for' – did they ask for the briefing? In Nepal, there is a significant difference between the executive groups, with leadership acknowledging a greater reliance on assistants. Ghana shows a similar difference between the leadership and others, despite being characterised in our opening section as being less bureaucratic and having better connectivity. The responses of the Indian leadership are as we have come to expect from our cross-country analysis, that South India (the less formal) says it has moved away from assistants, while North India is almost neutral on the subject.

4.2 The role of face-to-face information seeking

Although the trend is away from being given information, do policy actors still seek to discuss information and how much do they appreciate face-to-face contact?

Using informal networks is often referred to as the 'beer' or 'coffee' buddy – those close associates that the actor has informal drinks with and sounds out the proposals and issues of the day. There is general agreement with the statement 'I use informal networks to discuss proposals'.

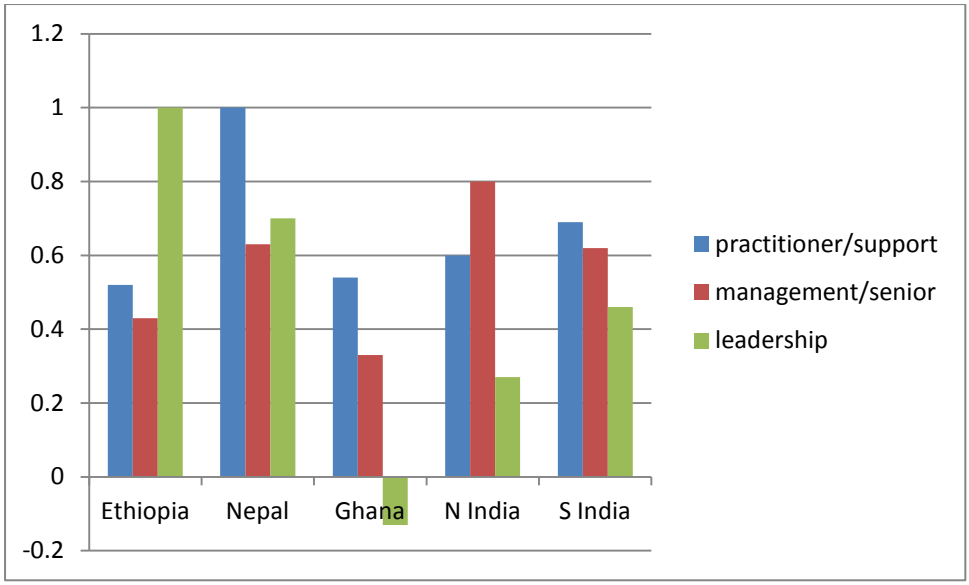
Figure 4.5 'I use informal networks to discuss proposals'. Average agreement with statement, disaggregated for executive responsibility



Note: scale = -2 Strong disagreement to +2 Strong agreement.

So why do the respondents use informal networks? Despite their increasing use of the internet to identify the information they require, which we will discuss below, there remains a belief that communication face-to-face is an effective process. Indeed, the question shown in Figure 4.6 was asked in the context of the new technologies, and phrased whether face-to-face was 'more' effective.

Figure 4.6 'I can communicate much more effectively face-to-face'. Average agreement with statement, disaggregated for executive responsibility



Note: scale = -2 Strong disagreement to +2 Strong agreement.

We see a mild but again majority agreement – that face-to-face remains important. It is fascinating to see that leaders in Ghana actually disagree with the statement – perhaps there is the suggestion that there might be a paradigm shift to electronic communications which seems to have taken root.

4.3 Do they search for information themselves?

Given the diminution of briefings by assistants, whether official or unofficial, are policy actors getting the information directly themselves?

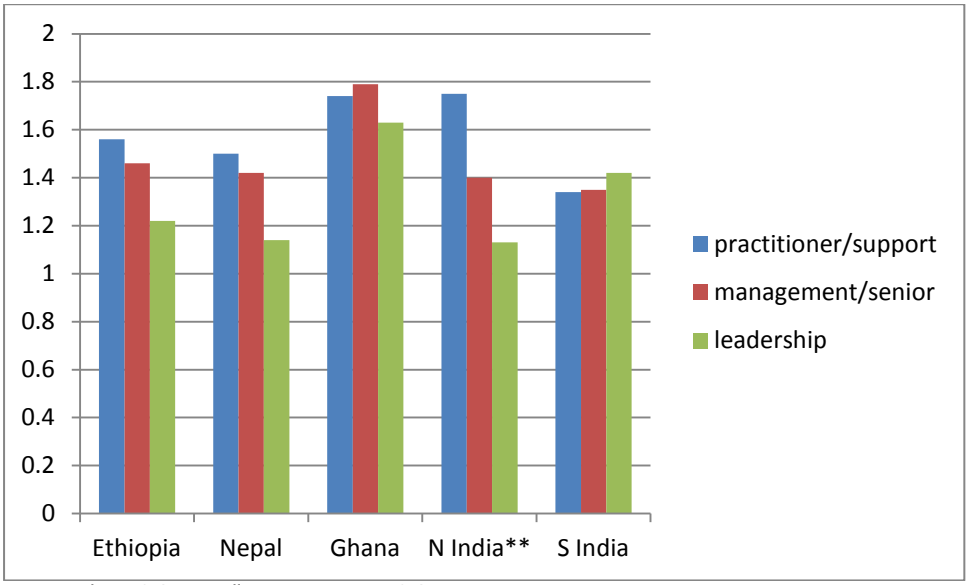
The first thing to note is that almost all those interviewed had direct access to a computer with internet access. In most cases they had several devices, and other papers in this series unpack their technology use. This is consistent with their being a part of the political elite – predominantly urban-based and with disposable income. We therefore cannot compare access with non-access. We considered computer *use*. However, across the whole sample 97 per cent reported use of a computer every day (or almost every day).

Table 4.1 How often on average have you used a computer in the last three months?

How often on average have you used a computer in the last 3 months?	Percent
every day or almost every day	96.7
at least once a week (but not every day)	2.5
at least once a month (but not every week)	.3
less than once a month	.3
Total	99.7
	.3
Total	100.0

Refining our enquiry, what becomes more important to our discussion here is whether they use this computer to search for online information. We can see from Figure 22 that the agreement levels on precisely this statement hover around 1.5 for each of the countries i.e. between agree and strongly agree. Ghana has a slightly stronger score and this is consistent with the data above, where Ghana is shown to be moving away from face-to-face information gathering. We might expect that since leaders in Ghana said so clearly that they do not use assistants to gather their information but search directly that they might have a significant higher score in the table below. This is not the case, and the only significant difference between different executive responsibility groupings is found in North India. This possibly reflects the high presence of government representatives in the sample, where one might expect a greater reliance on being given information.

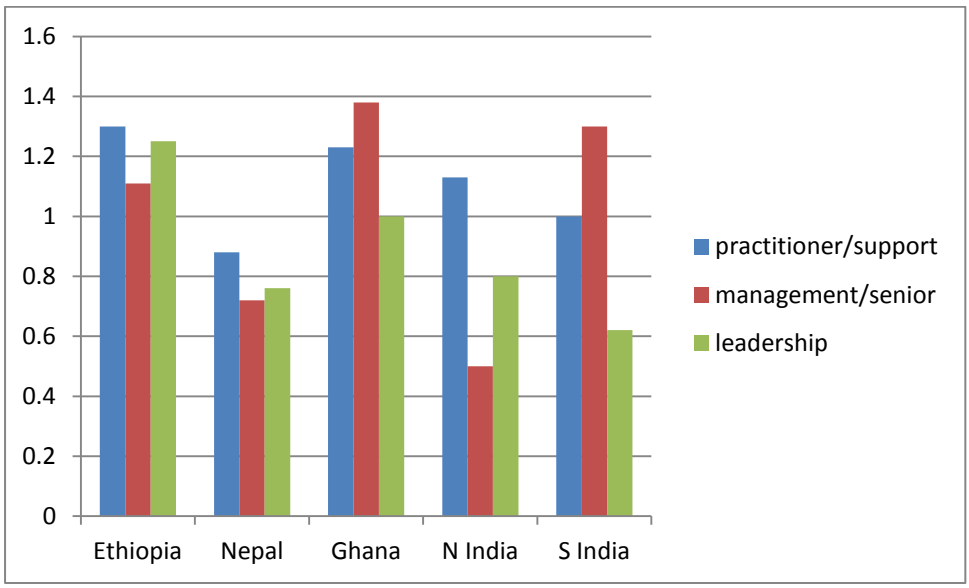
Figure 4.7 'I search online for information'. Average agreement with statement, disaggregated for executive responsibility



Note: scale = -2 Strong disagreement to +2 Strong agreement.

But searching online could mean anything – from one enquiry a day to spending the whole day 'surfing'. We can explore this by examining two questions. The first asks for a perception of the amount of time spent finding information.

Figure 4.8 I spend a significant amount of time finding my own information'. Average agreement with statement, disaggregated for executive responsibility



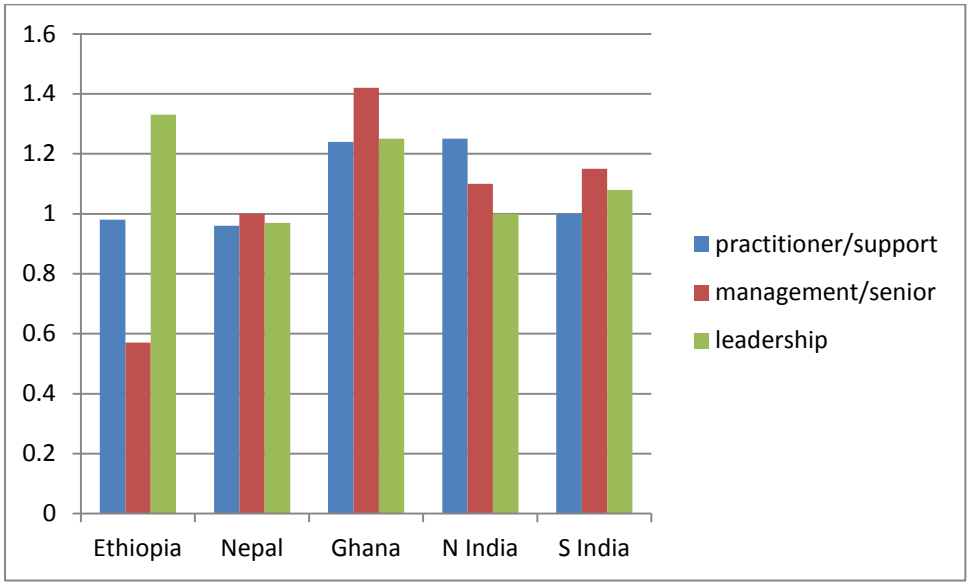
Note: scale = -2 Strong disagreement to +2 Strong agreement.

We can compare this with the agreement on the time spent reading briefs given to them. We see that they are consistently higher in their agreement scores for this question of finding their own information. By implication, they spend more time finding their own information than being given it and reading it. This combines with other questions to imply that most of their finding of information is through the internet.

To examine this further let us consider their agreement with the statement 'I describe myself as a 'persistent and curious' enquirer'. This is a phrase that has been used in other surveys on information seeking. Are they seeking information only in a functional mode, to find the information needed to meet a specific need, or are they, like so many of us, finding that 'surfing' is engaging and is a potentially 'enjoyable' task?[18]

[18] Note that Spink, Ozmutlu and Ozmutlu (2001) in 'Multitasking Information Seeking and Searching Processes' stated that 'Humans often do not conduct persistent information-seeking and interacting behaviors particularly when interacting with Information Retrieval systems.' They quote research from Jansen et al., 2000; Spink, Wolfram, Jansen & Saracevic, 2001. If we consider the high scores of the policy actors in the light the paradigm shift of internet based information retrieval that has occurred between 2001 and 2011, the results suggest that the situation regarding persistence may have changed and further research in this area is required.

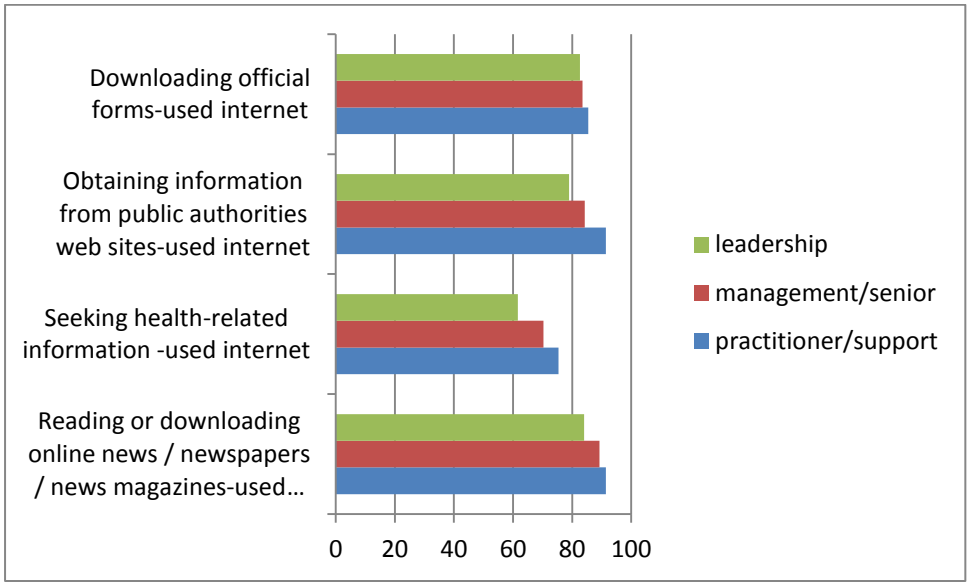
Figure 4.9 I describe myself as a 'persistent and curious' enquirer'. Average agreement with statement, disaggregated for executive responsibility



Note: scale = -2 Strong disagreement to +2 Strong agreement.

In a section below we will examine in more detail what the respondents were searching for in terms of information content, but to conclude this section the graph below shows that the majority of respondents had searched for and downloaded official forms, information from public authorities, health related information, and online news.

Figure 4.10 Content downloaded from Internet; percentage of respondents disaggregated by executive responsibility



4.4 Early adopters

The above findings have been disaggregated according to executive responsibility. An alternative disaggregation is by early adoption of technology. Are those who are more enthusiastic toward technology the ones who are diminishing their use of face-to-face briefings?

