



Digital Dividend Review Market Research 2007

Executive Summary

Research Document

Publication date: 28 November 2007

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Section 1

Introduction

Market research conducted in June 2006 was an input to our consultation on the Digital Dividend Review (DDR), published on 19 December 2006. This research helped to develop our understanding of consumer and citizen attitudes to potential uses of the digital dividend, from the perspective of value to both individuals and society. The report of this research was published alongside our proposals and is available at:

<http://www.ofcom.org.uk/consult/condocs/ddr/mktresearch/>.

Some stakeholders raised concerns with the 2006 research, detailed in the document linked to below. We listened carefully to the comments by stakeholders when planning further market research to be conducted in 2007. As part of the research design process we held a seminar on 22 May 2007 to share our proposals with stakeholders. The presentation slides shown at this event are available at:

<http://www.ofcom.org.uk/radiocomms/ddr/events>.

Stakeholder comments and suggestions at, and following, the seminar helped us to develop our approach.

Methodology

The research conducted in 2007 consisted of both **quantitative** and **qualitative** research.

The research was designed to assess consumer and citizen responses to six potential services that could use the digital dividend:

- extra standard-definition channels on Freeview;
- local TV on Freeview;
- High-definition (HD) channels on Freeview;
- wireless home networks;
- improved mobile phone and mobile broadband services¹; and
- mobile television

The **quantitative** research was a face-to-face survey of 1,999 UK citizens conducted for Ofcom by independent market research agency, Ipsos MORI.

We were interested in the opinions of a number of small population sub-groups, such as local TV viewers and HDTV subscribers. Since these groups represent only small proportions of the UK population, a standard UK survey sample would not include robust samples amongst these groups. To address this, additional booster interviews were conducted so that a robust measure of opinion could be obtained from these small, but important groups.

¹ By this we mean improved coverage and access for mobile services including mobile broadband.

Respondents in the quantitative research took part in a 25-minute structured face-to-face interview². The six service options researched were explained before attitudinal and behavioural questions were asked about each of them. Finally, respondents were asked to rank and rate the services' importance in terms of their own personal preference and from the point of view of what they felt best for UK society as a whole.

The **qualitative** research consisted of five deliberative workshops among UK citizens from London, the South East, Manchester and Glasgow. Participants were recruited to be representative of the UK in terms of age, gender and social group. We also ensured representation from rural areas by recruiting respondents to travel from different areas to the workshop venues. The groups were made up of participants with a mix of current technology ownership and in Manchester we ensured participation from viewers of the local TV service, Channel M. The workshops were conducted for Ofcom by independent market research agency, Opinion Leader Research.

The workshops lasted a full day and each had over 20 participants. During the course of the day, participants were shown demonstrations of the services, and took part in detailed group discussions on each of the services, considering how they could be valuable to consumers and to UK society.

Workshop participants were asked to rank the six services in order of importance to themselves as consumers and to UK society as a whole. This exercise was conducted four times in each group, at different points in the day.

Full details of the methodology are shown in Section 5.

Input to the DDR

The market research is one of five sources of evidence used in the DDR, alongside technical research, evidence submitted by stakeholders in their consultation responses, economic modelling, and secondary sources – we commissioned academic research on social value and since the consultation we have carried out a review of similar literature in this field.

There are, of course, limitations involved in any research, which we recognise. Ofcom considers the research methodologies adopted to be appropriate and as robust as reasonably possible, given these limitations. The specific limitations we have identified are discussed in Section 5.

Ofcom will publish a statement on its approach to awarding the digital dividend by the end of the year.

² Some of the booster interviews amongst hard to reach groups were conducted online.