To explore this we used the following proxy indicators of 'early adoption', comparing users (early adopters) with non-users:

- Variable A – The use of an iPad, tablet or e-book technology (compared with those who use none of the more recent hardware);
- Variable B – The use of smart phones;
- Variable C – The use of email and internet on smartphones.

The following table highlights those issues that are sensitive to these proxy indicators. Where differences in scores among early adopters and 'others' are statistically significant, an x is placed against the statement i.e. where three xxx are present the variable shows a statistically valid difference for three of the proxy early adoption variables.

Table 4.2 Proxy indicators for early adopters, signs of significance difference

	Ethiopia	Nepal	Ghana	North India	South India
I tend to get my briefings face-to-face officially, in meetings	x		x	x	
I tend to get my briefings informally from colleagues and friends	x				
I spend a significant amount of time reading briefs given to me (C)					
I will not surf the internet directly, but will ask an assistant	xx		x		x
I can communicate much more effectively face-to-face					
I use informal networks to discuss proposals	xx	xx			x
I search online for information	xxx	xx			xx
I spend a significant amount of time finding my own information (C)	x			x	
I describe myself as a 'persistent and curious' enquirer	xxx		xxx		x
Reading or downloading online news / newspapers / news magazines-used internet	xx	x			x
Seeking health-related information -used internet	x	x			xx
Obtaining information from public authorities web sites-used internet	x	x	x	x	

Downloading official forms-used internet	xxx	x	xxx		

The 'direction' of each difference is as conventional wisdom might predict – i.e. the early adopters get less briefings face-to-face and download more forms from the internet.

The large number of asterisks in the table suggests that early adoption of these technologies in Ethiopia makes a big difference to behaviour. Ethiopia is the poorest of our countries in terms of connectivity and we know from the qualitative feedback that equipment remains costly and connectivity is not cheap. It makes sense then that those who have obtained the latest equipment, and use it regularly through expensive connections, will want to make the most of it. The early adopters in Ethiopia are all the more likely to be technophiles, and to explore their connections the most.

While Nepal also has connectivity issues, the proxy variables for early adopters show fewer links with different behaviour. In the above analysis Ethiopia and Nepal have been relatively similar in their responses to the use of assistants, the external briefings etc. It is possible that the proximity to India and the general higher wealth of Nepali officials (compared to those in Ethiopia) means that early adopters are getting equipment as a status symbol rather than as a tool. Some qualitative data supports this proposition.

For Ghana, where the use of briefings and assistants is diminishing across both early and late adopters, the downloading of information and the persistence of enquiry distinguishes the early adopters. With an HDI not that dissimilar to Nepal qualitative feedback suggests that technology is also becoming a status symbol. Having said that, the strong linkage between early adoption and the 'persistence of enquiry' does suggest that early adopters recognise the potential of ICTs to provide them with access to rich sources of information to search. For North India, early adopters differentiate themselves only on the use of official briefings and searching for their own information. Again the lack of differentiation may be due to easy access to the technology and the status of owning the technology rather than the desire to be technologically ahead of the curve.

However, across all countries, the official briefings statement is linked to early adoption in 3 of the 5 countries, as is the question about assistants, searching for their own information and their own description as a persistent and curious enquirer. The linkages between these variables and early adoption does suggest that technology is driving the changes we see within the information ecosystem.

4.5 Conclusions for the section

The agreement on the statements about briefings seems to support conventional wisdom – that the presence of computers in an office environment is reducing the need for policy actors to be given face-to-face briefings. The findings are characterised by only *mild agreement* with the notion that they tend to get their briefings officially, and *disagreement* that they ask assistants to get information for them. Having said that, they did *agree* that they spend a significant amount of time reading briefs given to them.

There is generally across the categories a *strong agreement* that they search online for their own information and *agreement* that they spend a significant amount of time searching for their own information. This is supported by their claim (*agreement*) to be 'persistent and curious' enquirers, and that the majority of them have downloaded key information on health and public authorities, and from official forms.

There was a quite a range of responses as to whether they use face-to-face meetings to discuss proposals. While all the disaggregated averages were in *agreement*, they ranged

from agreement in Ethiopia among practitioners, to barely registering above neutral for Nepal managers. However there was a remarkably consistent mild agreement across all disaggregated data that they get informal briefings from colleagues and friends – the much discussed; 'beer' or 'coffee buddy'.

Why are these meetings still high on their agenda? Because they mainly *mildly agree* that they can communicate much more effectively face-to-face; with the one exception of leaders in Ghana, who seem to have adopted ICT to the point where they are as comfortable with electronic communication as face-to-face. Qualitative data also suggests that it is a good excuse to 'get out of the office'.

The countries were chosen for their range of connectivity (ITU IDI indicator), 'formality (through proxy indicators on government effectiveness and regulatory quality) and Human Development Index scores. Any conclusions about cause and effect (say, of connectivity on the responses) is complicated by the match between connectivity, 'bureaucracy' and HDI (or GDP). Poorer countries tend to (but not always) have more formal government systems which can be less effective, and also poorer connectivity. For instance, Ethiopia has a low HDI score, is also lowest on the IDI indicator, and is low on regulatory quality (although surprisingly higher than others on government effectiveness.).

When we consider the respondent data, it is not entirely consistent but there are indications that the poorer the country indicators, the more the respondents continue to rely on face-to-face and official briefing mechanisms. When the data from Kenya and Bangladesh is in, this may shed more light on this finding.

The executive responsibility has some interesting elements. In many variables there is consistency between the three groupings. However for 'official briefings' and 'asking assistants', the leadership stands out from their colleagues. They tend to rely more on official briefings, and less vehemently disagree that they sometimes ask assistants to surf online for them (with the exception of Ethiopia). This is understandable at such a senior level. An interesting outlier of the data disaggregated in this way are the leaders in Ghana who no longer feel they have to prioritise face-to-face meetings over other means of communication in order to be effective.

Finally the data was disaggregated for early adoption of technology. Ethiopia stood out with a large number of variables showing significant differences. It was hypothesised that since Ethiopia is the poorest of the research countries, those who have obtained the latest equipment, and use it regularly through expensive connections, will want to make the most of it. The early adopters in Ethiopia are all the more likely to be technophiles, and to explore their connections the most. This contrasts with, say India, where technology is more available at a lower cost, and differences between the behaviour of early adopters and non-adopters are fewer. The hypothesis is that early adoption of technology in these countries has become a status statement rather than an expression of technophile. This hypothesis requires more exploration.

4.6 Implications for intermediary work

There is an assumption in knowledge intermediary work that senior policy actors may not be searching for information directly themselves, and that they are presented with information. The information ecosystem is changing. While this may remain the case in the poorer more formal countries, it is less so in the mid-range countries. The implication is that where connectivity is improving, policy actors will look for information themselves. They will spend a significant amount of time looking for information, and they will be 'persistent and curious'. This seems to suggest that:

- The easier knowledge intermediaries can make it for policy actors to find the information, the more likely that the research will be used in their decision-making.
- Targeting research assistants alone will not be sufficient, although they still have some role to play especially with the very senior leaders.
- If policy actors are finding their own information, this raises the question – do they have the information literacy or capability to interpret both the information and its source? Do they know whether the information is trustworthy?
- Policy actors do indeed use informal networks to both get briefings and to discuss proposals. This suggests that knowledge intermediaries who can push information into any of their relevant social networks (and not just their formal official networks), will strengthen the pathway for that information to reach the policy actor.

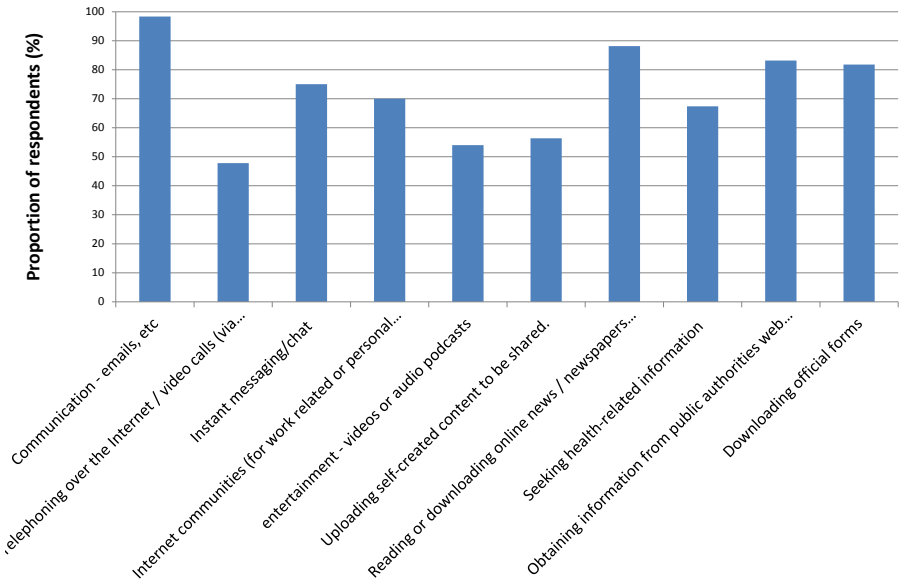
The role of early adoption and its implications on knowledge intermediary work will be explored in more detail below.

5 When policy actors engage with the internet, what do they do?

Over 70 per cent of respondents undertook three conventional internet-related activities; engage with emails, obtain official information and read online news. Less than 50 per cent had undertaken internet-based phone calls (in the last three months)

5.1 Use of the internet

Figure 5.1 Use of the internet (for private or official purposes); % of respondents across whole sample

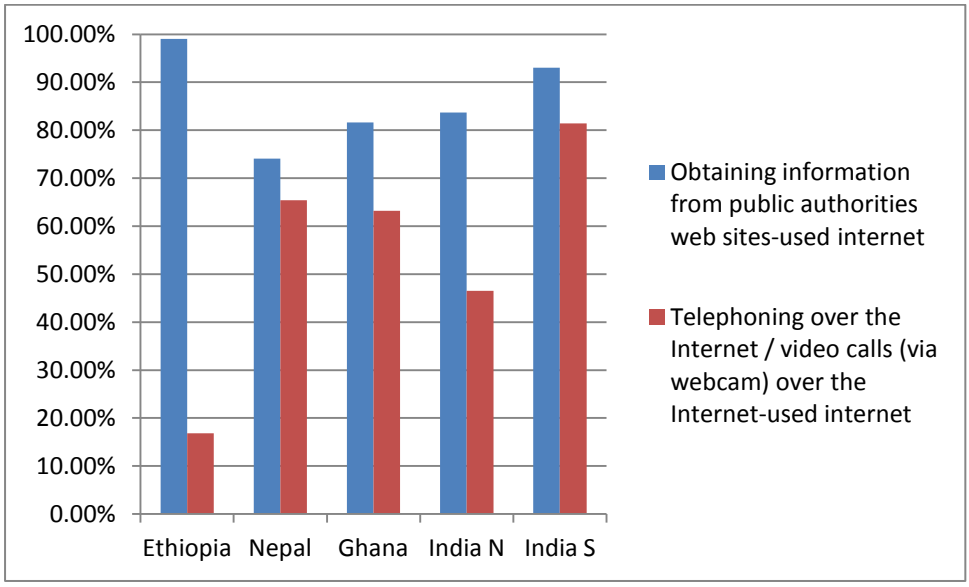


Unsurprisingly, almost all policy actors engage with the internet for emails. As one can see from Figure 5.1, over 80 per cent download official forms, obtain information from public authorities' websites and read or download newspapers or online news. A majority undertake the remaining options Instant messaging, Internet communities, video and audio podcasts, uploading self-created content and seeking health related information. Just under half have telephoned over the internet.

The above means that the behaviour of policy actors who have technology that is similar to the average USA household, is similar to the behaviour of the average USA household (Pew Internet & American Life Project 2011)).

As with most of the other variables, there are differences across the countries. We would expect the use to relate to the connectivity of the country, and to some extent this is what we see. For instant messaging and uploading video – which our data suggests are emergent behaviours more dependent on early adoption – there is no significant difference between countries. For the use of emails, while there is a difference between countries the overwhelming use makes such difference of no practical meaning.

Figure 5.2 Average agreement with statements, disaggregated for countries

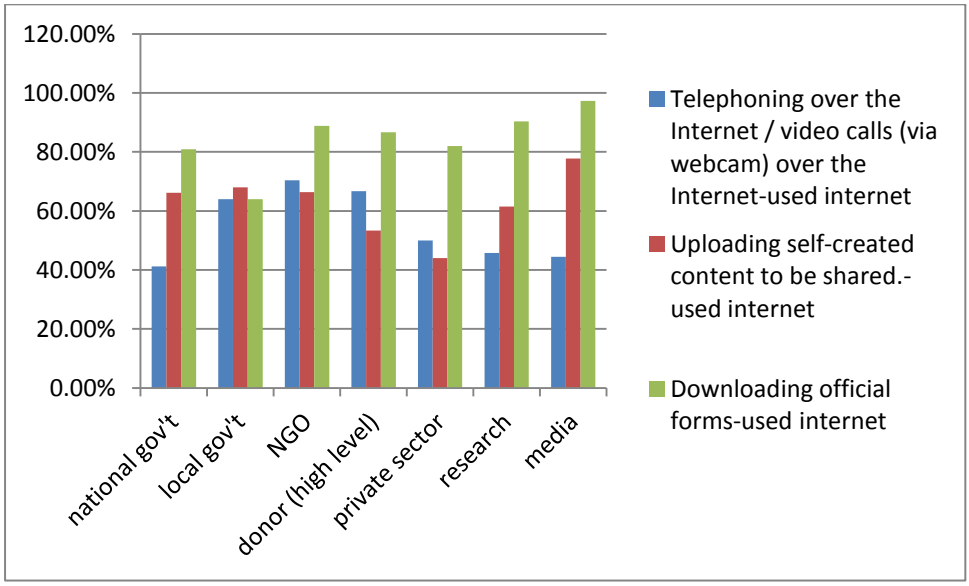


Note: scale = -2 Strong disagreement to +2 Strong agreement.

In Figure 5.2, we see that telephoning follows our understanding of the connectivity. Ethiopia with its poor connectivity makes telephoning a difficult option even for those on the best connectivity the country can provide. In India it has now become common across most respondents to use the internet for telephoning.

Similarly obtaining information from public authorities' web sites follows the connectivity pattern, with the exception of Ethiopia. The unusual high use can be explained from other data where the formality and need to know official government positions is higher in Ethiopia. Three of this cluster of variables show significant differences across institutions.

Figure 5.3 Average agreement with statement, disaggregated for institutions



Note: scale = -2 Strong disagreement to +2 Strong agreement.

There is a comparatively low use of downloading forms in local government. This is slightly unexpected particularly in the light of them being one of the higher users of telephoning over the internet and uploading their own content – ie suggesting they are towards the more adventurous end of the spectrum in internet use. It is also surprising that the private sector and media report low use of the internet for telephoning? One would expect that they would recognise the cost savings of IP telephony and make maximum use of it. As expected the media is one of the highest for uploading self-content, and the busy private sector one of the lowest. One might expect that researchers upload content more than say national government but across the sample this is not the case.

Regarding executive responsibility there are differences on entertainment and obtaining information from public authorities websites. Regarding entertainment those in leadership use significantly less, although still 50 per cent of the leadership respondents do use the internet for entertainment. For obtaining public authorities information, practitioners (91 per cent) have a higher use than managers (85 per cent) who have a higher use than leaders (79 per cent).

Those who identified themselves as being involved in policymaking, have a (statistically different) lower use for seeking health-related information and obtaining information from public authorities. They also have a much higher use of telephoning over the Internet / video calls (via webcam) over the Internet.

Self-identified knowledge brokers have a higher use of Internet communities (for work related or personal purposes), reading or downloading online news / newspapers / news magazines and seeking health-related information.
Self-identified researchers on the other hand only have a higher use of uploading self-created content to be shared.

Unsurprisingly early adopters have a higher use across all three predictor variables on Telephoning over the Internet / video calls (via webcam) over the Internet-used internet, entertainment - videos or audio podcasts and Uploading self-created content to be shared, and for internet communities for one variable.

The pattern of use for those with and without children mirrors that for smartphones. Childless actors tend to be younger and have a greater exploration of the wider uses of the internet. They tend to be equal or very slightly more use than those with older children. Our hypothesis was that teenage children show their parents how to do things on ICT, and therefore encourage a wider adoption of the more innovative or emerging uses.

We can see this in the data. Those who do not allow their children to use of their smartphone, also have not yet allowed their children onto the internet and are not yet learning from them. Their breadth of use of the internet is lower than those who allow their children to use their smartphones. The exception to this generalisation is using telephony across the internet – here it is the actors who do not allow children use of their cell-phone that have a significantly higher use.

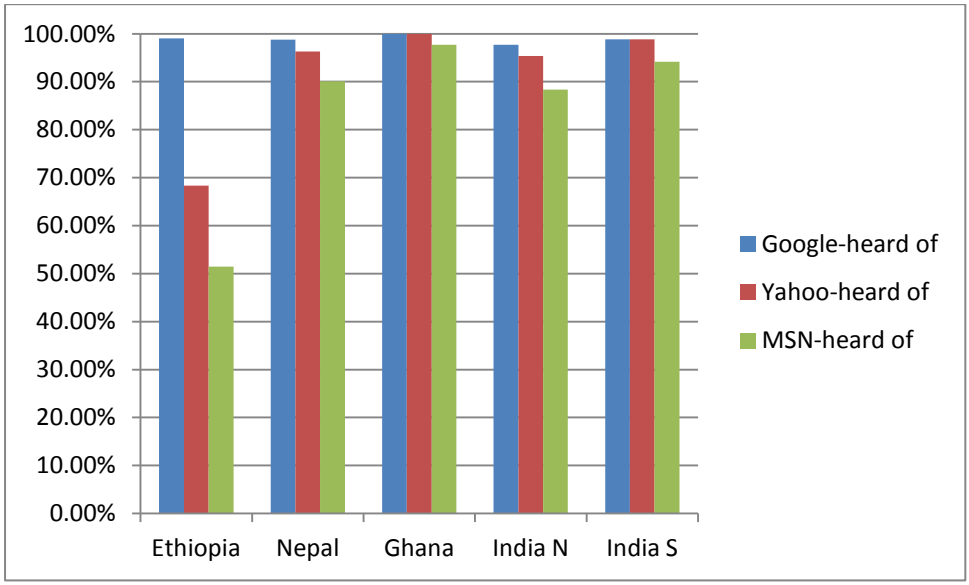
There are no significant differences between those who demand facts and figures and those who don't, although the persistent enquirers have a significant greater use of telephony and internet communities. Those who are satisfied that they have access to the information that they need have significantly greater use of the internet across all the use variables with the exception instant messaging and uploading content.

5.2 Searching for information

A core feature of the internet is its ability to provide global sourced information. However, key to every internet experience are the search engines and portals that people learn to use to reach the information they require.

We asked respondents to state their awareness of search engines. Unsurprisingly, awareness of the main search engines was high.

Figure 5.4 Awareness of Search Engines; Percentage of respondents disaggregated for countries



Ethiopia was the only country yielding an interesting result – that a substantial number of policy actors had not even heard of MSN or Yahoo. The ubiquitous Google responses were as expected.

We also enquired into their awareness of specialist development portal (and associated communities of practice). Detailed findings are not presented here. The awareness of

specialist development portals drops considerably, hovering around 30 per cent. Again we find greater connectivity is linked to greater awareness, with none of the Ethiopia respondents knowing any of the major development portals. However there is also a difference in awareness across the countries – with some portals being more well know than in others. The difference across institutions is wide-ranging, with the donors being the group with the lowest overall awareness.

5.3 Conclusions

When policy actors engage with the internet they follow a very similar pattern to the rest of the world. The majority of the respondents tackle their emails, engage with official sites to identify key information and they read the news. Fewer of them have explored other functionalities such as instant messaging or uploading video, however there is still a considerable proportion of the respondents who have explored all these features.

Some functionality does depend on the connectivity. We find a lower use of telephoning over the internet in countries with poor connectivity.

In terms of internet use – having children make a difference. Those who let their children use the internet on their phone have a greater breadth of internet use (wider range of functions), than those who do not let their children use it – given equal other factors such as age and gender.

We find the anticipated awareness of the major search engines. Google is known by almost all respondents, and there are varying degrees of awareness to other search engine alternatives. However when we enquire into their awareness of specialist development portal (and associated communities of practice), the awareness drops considerably.

5.4 Implications for intermediary work

Policy actors are using the internet to find information. They do use them to download information from public authorities websites, and to download official forms. This would seem to imply that if the actor trusts the website (ie that its 'official', they will use it. This may have implications for intermediary work – if intermediary processed information can find its way onto official sites, the majority of policy actors are likely to access it.

There is currently some use of podcasts and videos by about 50 per cent of the respondents. This would suggest that good quality relevant audio and video products from knowledge intermediaries might find its way to the relevant audience.

Telephony over the internet is currently the least used of the options given, however even then it is only just under 50 per cent. If policy actors are increasingly using internet-based telephony, with its associated very low cost even for international calls, then 'telephone' helpdesks as par tof intermediary work could be a reality.

Where intermediaries intend to use the internet to communicate summaries of research and evidence, it is important to ensure that they can be seen through Google. While ranking across all search engines is important, the data confirms the dominance of Google (at the moment).

In terms of existing websites that specialise in development information there was a reasonable awareness across the respondents. There is room for improvement.

6 How do policy actors value different origins of research?

International research is still trusted more highly than local research. But in India and Ethiopia local research is thought of as more relevant than international research.

6.1 Accessing Information

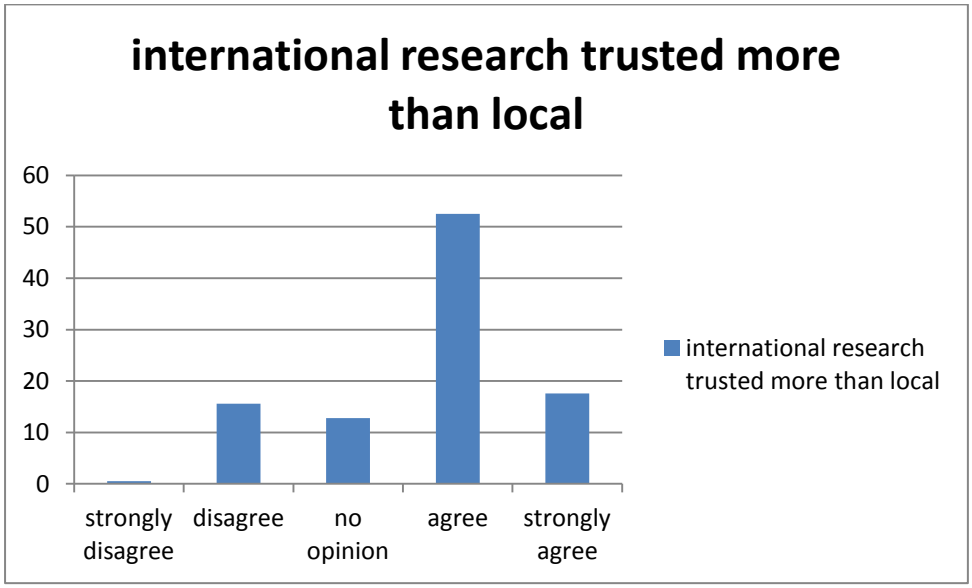
In previous chapters we have presented how policy actors access information. In brief summary the highlights were:

- That they have personal access to the internet, and the majority use it to find information themselves
- Their use of assistants is diminishing, particularly where connectivity is improving and governance is changing from single party state to multi-party democracy
- They use the media in various ways to keep up to date with news in their sector, although they have limited confidence in the media's ability to report development issues constructively.
- There are significant differences as to the channels they use for gaining information between the varying levels of executive responsibility, however these can be summarised as: the more executive responsibility the more likely they have access to the new technologies.
- Smartphones and internet access over the phone is a reality even in countries with very low IDI.

6.2 What value do they place on local research?

Direct questions about trust of local and international research get the following response from the whole sample.

Figure 6.1 Percentage of respondents agreeing/disagreeing with statement – 'International research is trusted more than local research'

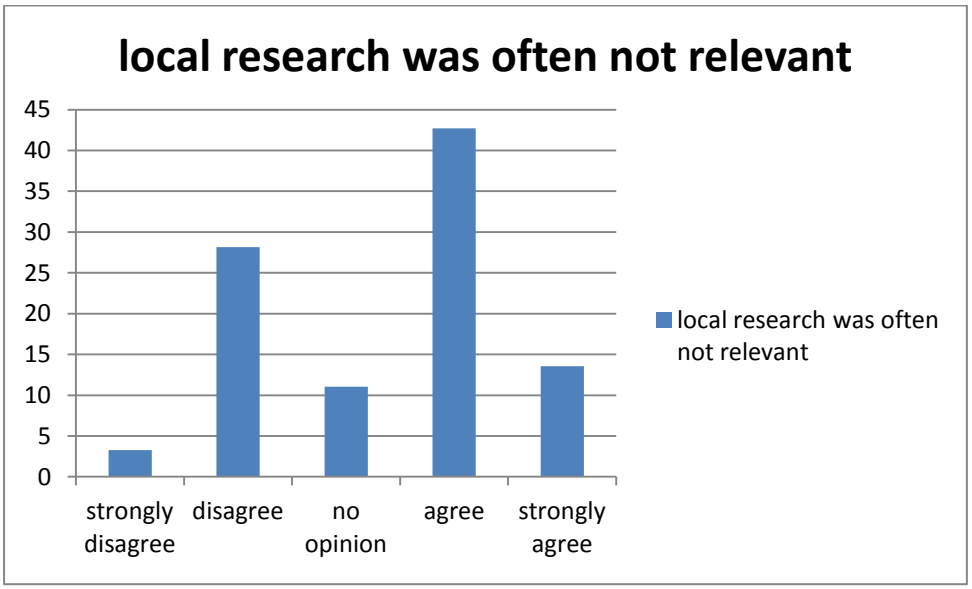


However trust is a complex word. Do they consider that the quality of the international research will be higher than local research, or is it the brand of the international research institution that makes them trust international research more?

Research communication leading to policy implementation can be reduced to a 3 stage process. When a study is complete in a specific location we may have answered the question – did this treatment make a difference in this particular context, ie has it worked somewhere. The second step as proposed by Hafkin 2011 Is that the policy actor will want to ask what were the supporting factors that made the treatment work in that context – i.e. isolating the general principles behind the work or asking will it work elsewhere? The third step is that the policy actor will then want to ask whether they have the same (or similar enough) supporting factors in their specific context – i.e. will it work here?

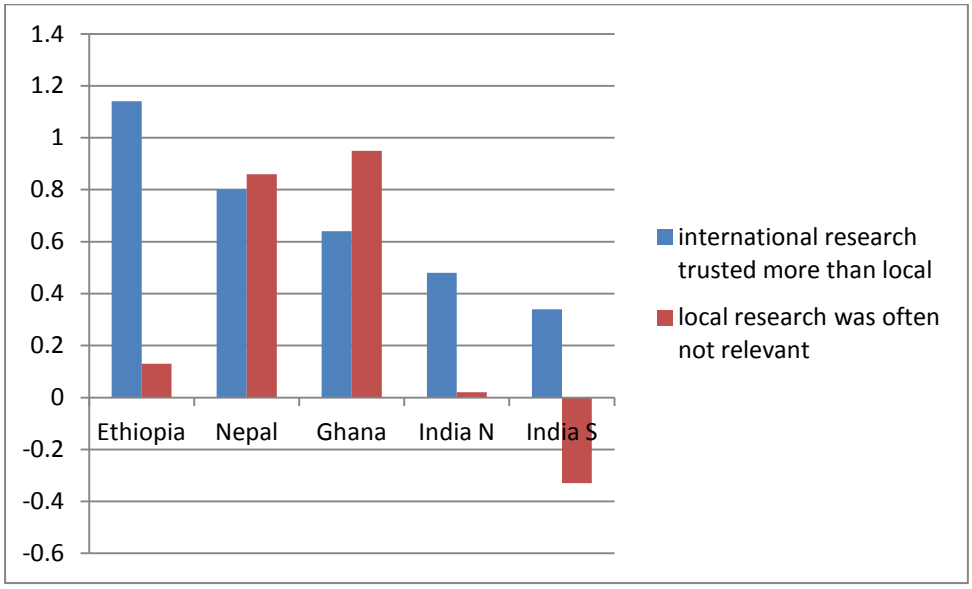
One of the assumptions behind local research is that if the research is conducted in the same context as the policy actors region of interest, then one would assume that if 'it worked nearby (as studied by the local researcher) it 'will work here'. However this is not the assumption in all policy actors' minds. The sample showed a very clear split of opinion on *relevance* of local research.