Section 2

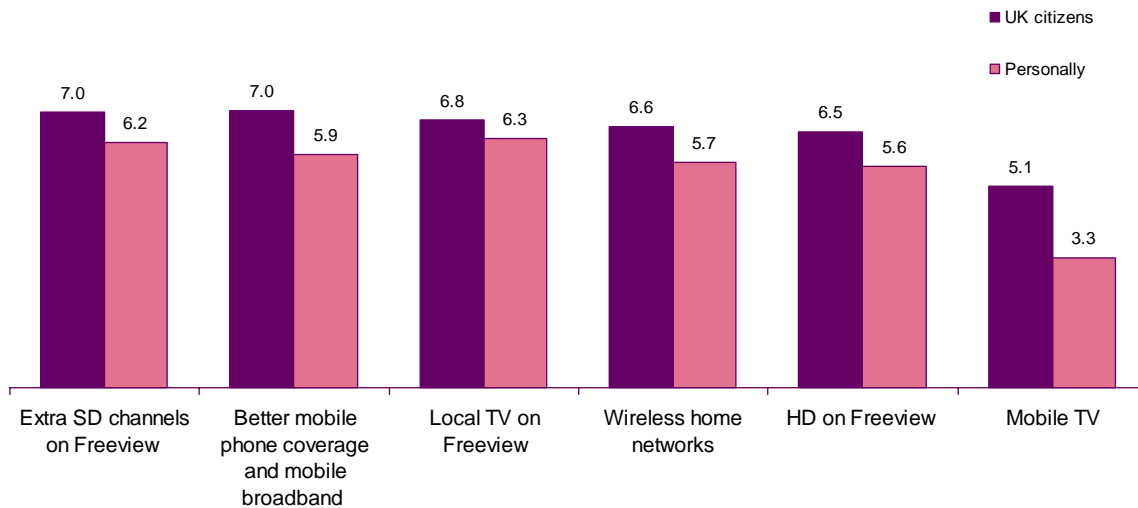
Overview

As we found in the survey and deliberative research in 2006, the 2007 quantitative and qualitative research shows that no single service commands overwhelming support in terms of the personal or societal value it delivers. This is illustrated in the four charts which follow, taken from the 2007 quantitative research.

Figure 2.1 shows the mean average scores out of ten that respondents gave to each service to indicate its importance to them personally and their perceived importance of the service to all UK citizens and society as a whole. In each case services receive a higher average rating from a societal point of view.

Figure 2.1, ratings of service importance (0-10 scale)

Scores on chart bars show mean average score out of ten given by respondents



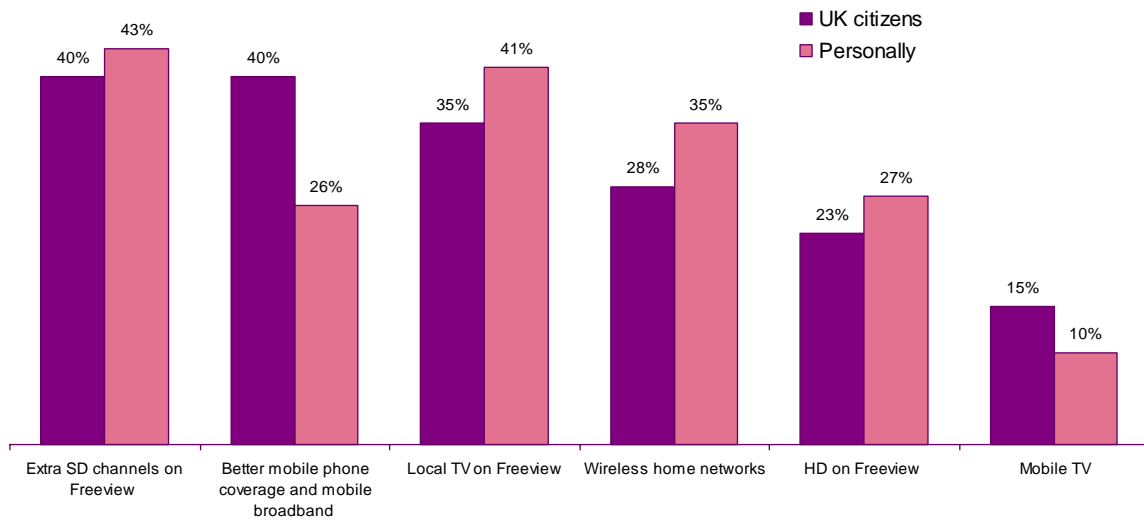
Source: Ipsos MORI survey 2007 Base: UK adults: 1,049. Don't knows are excluded from mean scores.