Figure 6.2 Percentage of respondents agreeing/disagreeing with statement – 'Local research was often not relevant'



How do these two views vary across the countries? Figure 6.3 presents the average agreement for the two statements for each country. We can see clearly that once again opinion seems to follow the trends in IDI, Governance and GDP. For Ethiopia, there is strong agreement on the higher trust value in international research, while for Southern Indians, they have a very mild agreement. In the light of this it is interesting that Ethiopia policy actors feel that local research is relevant (or at least have a relatively neutral position on the question), while Nepal and Ghana agree that local research is often not relevant. Again though, India with its strong new industrialisation does have a middle class and a set of strong Indian research institutions. So much so that the average response from the South Indian policy actors was a mild disagreement with the statement.

Figure 6.3 Average agreement with statements, disaggregated for countries



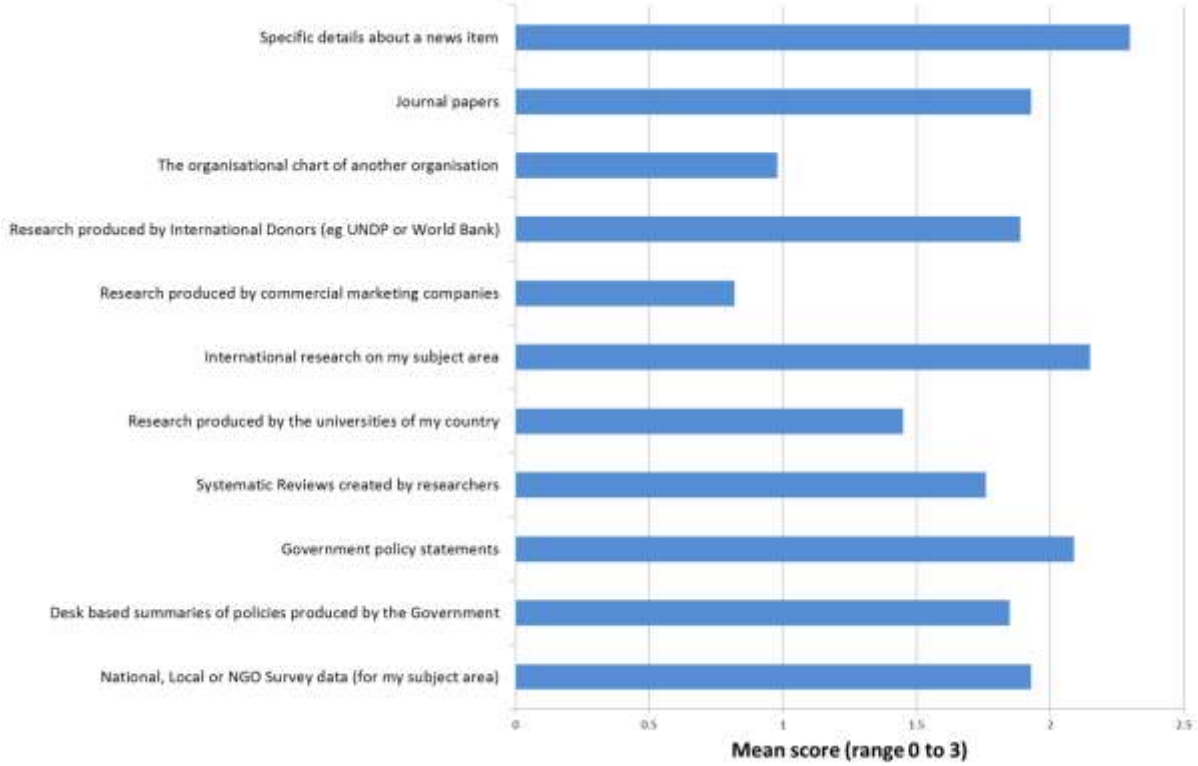
Note: scale = -2 Strong disagreement to +2 Strong agreement.

Across the whole sample there was no significant difference on either statement based on institutional type, executive responsibility, policy engagement or involvement in research, with the exceptions of knowledge brokers and early adopters of technology such as tablets or iPads who were both significantly more likely to agree that international research was more trusted than local research.

6.3 So what research are they looking for?

The survey explored the types of information the respondents have specifically looked for. It asked 'In the past 3 months I have looked for or been given to read:-' with the options of Many times (Coded 3), A few times (Coded 2), perhaps once (coded 1) and Not in last 3 months (coded 0). Figure 46 shows the mean scores given this non parametric response.

Figure 6.4 Information types accessed by the respondents with a measure of frequency of access

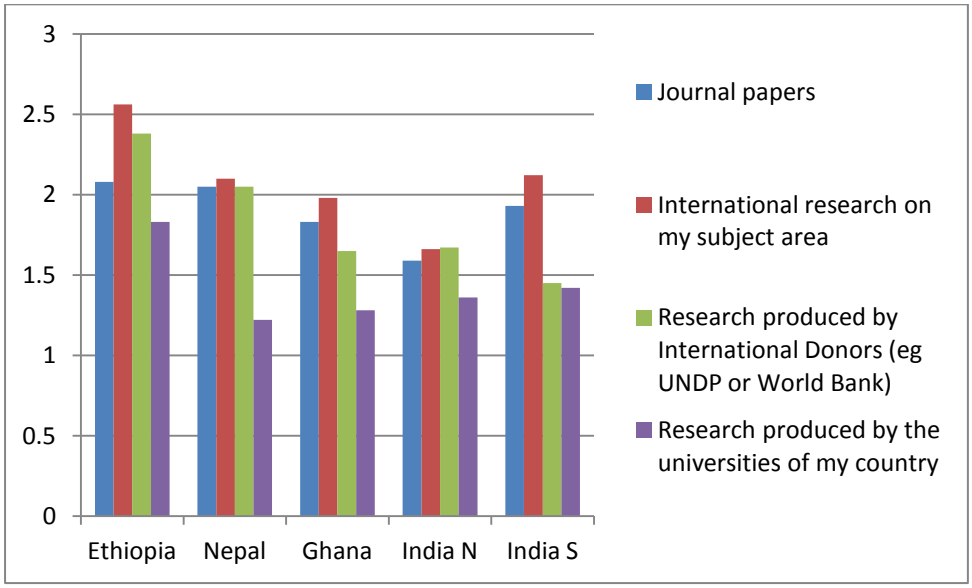


Note: Average access – from scale : Many times (Coded 3), A few times (Coded 2), Perhaps once (coded 1) and Not in last 3 months (coded 0).

We see that with an average score over 2 specific details about 'a news item', 'international research on my subject area' and 'government policy statements'; many respondent are accessing this type of information frequently. 'Systematic reviews', 'policy summaries', 'Survey data', 'Journal papers' and 'Research produced by international donors' all feature strongly. The lower responses are on 'research produced by commercial companies' and 'by universities of my country' reflect the wider discussion on trust of sources.

This data supports the stated difference in trust between information originating internationally or locally. There are also significant differences between the countries. If we cluster the research items, and disaggregate for countries we get the following three figures:

Figure 6.5 Average access of information types Cluster A, disaggregated for countries

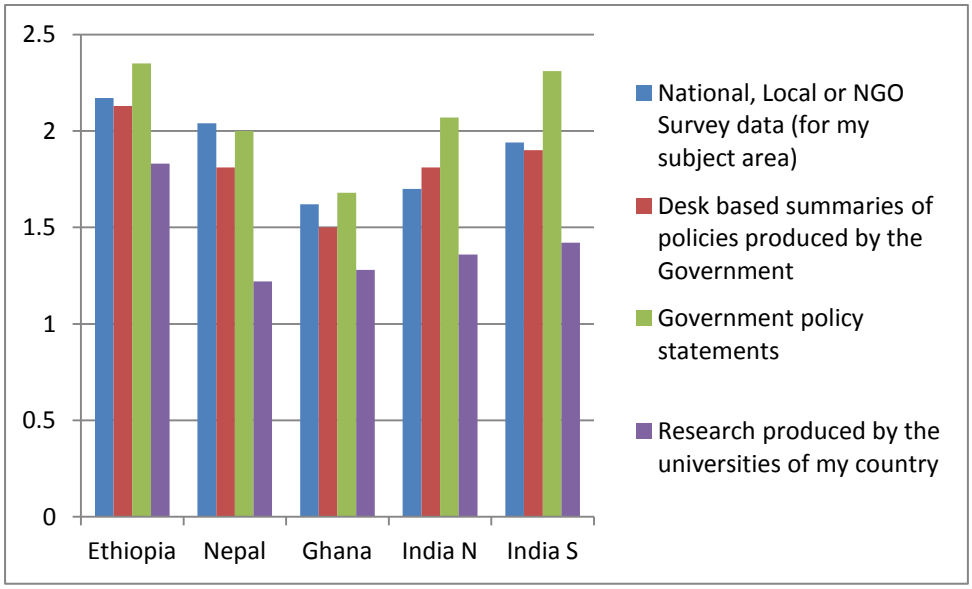


Note: from scale – Many times (Coded 3), A few times (Coded 2), perhaps once (coded 1) and Not in last 3 months (coded 0).

For these three international items, we see averages ranging from 2.54 for Ethiopia on International research, following the trend of the countries meta descriptors to descend to 1.48 for research produced by donors as respected by South Indian respondents. When we come to the cluster of local information we find the Ethiopians respecting local research at 1.83 while the others are between 1.2 and 1.4. The responses are consistent with the views stated above.

However, while local research can be devalued, local information per se may not be. In Figure 6.6, the data suggests that local information is used and respected. Indeed in South India for instance, which as a country suggested that local research was relevant, the use of government policy statements, national data from surveys, and desk based summaries produced by the government are all well used.

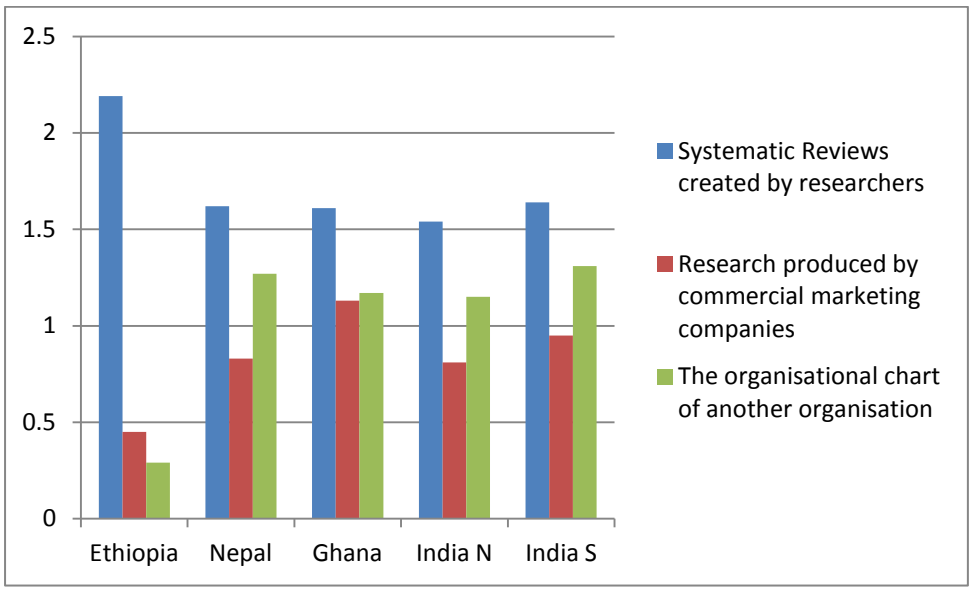
Figure 6.6 Average access of information types Cluster B, disaggregated for countries



Note: from scale – Many times (Coded 3), A few times (Coded 2), Perhaps once (coded 1) and Not in last 3 months (coded 0).

From this cluster of questions about the information policy actors use, there were three anomalies that did not fit the disaggregation of local and international.

Figure 6.7 Average access of information types Cluster C, disaggregated for countries

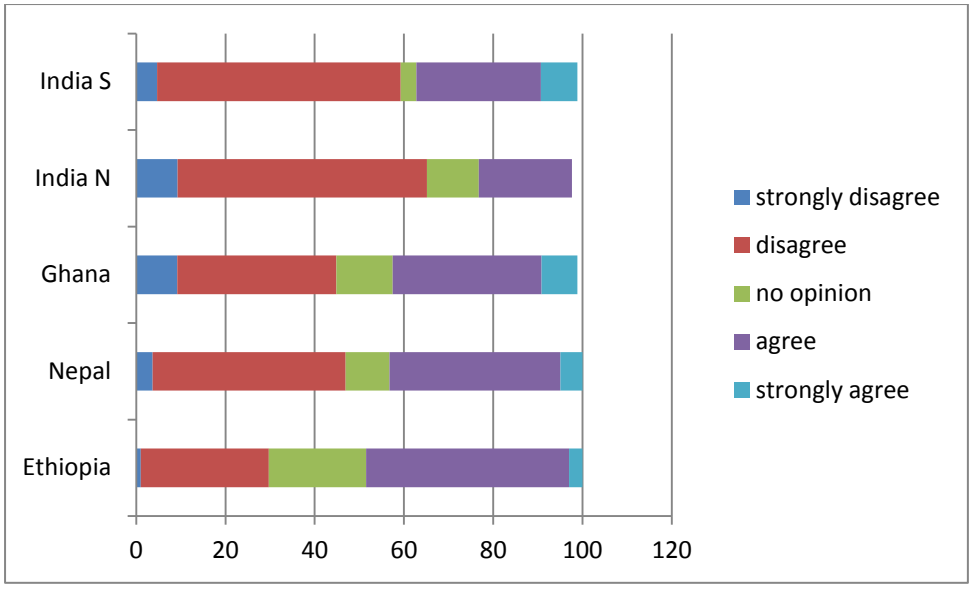


Note: from scale – Many times (Coded 3), A few times (Coded 2), Perhaps once (coded 1) and Not in last 3 months (coded 0).

'Systematic reviews', while often international, could in theory be local. They are valued across all the countries. Research produced by commercial companies could also be local or international, but whichever they are they are utilised much less frequently than the other research mentioned above. This would seem to indicate that 'Brand' is important. The qualitative data suggests that research produced by commercial marketing companies is respected less because it may contain a bias. Qualitative data also suggested that part of the reason why local research was not as well respected as international research was this question of bias. Universities might be commissioned by interested parties. However, despite this lower use (and implicitly trust) of commercial research, it is perhaps worth noting that there was nevertheless use. In the last three months a majority of respondents had accessed commercial research in the last 3 months.

So what about civil society? The above figures show that research produced by civil society is being accessed (local and NGO data). We explored specifically whether policy actors trusted research produced by civil society. There was a significant difference between the countries, with Ethiopia agreeing with the statement 'Policymakers do not trust research findings from civil society' while Ghana and Nepal were more or less neutral on the subject and India was disagreeing with the negative statement (i.e. stating they felt policymakers did trust civil society produced research.)

Figure 6.8 'Policymakers do not trust research findings from civil society'; Percentage of respondents agreeing/disagreeing with statements, disaggregated for countries



Note: scale = -2 Strong disagreement to +2 Strong agreement.

Finally we included a question about the organisational chart of another organisation. When DFID undertook its review of its own website and surveyed users about its use, the top use was not to find information but to find the right person to speak to! While finding the organisational chart may not have ranked as high on their use table as international research, it nevertheless is being sought out by policy actors.

6.4 Conclusions

In this section we have considered how policy actor value different sources of evidence. A little unsurprisingly they value international research more than local research. Value was considered through two key concepts – trust and relevance. Policy actors are more trusting of international research over and above local research. However when it comes to relevance, overall Ethiopian and Indian respondents felt that local research was as relevant as international research.

The findings suggest that the respondents are on average accessing more than a few times a month various forms of research. Given their trust of international research it is not surprising that they access international research more than local research. However, it is important to note that the average scores for accessing local research from universities are around 1.5 suggesting the research is accessed a few times in the last 3 months. Locally produced civil society data and desk based summaries of government policies are accessed more frequently than local university research.

Commercial research is not valued highly and this shows in it being accessed perhaps once in the last 3 months. This seems to be an issue of source – qualitative data suggests it is not a trusted source and that it will be biased information.

6.5 Implications for intermediary work

Intermediaries are seeking to enable policy actors to access and use a diversity of evidence to inform their decision-making. This evidence may be formal research, or it may even be

opinions (We have seen in the previous chapters that vernacular radio is valued as a source of public opinion – evidence of public preferences).

So how then do we address the value, the trust and relevance, that policy actors assign to certain origins of research. We can see that useful data like NGO surveys, and desk summaries of government policies, are accessed relatively frequently. This suggests it is the utility of the information that encourages frequent access. How can we make our research intermediation focus on usefulness to policy actors?

In other qualitative data, policy actors do not want to be told what to do. They require access to information but not if it seems to be telling them how to do their job.

7 Evidence, persistence and satisfaction

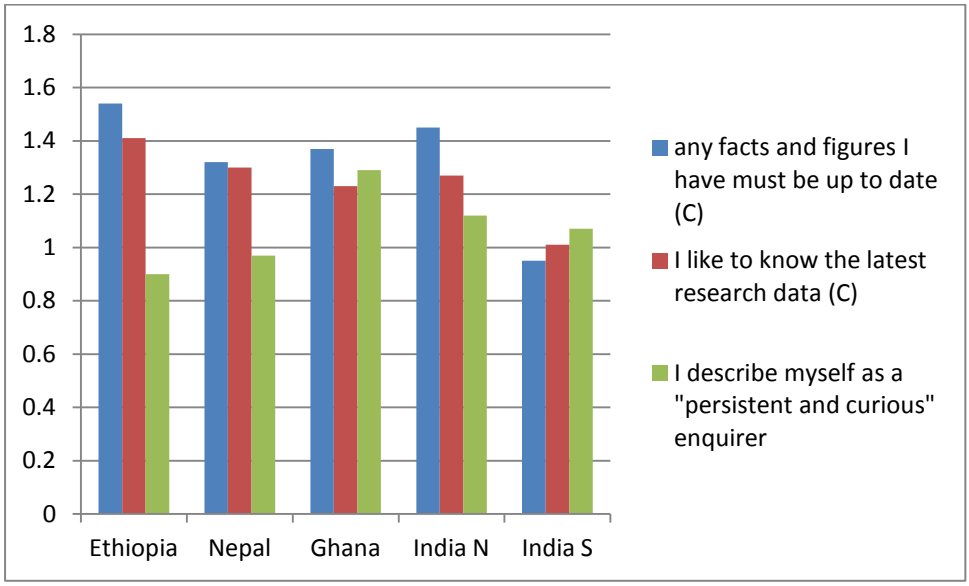
7.1 What does the survey tell us about the demand for 'evidence' (facts and figures)?

The study was designed primarily to gain insights into the information ecosystem of policy actors. Although not its primary intention researchers considered whether the study might show some insight into the perennial question of 'demand for evidence' or demand for research. The literature suggests that demand for research can be very context specific. There are documented differences between sectors, with the health and education sectors tending to use research for policy changes more than some other sectors. There is also some evidence that the political economy is one of the strongest factors, and that research and evidence is only used when it fits the political context.

We have already documented above the use of key research products such as Systematic reviews and desk summaries.

To investigate further the nuances of context for each respondent would not have been possible in this study. The study was focused on the information landscape. However, there were four specific questions relating to demand for 'facts and figures'. These questions were related to each other and a factor analysis showed their links with each other. By using two of these variables as the predictor variable we are able to explore the landscape in the light of demand for facts and figures.

Figure 7.1 Average agreement with statements, disaggregated for countries



Note: scale = -2 Strong disagreement to +2 Strong agreement.

While there are significant differences between the countries, in general we can see an overall agreement with the statements. Using these as a predictor variable we reduced the 5-point likert scale of agreement to a bipolar agree disagree variable, and used a Spearmans analysis to bring up significant differences on other variables.

Regarding the demand for facts and figures, there were significant differences between those who had the new tablet and e-reader equipment and those who didn't, those who had mobile wireless broadband, and those who accessed Twitter. Their current access to Twitter was reinforced by their more positive attitudes in the TOPB model towards Twitter. While they did not have a significantly increased intention to use Twitter, they did have significantly more positive attitudes. These findings seem to indicate that policy actors who are more fact and figure orientated are also more likely to be early adopters of new technology and new services that will provide them with those facts and figures. It also suggests that knowledge intermediaries should adopt Twitter as this is likely to reach policy actors who have a demand for facts and figures.

Those who agreed they need timely facts and figures also indicated that they spend a lot of time reading briefs given to them. This should be considered in the light of the wider analysis that suggests policy actors are spending less time reading briefs given to them, and are searching for information on their own. This change in behaviour is closely linked with connectivity and access to information systems. Given that we have established above that those concerned with facts and figures are likely to be early adopters, it seems to suggest that perhaps those more concerned with facts and figures are specifically still asking others to do the detailed work because they need accuracy.

Those who like to know the latest research data have significantly different responses for what type of information they have accessed in the last three months. They have significantly more use for government policy statements, Systematic Reviews created by researchers, Research produced by the universities of my country, International research on my subject area, Journal papers and Research produced by International Donors (eg UNDP or World Bank). These are the types of information that are associated with high quality research. From this cluster of types of information it is worth noting that they do NOT have a significantly different use of other types of information which have been characterised as having lower trust among policy actors. That is Research produced by commercial marketing companies, national, local or NGO survey data (for my subject area), the

organisational chart of another organisation, and desk based summaries of policies produced by the government. This latter one is interesting in the light of their greater use of assistants, and reinforces the idea (derived from qualitative data) that they are commissioning their assistants to undertake specific pieces of work (as opposed to reading generic summaries).

The two variables have significantly different responses regarding some aspects of the media, in particular radio. Those who need facts and figures tend to agree significantly more that vernacular radio stations are indispensable for gauging mood; while those who like to know the latest research data have a significantly more positive attitude to the online audio response: 'Listening to live radio means that I sometimes find interesting information unexpectedly'.

Those focused on their facts and figures show a significantly higher disagreement to the control belief 'I am already suffering from information overload' and a higher agreement to 'I can communicate more clearly using electronic media.'

What is also interesting is the lack of significant differences across other variables. Across all other variables no others show. This suggests that those who do demand timely facts and figures do NOT surf the internet more, or have smartphones, or access particular websites or journals, etc. Their overall behaviour in the information landscape is relatively similar to other policy actors in that landscape – i.e. demand for facts and figures is NOT a driver of information-seeking behaviour. (With the slight exception of early adoption cited above and the focus on the quality of types of research publications).

7.1.1 Conclusion for this section

The findings suggest that those policy actors focused on facts and figures and getting the latest research are early adopters of technology and new information services. Twitter features strongly and would suggest that communicators of research should embrace the art of tweeting.

The findings also suggest that those focused on facts and figures do indeed source the higher quality research publications such as journals and systematic reviews. Branding is perhaps important since research published internationally and by donors is increasingly used. In terms of local research, while local research is generally not as valued as international research, those who focus on fact and figures do appreciate research from their local university more than their policy actor colleagues.

Those focused on facts and figures do have slightly more disposition towards radio, so it is worth knowledge intermediaries engaging with local radio about local and international research.

Finally we conclude that apart from the Twitter link and the focus on quality research highlighted, the general information-seeking behaviour of policy actors who have a higher demand for facts and figures and for timely research, is actually not particularly different from their peer group. Knowledge intermediaries using the new services will likely reach the policy actors as a whole, and will not be targeting their information towards those actors who have a higher demand for evidence.

7.2 What does the survey tell us about the demand for 'information'? (Are policy actors persistent?)

When we broaden the question to focus not just on facts and figures, but to ask do those who actively seek information have particular characteristics that are significantly different from those who are more passive seekers, we find considerably more differences. Persistence is strongly linked with early adoption of technology. It shows a link on our four key early adoption variables, and on ownership of laptops, e-readers, tablets, etc. Persistent enquirers are more likely to already be using instant messaging, and have more positive attitudes towards the new services.

While they disagree with the statement 'I go to a library regularly', they disagree with it less than the non-persistent respondents. They are more likely to pay for online journals, and they are less likely to read articles on the screen. They will tend to identify information directly, i.e. not through an assistant, and they are less likely to read desk based summaries of policies.

In terms of the type of information sought, they are more likely to draw on commercial funded research and seek organisational charts, but on the whole they are indistinguishable from their non-persistent colleagues.

They are less critical of the media in how it covers development although they disagree that newspapers are the most important news source. They regard local research in higher esteem than their colleagues and are more likely to use informal networks to discuss proposals.

Active seekers of information then, who are not focused necessarily on facts and figures or research evidence, do have some distinguishing characteristics, but few of them lead to any particular implication for knowledge intermediaries. In the main they are early adopters of technology and new services, and this shows that providers of research on innovative platforms may find an audience in a subset of policy actors who are 'persistent and curious enquirers'.

7.3 Does technology lead to information satisfaction?

There is a significant difference between those who agree that 'I am satisfied that I have access to the information that I need' on almost 60% of the technology-related variables. These satisfied people are much more likely to have access to technology and connectivity, to be early adopters of the latest technology and to have explored the new services. They have more positive attitudes towards new services, and they have less negative attitudes towards the control beliefs.

As one might expect they are more likely to surf the internet directly than ask an assistant to do so. Oddly, they are less likely to have used quality research products such as journals or international research, than their less satisfied colleagues. Additionally, they do not use as much lower quality research, such as NGO data.

They are more likely to have heard of the larger internet search engines, but also of specific development portals.

Their demand for facts and figures is indistinguishable from their less satisfied colleagues, as is the trust in the various origins of research and in the media with the one exception that they feel significantly more strongly that media fails to cover development issues constructively.

7.4 Do policy actors use libraries?

Two direct questions were asked about the respondents' use of libraries. There was overall agreement with the idea that they no longer need to go to the library. Need is a defining word in this response, and potentially they could accept they don't need to go, but might still choose to go. The follow-up question asked if they went regularly. Here we see a general disagreement to the statement – i.e. they do not go regularly. While there are significant differences when disaggregating by country and institution, nevertheless as figures 7.2 and 7.3 show, these are difference in the strength of the agreement and disagreement for the two statements and it is not an actual difference of opinion.

Is there anything in the data that unpacks this diminishing use of libraries? We did not seek to identify what library they had in mind when answering the question – it could have been an institutional library or public.

Those involved with policymaking had significantly less strength to their agreement that they no longer go to the library, but nevertheless still agreed. They and researchers disagreed less strongly to the second statement, but still disagreed. Knowledge brokers actually agreed more strongly that they didn't go to libraries.

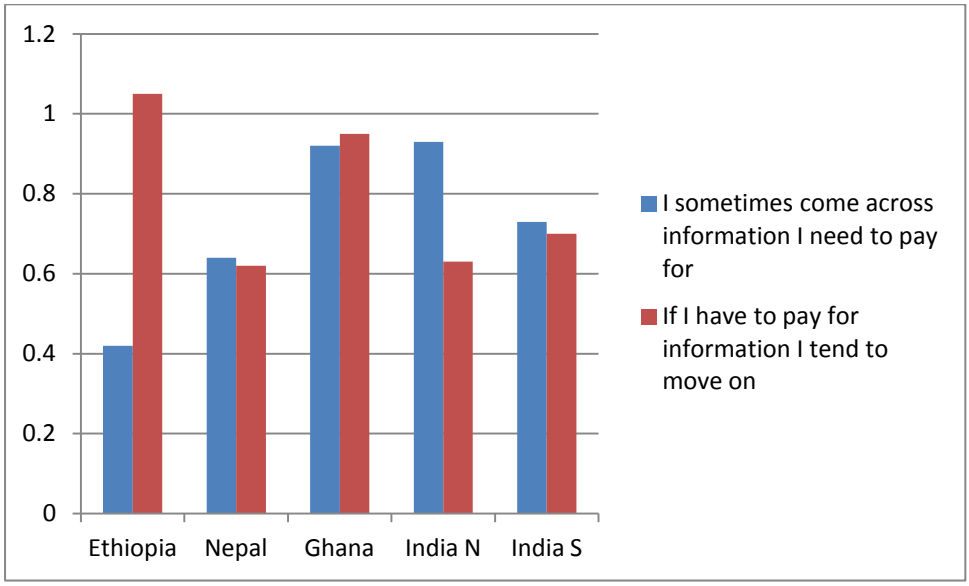
Elsewhere in the study we have seen that persistent enquirers do not prefer libraries but are early adopters of technology, and yet there are no significant differences between early adopters' statements about the library. Persistent enquirers disagree slightly less that they go regularly to libraries – but once again the means are well into the disagreement scale. In brief, there is a very consistent agreement that policy actors no longer need to go to the library and that they do not go regularly to the library. There are no subsets within our study that have an identifiably greater avoidance of libraries, and the low use of libraries seems to a part of the information-seeking landscape.