Figure 2.2 shows the results of an exercise in which respondents were asked to rank the services in order of importance to them personally and then to all UK citizens. This exercise 'forced' respondents to indicate an order of preference from both a personal and citizen point of view, so trade-offs had to be made. Comparisons between the personal and citizen ranking should be treated with caution since an apparent lower score from a citizen point of view does not necessarily mean that respondents thought the service had a lower citizen value than a personal value – just that the order of importance was different from personal and citizen perspectives.

The chart illustrates that all services researched were popular with some people. Even the lowest-ranked service on average (mobile TV) was rated as one of the top two from a personal perspective by 10% of respondents.

Figure 2.2, ranked importance of services

Scores show percentage of respondents who ranked each service 1st or 2nd



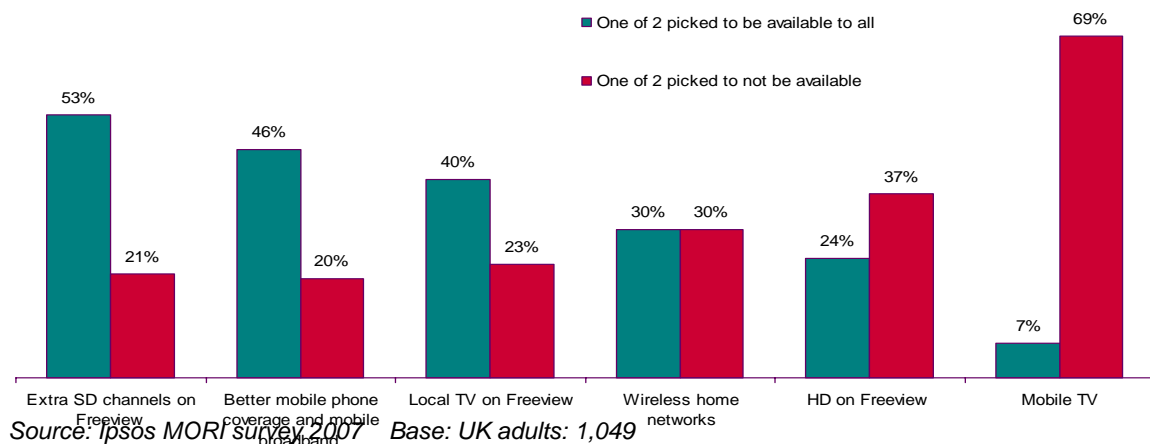
Source: 2007 quantitative research conducted by Ipsos MORI. 9% of the sample did not/ could not rank the services.

Figure 2.3 shows the results of an exercise in which respondents were asked to pick two of the six services that they thought should be available to everybody in the UK. They were then asked to choose two of the remaining four services that would not be available to anyone.

They were asked to do this from the point of view of what would be best for the UK as a whole.

The data in the chart illustrates the extent to which views of UK citizens vary on the value of each service, with each service attracting support from some citizens and also being picked as a service to not be available.