7.5 Are policy actors cost sensitive regarding research information?

Are non-open journals a deterrent to getting information? (implying that open journals would be good)?

In the graph below we see that the sample does sometimes come across information that requires payment, and that when that happens the respondents tend to move on. While there are significant differences between the countries, these are of the strength of agreement with these two statements rather than a difference of actual opinion.

Figure 7.2 Average agreement with statements, disaggregated for executive responsibility

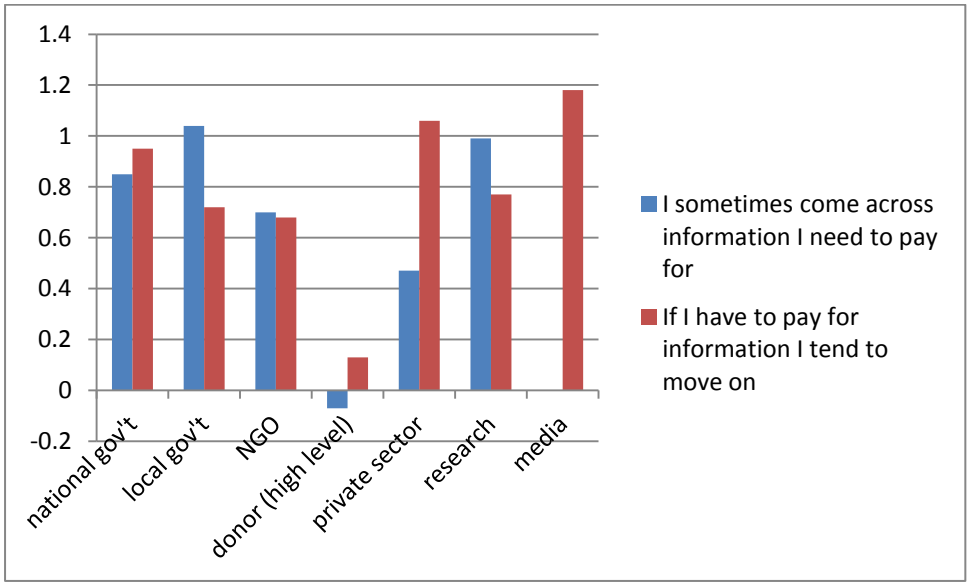


Note: scale = -2 Strong disagreement to +2 Strong agreement.

One might assume that those countries with lower GDP would be more likely to resist paying for information. This does not seem to be true. While Ethiopia does indeed resist payment, the respondents from Nepal are remarkably accepting, more accepting than their Indian counterparts. From qualitative data the willingness to pay seems more connected to the prevailing culture than proportion of GDP (Culture – formality of information flows, availability of alternatives, value assigned to scientific evidence).

When considering the disaggregation of the data by institution we can see that donors across the whole sample do not agree that they come across information that needs payment, and therefore they also tend not to agree with the idea that they come across the need for payment and move on.

Figure 7.3 Average agreement with statements, disaggregated for executive responsibility



Note: scale = -2 Strong disagreement to +2 Strong agreement.

This seems to us an important finding. Donors are insulated from the need to pay for information by their institutions, and therefore they may not appreciate how big a stumbling block this is to researchers and policy actors.

Self-identified policymakers and researchers also significantly agree more that they come across information requiring payment, however they do not have a significantly greater agreement to the idea that they move on and avoid payment – the implication being that although they more often come across the need for payment.

Early adopters do not show significantly different scores on these variables, nor do those focused on facts and figures. Only the persistent show significantly different scoring, and that is to agree more that they come across information requiring payment, and agree less that they do not pay. That is, persistent enquirers have a slightly greater propensity to pay for information.

7.6 Do people prefer to print out or read on screen?

We sought to identify if policy actors printed out items before reading them, or whether they would read an item on a computer screen as easily as if given a printed brief.

Although perhaps not obvious we see a faint reflection of the patterns we have seen according to the country descriptors. Consider first the printing before reading. The more formal countries (Ethiopia, Nepal and North India) agree they like to print. While Nepal is significantly higher than Ethiopia, this seems consistent with their use of technology and the costs associated by technology. Printing for Ethiopians is a significant expense. It is also consistent with other data that Ghanaians prefer aural information, are technically savvy (given their connectivity and GDP) and cost conscious. Therefore they resist printing. South India as the highest ranking area for IDI, Governance indicators and GDP, can afford printing but choose not to because of their familiarity with technology.

Ethiopia preferring to read on screen than generate unnecessary cost, Nepal being formal and less technically connected, Ghana being technically savvy, North India more bureaucratic than South India. What initially looks like a disconnected response is entirely consistent with the picture we have built up with other data.

Such responses also carry over into our disaggregation of this data by institution. Government actors would be less likely to be cost conscious than say the private sector. They are also less technically familiar. The media, which deals with a lot of information, is averse to printing it all out.

There are no significant differences between those with executive responsibility. Early adopters unsurprisingly show a significantly greater comfort with not printing out and reading information on the screen. A little surprisingly, persistent enquirers are significantly less comfortable reading on the screen – one might expect the opposite.

7.7 What is the influence of children on policy actors?

Research from developed countries suggests that where adult households have children, there is a greater use of technology by the adults. Likewise the research goes on to suggest that where adults allow their children to use their equipment, they learn and use a greater variety of new services and software. To test whether this effect might be happening with the policy actors' information behaviour, we asked every respondent whether they had children and whether they allowed the children to use their cellphone. We assumed that use of the internet through a PC would be allowed with parental restrictions and that this would

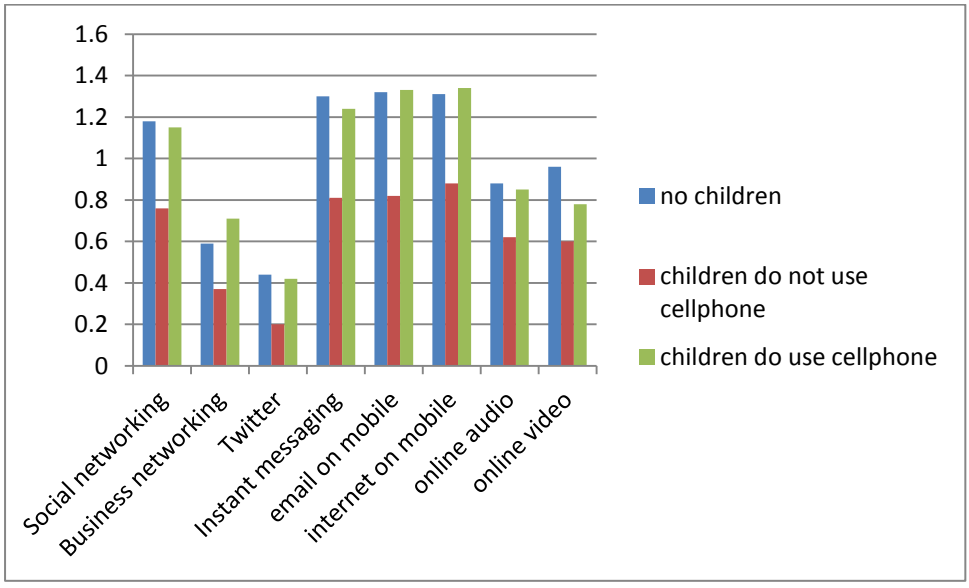
be unlikely to change behaviour. However, the smartphones have new intuitive ways of handling software, and download of 'apps' might be done by children and then used by the adults.[19]

The idea that having children may encourage computers at home is strongly supported by the data. Desktop computer, an iPod or MP3 players and game consoles are significantly more likely to be in the home if there are children. However the difference between letting the children use the cellphone and not is a defining characteristic for some variables.

Policy actors who allow their children to play with their cellphone are significantly more likely to have a BlackBerry phone and to have mobile wireless broadband. However there is no clarity of cause and effect here – it may be that those with a BlackBerry might be more inclined to let their children play with their phone.

The hypothesis was that those with children and who let them use their phones would be likely to be more adventurous with their cellphone – to do things like record a video or play a game. However as the graph shows, while those who allow their children to play with their phone consistently undertake the more adventurous actions themselves, they are not significantly more adventurous than those who don't have children.
We can surmise that age is a key factor in this result. It would not be unreasonable to assume that those policy actors without children have an average age less than those with children of an age that they might play with costly technology that is important to the policy actor. We know from all studies that the younger adult is more adventurous with technology than the older adult. In our study given that we were working with respondents who were professional and senior we did not seek to identify the age of the respondent.
If we disaggregate the data for those with children only, then across all the wider use of cellphone variables, those who let their children play with their phones are significantly higher in their own use of the services. This pattern holds true for the intention to use the new services explored in detail in the section on TOPB.

Figure 7.4 Average agreement with use of new services, disaggregated for whether children are allowed to use the cellphone



Of those who have children, it is those who allow them to explore their cellphone who have a more positive mean attitude towards the new services and a higher intention. However the

[19] I fully admit that I play angry birds because it was first downloaded for me by my teenagers.

intention of the ‘with children and allow them to play’ group is almost identical to the no children group. Again we hypothesise that this is because of the average age of the no children group – but we have no evidence to back this up.
The hypothesis that if you allow your children to play with your cellphone you are more likely to explore new services more quickly than those who don’t let their children play with the technology is confirmed. However, we cannot say for sure whether having children and letting them play encourages a more positive attitude and behaviour towards new services than those without children.

8 Future use of new ICT services

In the introduction, we made reference to the Theory of Planned Behaviour. This psychosocial construct gives some insight into the likelihood that behaviour might change. It looks at the attitudinal, social referent and control factors that might be drivers and barriers to an intention to behave in a particular way. In this case we constructed the survey with the model in mind, in order to determine if policy actors are likely to take up the emerging new services.

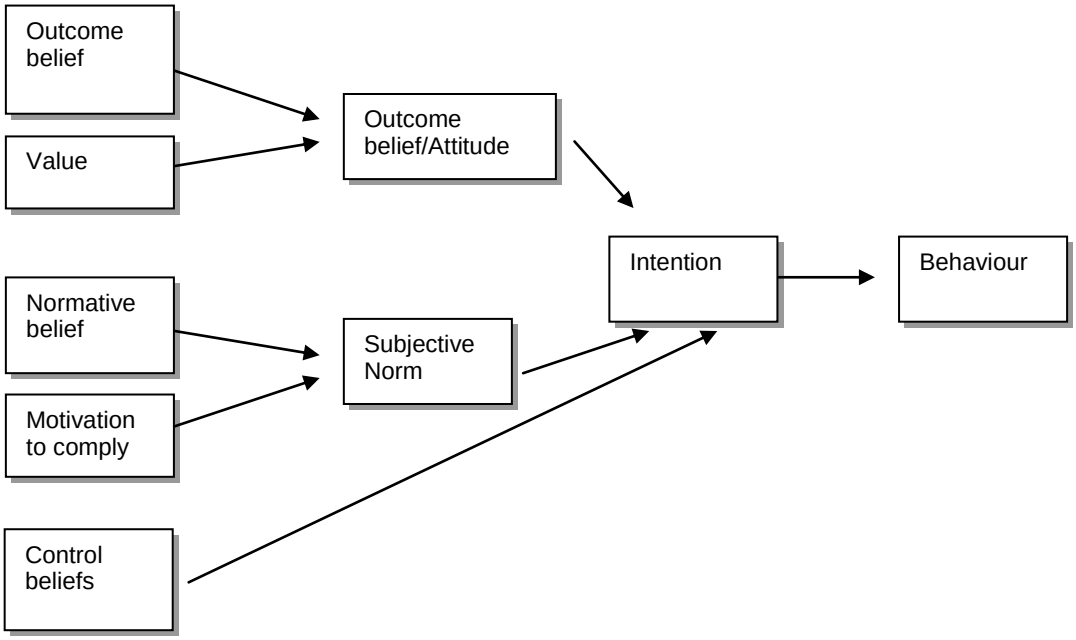
‘In psychology, the theory of planned behaviour is a theory about the link between attitudes and behaviour. It was proposed by Icek Ajzen as an extension of the theory of reasoned action. It is one of the most predictive persuasion theories. It has been applied to studies of the relations among beliefs, attitudes, behavioural intentions and behaviours in various fields such as advertising, public relations, advertising campaigns and healthcare.’ Wikipedia accessed 30/1/2012. The researchers have experience of applying the model to environmental and developmental concerns in Africa and Asia (livelihoods, energy, ICT and HIV).

Through the qualitative and pilot data, the final survey explored the TOPB model around 6 new services that may have a reasonable impact on policy actors’ communication landscape:

- Social and business online networking;
- Twitter;
- Instant messaging;
- Email and internet by smartphone;
- Audio on demand (internet);
- Video on demand (Internet).

The Theory of Planned Behaviour presents the following model:

Figure 8.1 The Theory of Planned Behaviour model by Icek Ajzen



By asking specific attitudinal questions, and linking these responses to the responses about social referents and control factors, the researcher can gain an idea of whether the intention to use the service is being strengthened and whether it is likely to turn into behaviour. In our case here, we are seeking insight into whether policy actor may take up new services, and therefore whether investment by knowledge intermediaries should focus on these new channels.

The data and analytical tables for the following section are available on request.

8.1 Social and business networking

We do not need to comment on the rise of the social network. In the last few years the way people use the internet has changed, and Facebook is now said to be competing against Google for being the focal point for people finding information on the internet.

If policy actors' use of technology is comparable with the mean use by households in the US and Europe, are they also adopting social networking?

In the qualitative and pilot studies, an early finding was that Facebook is considered a personal space for friends and family, while LinkedIn was said to be the networking site for business. Therefore in the larger study, the questions differentiated between Facebook and LinkedIn.

In the data we see that the mean response is generally positive or neutral. We see an agreement that Facebook is a good way of sharing information with personal contacts, and despite the early findings about the difference between LinkedIn and Facebook, we find a slightly lower agreement that LinkedIn is good for sharing information with contacts. This is difficult to unpack since Facebook is the more widely known network and has almost ten times as many subscribers as LinkedIn. Those agreeing may be making assumptions about personal use and penetration of a network which may not be accurate. Qualitative data suggests that people think that information posted on Facebook is more likely to reach people beyond their personal network – even though LinkedIn has many of the features of Facebook.