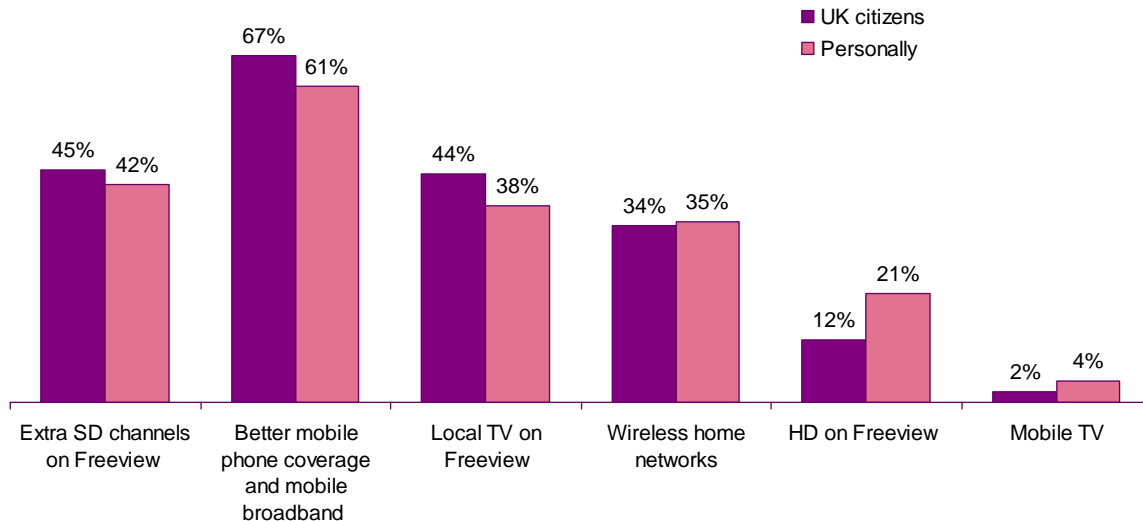
Figure 2.3, services of most and least value to society and the UK



Source: Ipsos MORI survey 2007 Base: UK adults: 1,049

Figure 2.4 shows the results of the ranked importance exercise in the qualitative research. The results are shown in the chart below, and demonstrate broad consistency between the qualitative and quantitative research.

Figure 2.4, final ranking from qualitative research



Source: Opinion Leader Research

The findings cannot be directly compared to the 2006 research, since the services we showed respondents this time additionally included wireless home networks and explained that use of the spectrum for mobile services would bring improved coverage for existing services as well as new services, such as mobile broadband. The show-card descriptions (which were used to explain the services to respondents) were also amended after some suggestions by stakeholders.

The findings are however broadly similar to the 2006 research, although the addition of the combined 'improved mobile phone and mobile broadband services' has had an impact on the ranking of other services, since it took a relatively large share of high ranks, especially from a citizen perspective. This service description was amended as we felt that this is a better description of the incremental benefits that the digital dividend can provide for this type of service.

The 2007 research allowed us to identify how opinion differs among some key sub-groups. These are discussed in the following section.

Demonstrating and deliberating

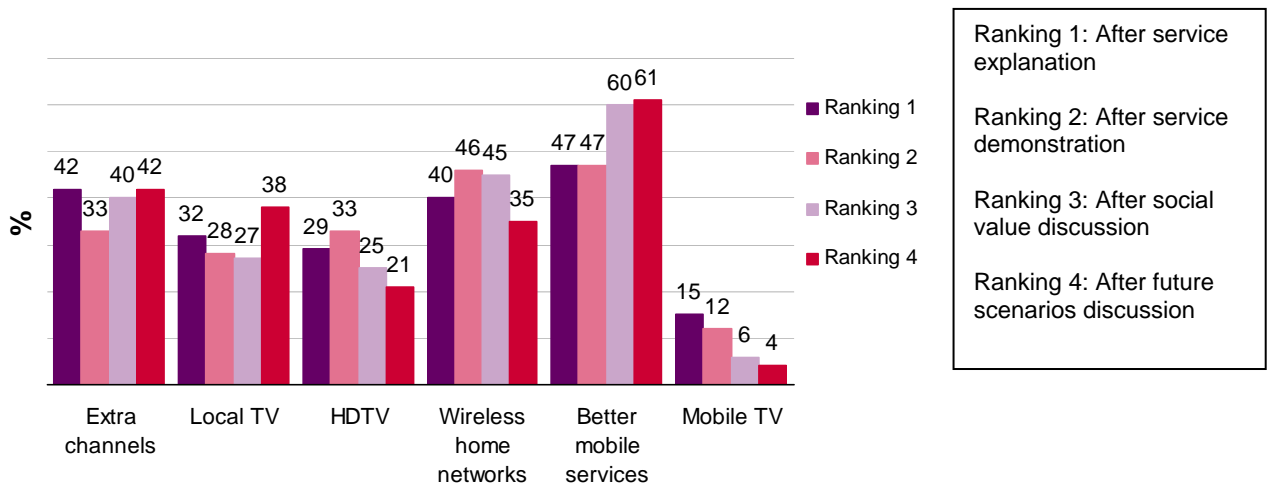
The deliberative research allowed us to test whether opinions differed when the services were demonstrated to citizens and after detailed consideration and discussion of some of the arguments for each service.