What is clear is the positive attitude towards the social networking sites. The TOPB model asks the respondent to say whether they consider their beliefs about social networking to be of any value,[20] and in this case the rating is very high.

The TOPB model weights the beliefs with the value assigned to that belief. Attitudes have been calculated as the product of belief statements and the associated value score. Mean attitude scores indicate that overall, on the basis of the limited number of indicators included, respondents were positively disposed towards audio and social networking, but had somewhat neutral views on the other technologies.

- Networking is viewed as a good means of sharing information.

Given such positive weighted attitude, is it therefore likely that policy actors will increase their use of social networking over the coming year?

There is a positive intention to use social networking, but also instant messaging. A detailed analysis of the attitudes show that:

- Social networking – all attitudes act as drivers;
- Business networking – all attitudes act as drivers.

However, in the TOPB model two other sets of factors need to be considered before assuming positive attitude will translate into positive intentions. In some cases the opinion of Social referents may override the positive attitude.[21]

While the TOPB ideally asks for the social referent position on each individual action, i.e. each new service proposed, such disaggregation in the questionnaire was not possible. The questionnaire was already very long and exceeded the time most policy actors wished to give the study. As a compromise, we asked for social referent responses to new services per se. Overall, respondents felt that the range of social referents would approve of their use of new information services.

It can be seen from the data that intention to use the range of new services is strongly linked to the subjective norm i.e. perceived social pressure from social groups to use these services. A number of interesting features can be seen:

Intention to use social networking is linked not only to the opinions of friends, but also to the opinions of peers, indicating that people may use social networking for keeping in touch with people in other organisations.

In addition to the influence of social referents the link between attitude and intention can also be redirected by control factors. This is the key difference between the Theory of Reasoned Action and of Theory of Planned Behaviour. In 1985, Ajzen modified the earlier Theory of Reasoned Action proposed by Martin Fishbein and himself in 1975. The Control beliefs are an individual's beliefs about the presence of factors that may facilitate or impede performance of the behaviour.

In this case the control beliefs were derived from the qualitative interviews and the pilot data. Again, instead of asking a long series of opinions about each new service, the control factors were brought together in one module. Most of the control factors were perceptions about the

[20] One may believe something and assign not particular value to that belief. For instance I may believe that stars are far way but this may have no particular value to my life. On the other hand I believe the chair I am sitting in can hold my weight – this belief is quite valuable to me.
[21] I may believe that I would benefit from driving a sports car, but if my partner disapproves I may not act and buy a sports car.

devices that social networking might be on – particularly the rise of the smartphone. They also stated that connectivity might be an issue – see analysis of connectivity in previous chapters.

Overall, respondents appear to have rejected the view that applications are too complex to use. Poor network connectivity appeared to be mostly commonly regarded as a problem. Views on mobile phone screen size and costs were more or less neutral.

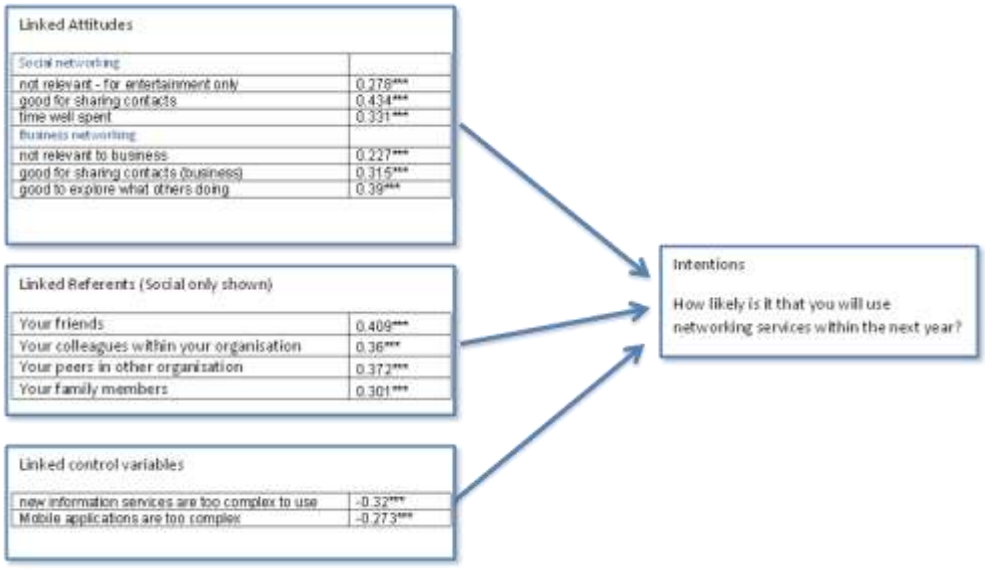
The relationships evident in the data show that cost of connectivity does not influence people's intention to use new services. Although there was a prevailing view that network connectivity was poor, it did not appear to be influencing intentions to use any of the new services, and in this case does not offset the positive attitudes to use social networks. Although mean scores indicate that respondents tended to disagree that applications are too complex, the consistent set of links evident in the data suggest that this can act as a barrier – people who feel they are too complex feel less inclined to use services.

8.2 Behaviour regarding social networking

The data confirms that expressed intentions are indeed linked to current use of services. Since there is a linkage between intention and current behaviour, we can use the TOPB model to confirm that policy actors will increasingly use social networking. Positive attitudes are reinforced by positive social referents, and the control factors do not impede the resulting intention.

Figure 8.2 presents the links between these variables, along with links evident with more specific indicators. Presenting links in this way often helps identify which set of factors are more influential in determining intentions, but this not clear from Figure 8.2. Whilst the simple statements suggest that personal attitudes are more influential than the views of others, links with detailed indicators suggest the subjective norm is more closely linked to intentions.

Figure 8.2 Theory of planned behaviour framework for networking - linking elements to intention (correlation coefficients)



8.3 Twitter

Closely connected to the development of social networks has been Twitter. This extraordinary service has blossomed in the last 12 months, and while it is not ubiquitous yet,

it has become a key part of business development in the USA and Europe. It provides insight into trending ideas, it is an invaluable advertising tool, and is closely linked with radio entertainment.

Twitter is newer than the mainstream social networks (and serves a different purpose from, say, Facebook), and at the time of the survey was very much emergent. Nevertheless about 50 per cent of the respondents knew what Twitter was.

There is a mild disagreement with the idea that Twitter isn't useful with self-expression, and with the issue of trust. There is very mild agreement that 'Twitter is good for sharing resources that are available on the internet'.

The value assigned to these statements is positive. This leads to calculated weighted attitudes, i.e. positive attitudes. Linking this to intention we find a lower intention to use Twitter than social networking.

Only use of tweets against users does not appear to be linked to intention. The intention to use of Twitter is also closely correlated with the positive attitudes to use social and business networking.

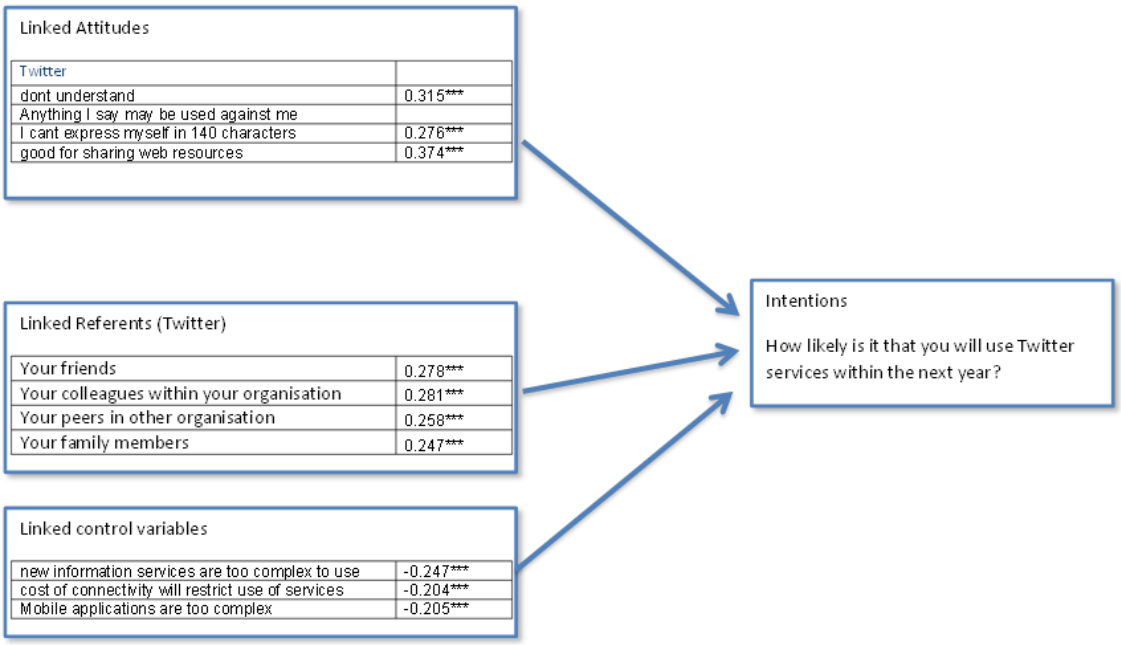
Given that we used a generalised set of questions for the social referents, we need only to see whether Twitter intention is correlated with the positive social referent responses. It is, indicating that social referents will support and drive the positive attitudinal intentions.

Similarly, are the control factors strong enough to dislodge this positive intention to use?

Here is our first indication that the intention to use Twitter might be derailed. Negative attachments are made with two complexity statements and the cost of connectivity. This is fascinating in the light of what Twitter actually is! Since it uses 140 characters, its use of bandwidth is lower, and shall we say more disciplined than, say, the use of email. Cost is very unlikely to be a practical problem, and yet at the moment it is a barrier in the minds of the respondents. Having said this, qualitatively the statements about cost were linked with the ideas of information overload – too many tweets. Similarly, the idea that tweeting is complex does not line up with the data that suggests many of the respondents are able to surf the net and upload video, etc. In comparison tweeting is easy, although respondents currently think it may be complex. The discontinuity between the stated opinions and the actual practicalities suggests that these control factors will change very quickly once Twitter becomes more ubiquitous. Even as it is the control factors are not really strong enough to derail the intention to use Twitter.

Indeed as the data shows there is a linkage between intention and use, and so we may reasonably expect a strong uptake of Twitter among policy actors over the next year.

Figure 8.3 Theory of planned behaviour framework for Twitter - linking elements to intention (correlation coefficients)



8.4 Instant messaging

Instant messaging is gaining ground on mobile phones as well as laptop and desktop computers. For the mobile it can offer a cheaper way of sending messages, and the explosive use of Mxit in South Africa has shown its potential among the public. Instant messaging among professionals is less well documented, and so we have explored using the TOPB whether it has a role in the policy actors' communication landscape.

From the qualitative data one of the main uses (benefits) of IM were to chat while doing something else. This was offset by comments about how tedious it is to wait for IM returns, and people noted that they rarely used IM with people they don't know. This is a potentially interesting arena for knowledge intermediaries. Businesses such as Dell Computers for instance, are increasingly offering IM to assist with sales. One could imagine a knowledge intermediary service that also offered direct help via chat. While some people find this helpful others feel uncomfortable using such services.

The core beliefs and their mean scores were as one might expect, and these beliefs were given a relatively high value score.

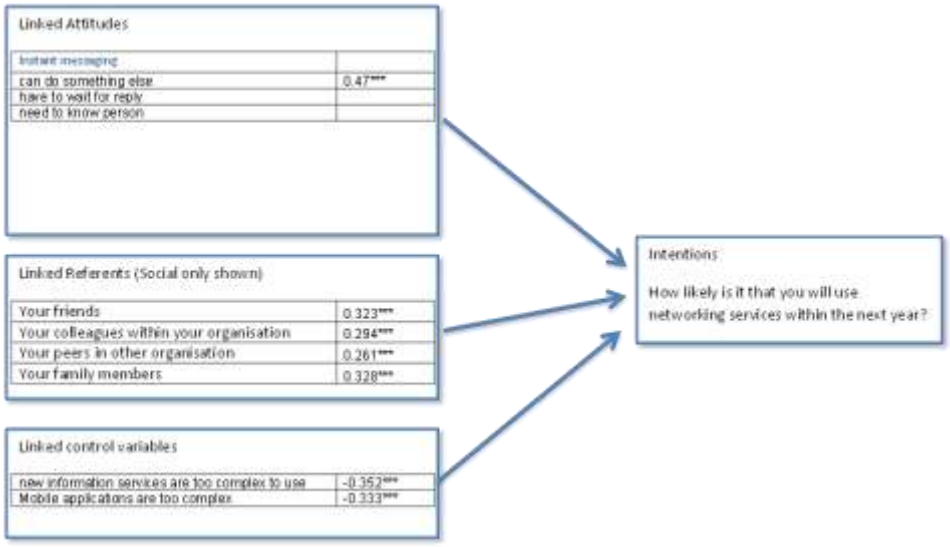
The data suggests that the use of instant messaging is restricted by the need to know the other person.

Lining this up with intention we find that only the ability to do something else acts as a driver.

Again we have the positive social reference, and again we have the same control factors. Here we find that social reference is a positive driving force, and may overcome the indifferent attitudes. Intention to use instant messaging appears driven by opinions of friends and family.

Once again the idea of complexity is what may potentially hold people back and lower their intention to use. However as with many of the other services, use does follow intention to use.

Figure 8.4 Theory of planned behaviour framework for instant messaging - linking elements to intention (correlation coefficients)



8.5 Smartphone use

We have noted in Section 1, that about 40 per cent of respondents have smartphones. We also noted that remarkably high proportion of these know how to use the smartphone. In this section we use the TOPB model to ask whether across the whole sample there is an intention to use smartphones particularly for collecting emails and looking at the internet.

We find overall there are positive attitudes towards collecting emails and internet over smartphones. This is given as a negative mean for the negative statements.

The respondents assign a relatively high value to these beliefs, resulting in strong calculated attitudes.

The appeal of smartphones is in the ability to get emails and access the internet at any time, but navigation using a small screen is clearly a constraining factor.

As we can see from the data, all attitudes act as drivers for Mobile email. For Mobile internet the concern about the difficulty in navigating and moving around pages does not act as a barrier, and finding timely information is a driver.

Strong positive intentions to use mobile email and internet suggest rapid uptake of smartphones.

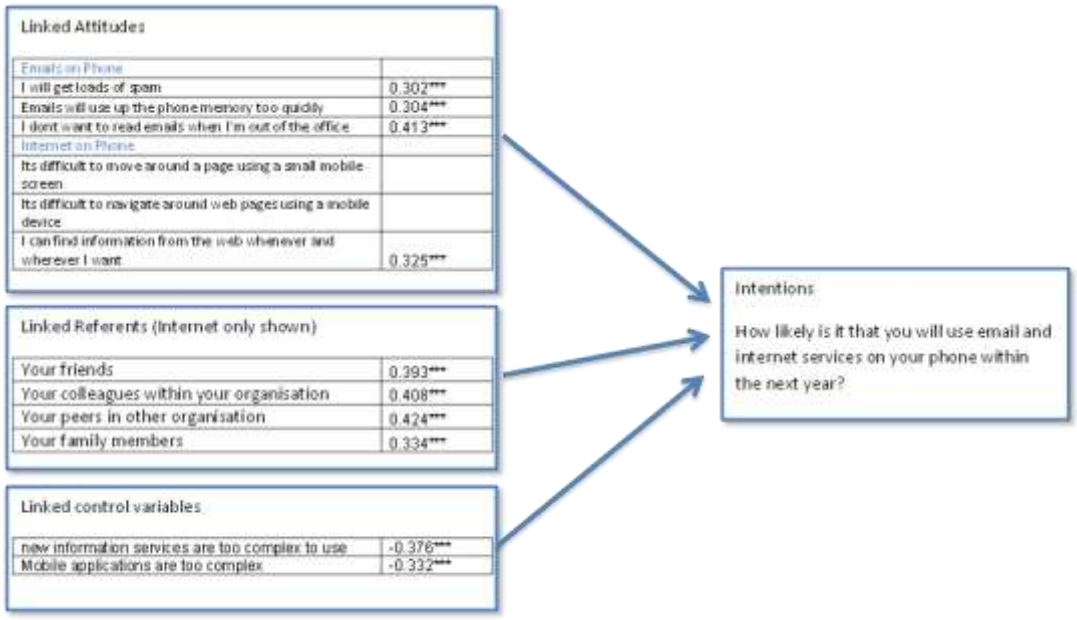
Regarding the social referents, Intention to use smartphones appears most strongly linked to opinions of peers, suggesting that there is a status issue (note that links, although still strong, are weakest for opinions of family members).

Perhaps surprisingly the control factors once again show complexity as a weak barrier. Cost of connectivity does not seem to be a factor. Although there was a prevailing view that network connectivity was poor, it did not appear to be influencing intentions to use new services. Interestingly, in slight contradiction to the above attitudes, views on the size of

mobile screens on mobiles did not appear to influence intention to use services, even internet on mobile.

And in terms of intention to actual use, we find positive correlations.

Figure 8.5 Theory of planned behaviour framework for smartphone use – linking elements to intention (correlation coefficients)



8.6 Audio online

In other chapters we have seen that radio is a strong contender as a source of local information for policy actors. A mixed response showed that some policy actors do rely on talk shows to gain local news about their sector. In a more positive response across the whole sample, vernacular radio was said to be good for gauging the mood of the public about policies.

So as we move towards podcasts, online repeats of radio stations, and on demand music, how might policy actors respond to online audio?

The AudienceScapes work suggested that many policy actors listened to radio while in the car in traffic. The positive attitude found towards listening while travelling seems to support this even though it was not a universal trait across the whole sample. The strong attitude towards listening to live radio supports the serendipitous nature of radio information as discussed in the previous chapter. Respondents were keen on being able to find information by chance on the radio.

Again a high value was assigned to these beliefs: this leads to positive calculated attitudinal values.

In the case of internet audio, both user controlled listening and finding information by chance act as drivers.

Links between intention to use new services and attitudes (correlation coefficients)
As in many of the other services, the social referents are encouraging and supporting the use of the service.

And once again it is only complexity that influences from the control factors.

8.7 Video online

Although users are familiar with audio on the radio, and the new services mean that they can access radio on demand potentially enhancing their experience, some users might be less familiar with the changes in video. TV is a strong means of identifying information as discussed in a previous chapter, and in many countries TV challenges radio for frequency of use. Most policy actors would be familiar with DVD and timeshifting television (although we did not check this assumption).

However in the last couple of years online video has changed the way some younger people undertake their nightly viewing. Video online enables younger people in the USA and Europe to watch television programmes when they want, often without having to pre-record them. Sites such as YouTube have created a new phenomenon – the short 3 minute amateur video. These can be serious or light hearted and can have 100 million views or more, or have less than 20 views. Video has become used in the way a webpage might be used – to store information, to communicate with the masses or to communicate with the few.

As connectivity improves, online access to these video repositories will be opened up to policy actors. In our qualitative data we found that video can be considered a waste of time, for example policy actors who are used to speed reading documents find the time taken to watch a video distasteful. In contrast, we also found people who thought they were a great way of learning – if a picture is a thousand words then a video is potentially a thousand pictures. Testing these attitudes across our respondents we find:

There is reasonably strong agreement with the idea that videos are a good way of learning, but a neutral response to whether they 'go too slow' and therefore overall a mild agreement to the idea that they end up wasting time. These beliefs are allocated a strong value, and therefore the calculated attitudes are relatively strong.

While respondents were concerned about their ability to waste time accessing video on the internet, they also acknowledged the use of them for learning. The comparable strengths of these two opposing opinions are clarified when we consider their intention to use. The use of video for learning is a driver.

Once again the social referents support this drive forward, and only the control factors of complexity affect the model.

The data confirms that expressed intentions are indeed linked to current use of services.

8.8 New services as a whole

On the whole, attitudes concerning a range of new technologies were positive or neutral. It is interesting to note that respondents tend to feel that they could communicate more clearly using electronic media and they felt that they could communicate better face-to-face - these appear contradictory points of view.

The mean value scores indicate that respondents regarded social networking and smartphones as most important (and relevant to their work), and Twitter as least relevant.

Attitudes have been calculated as the product of belief statements and the associated value score. Note that where belief statements tend to detract from increased use of the technology, the sense of the attitude has been reversed – this enables results to be easily

interpreted i.e. positive scores support adoption of the technology. Mean attitude scores indicate that overall, on the basis of the limited number of indicators included, respondents were positively disposed towards audio and social networking, but had somewhat neutral views on the other technologies.

Interesting points evident from the data include:

- Networking is viewed as a good means of sharing information;
- Use of instant messaging is restricted by the need to know the other person;
- The appeal of smartphones is in the ability to get emails and access the internet at any time, but navigation using a small screen is clearly a constraining factor;
- Respondents were keen on being able to find information by chance on the radio;
- Respondents were concerned about their ability to waste time accessing video on the internet.

8.8.1 Intentions and attitudes

Responses to direct questions on intention to use a range of services show a positive intention to use all services.

- Strong positive intentions to use mobile email and internet suggest rapid uptake of smartphones;
- There is a positive intention to use social networking, but also instant messaging;
- There is little difference in intention to use the internet for audio and video.

A detailed analysis highlights specific attitudes that are linked to intention to use services, and, therefore, appear to be acting as barriers or drivers:

- Social networking – all attitudes act as drivers;
- Business networking – all attitudes act as drivers;
- Twitter – only use of tweets against users does not appear to be linked to intention;
- Instant messaging – only the ability to do something else acts as a driver;
- Mobile email - all attitudes act as drivers;
- Mobile internet – difficulty in navigating and moving around pages do not act as barriers;
- Internet audio – both user controlled listening and finding information by chance act as drivers;
- Internet video – only the use of video tutorials acts as a driver.

8.8.2 Intentions and social referents

Overall, respondents felt that the range of social referents would approve of their use of new information services.

It can be seen that intention to use the range of new services is strongly linked to the subjective norm i.e. perceived social pressure from social groups to use these services. A number of interesting features can be seen:

- Intention to use social networking is linked not only to the opinions of friends, but also to the opinions of peers, indicating that people may use social networking for keeping in touch with people in other organisations;
- Intention to use instant messaging appears driven by opinions of friends and family;
- Intention to use smartphones appears most strongly linked to opinions of peers, suggesting that there is a status issue (note that links, although still strong, are weakest for opinions of family members).

8.8.3 Intentions and control factors

Overall, respondents appear to have rejected the view that applications are too complex to use. Poor network connectivity appeared to be mostly commonly regarded as a problem. Views on mobile phone screen size and costs were more or less neutral.

The relationships evident show that cost of connectivity does not influence people's intention to use new services. Although there was a prevailing view that network connectivity was poor, it did not appear to be influencing intentions to use new services. Interestingly, views on the size of mobile screens on mobiles did not appear to influence intention to use services, even internet on mobile.

Although mean scores indicate that respondents tended to disagree that applications are too complex, the consistent set of links evident suggest that this can act as a barrier – people who feel they are too complex feel less inclined to use services.

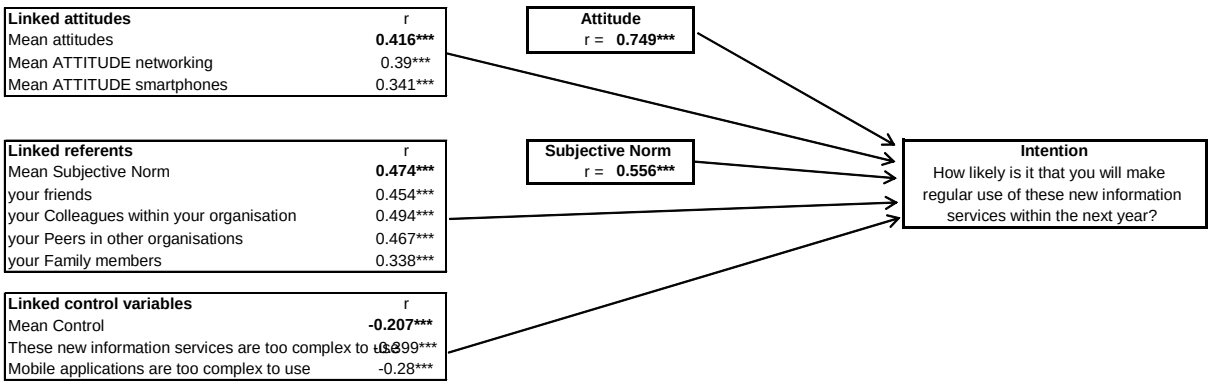
8.8.4 Intentions and use

The data confirms that expressed intentions are indeed linked to current use of services. Note that intention to use instant messaging appears to relate to internet IM, not on mobile phones.

8.8.5 Theory of planned behaviour framework

The questionnaire included generic statements on intention to use new information services, attitude towards services, and perceptions on how social referents would feel about the respondent's use of services. Figure 8.6 presents the links between these variables, along with links evident with more specific indicators. Presenting links in this way often helps identify which set of factors are more influential in determining intentions, but this not clear from Figure 8.6. Whilst the simple statements suggest that personal attitudes are more influential than the views of others, links with detailed indicators suggest the subjective norm is more closely linked to intentions.

Figure 8.6 Theory of planned behaviour framework – linking elements to intention (correlation coefficients)



8.9 Country differences in the new services

We have seen that in general positive attitudes are linked to a positive intention to use. There is a statistically valid difference between the responses from each country to nearly every attitudinal and intentional statement. However the analysis has not dug deep into this

level of detail. The graph below shows the mean attitudinal responses for each country and each new service.

In brief we can see that the response to Social networking seems tied once again to the country descriptors. In general those with poorer connectivity and GDP are most positive towards Social networking. This pattern holds for most of the other services with the exception of Ghana. Ghana is consistently more positive in its attitudes than one would expect given its IDI and GDP rank.

Similarly intentions are also distributed along the same pattern, with greater intentions being associated with lower connectivity, lower governance and low GDP. Again Ghana seems to be the exception with a very positive intention to use the new services. Where it gave a neutral mean attitude towards video online, it has an overall positive intention to use it.

Institutionally across the whole sample, only the mean attitude to video online is significantly different. For video the donors and private sector have mean attitude of – 0.2 and -0.18 respectively showing a very mild negative attitude. However when we consider intentions, both donor and private sector have positive intentions to use. Media organisations have a significantly higher intention to use across almost all the services, particularly Twitter, which doors again have an almost neutral intention to use.

Regarding executive responsibility, there are no significant differences across the groupings (for the whole sample for mean attitude), except with Twitter. Here the mean attitude is less among managers, and from qualitative data this may reflect that they do not feel the need to publicise their work. When we consider intentions, there are significant differences for business networking, email on phones, internet on phones and audio and video online, where it is the leadership that are the laggards and have a reduced intention to use.

Self-identified policymakers also have a significantly positive mean attitude towards Twitter (only), and Researchers towards instant messaging. For intentions, policymakers have a significantly lower intention to use IM, email on phone, internet on phone, audio and video online. This is perhaps consistent with the idea above that leaders are laggards in these services. Researchers do not have significant differences in intention for any service, although self-identified knowledge brokers do have a more positive intention for IM, email on phone and internet on phone.

For our three definitions of early adoption, all three have significantly more positive mean attitude towards Twitter, instant messaging and smartphones. For the other three services, only Audio online shows a significant difference on one of our three early adoption variables. While those who have an expressed demand for facts and figures show no significantly different mean attitude or intention towards the new services, those who listen to drive time radio have a significantly clearer intention to use all the new services even though they do not show a significantly different mean attitude.

9 Next steps

This working paper has been produced from approximately half the dataset. To gather data from senior actors takes time. A full dataset should be available soon, and a further analysis of the full data will be made available.

This preliminary analysis shed some light on the information ecosystem of the respondents. It has also raised interesting other questions that the full dataset may address. For instance one of the peer review team for this paper asks ‘I wonder how confident our policymakers are in dealing with the media’. The preliminary data has shown that policy actors distrust the traditional media questioning whether they report accurately. This suggests that further work

could be undertaken by knowledge intermediaries in building the capacity of the media to report accurately, build the policy actors capacity to communicate with the media and convening meetings between media and policy actors to create greater two way communication and a common discourse.

Other questions that have been raised include among others:

- How can we make our research intermediation focus on usefulness to policy actors?
- If as intermediaries we are concerned with representing diverse voices, what does the data suggest we can do?
- What does the data suggest about the information literacy and capability skills of the respondents – and how might the intermediary sector strengthen policy actors capacity?
- How could informal networks and online information sources be better marketed to reach to policy actors.

These and other questions will be explored in the subsequent analysis of the full dataset. We invite further feedback to this working paper and comments that might be assist and direct us in the full analysis.

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