This research shows that demonstrating different technologies had a short-term positive uplift (see difference between ranking 1 and ranking 2 in Figure 2.5) on ranking scores, from a personal perspective, for HDTV and wireless home networks, but this uplift disappeared during subsequent deliberative discussions on social value and future scenarios (detailed in the qualitative research report).

From a personal perspective, improved mobile phone and mobile broadband services started high and steadily rose over the course of the discussions as participants' views were further confirmed, and mobile TV's value dropped over the day in direct comparison. Most of the other services remained in broadly the same positions in relation to each another, except for local TV and wireless home networks which rose and fell respectively at the end of the day, perhaps in response to one of the future scenarios where local TV could have been seen as having greater value in a scenario with less regional TV programming.

Figure 2.5, ranked importance of services – personal perspective

Scores show percentage of participants who ranked each service 1st or 2nd

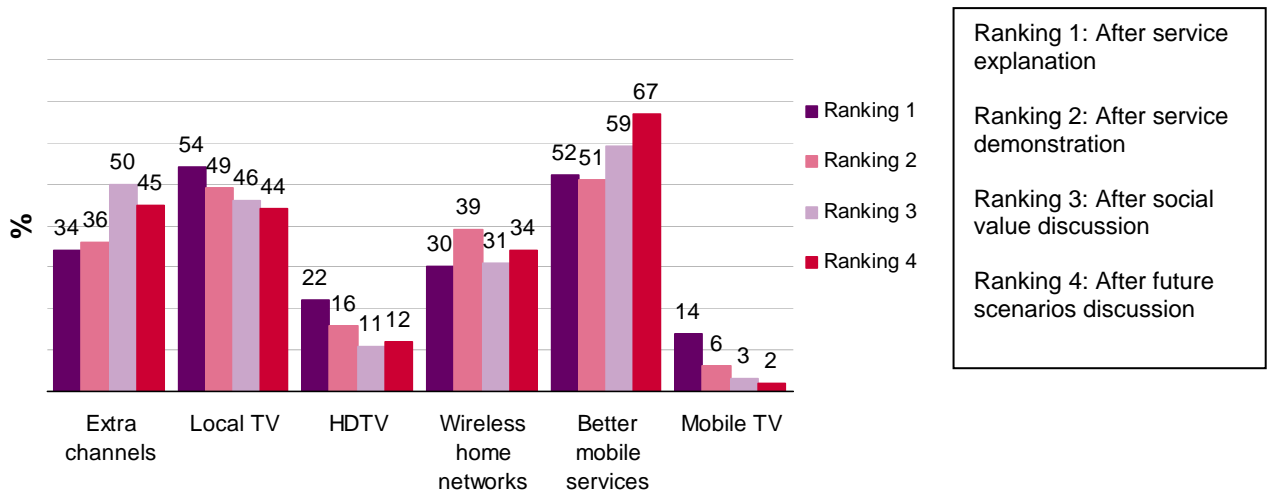


Source: 2007 qualitative research conducted by Opinion Leader Research

Figure 2.6 shows how rankings change over the course of the day when looking at the social value of each of the service options. Participants were slightly more consistent in their views of which service options had social value, with HDTV and mobile TV receiving low social ranking values throughout the day. Improved mobile phone and mobile broadband services started out at a similar level to local TV in terms of citizen value, but by the end of the day's discussion they were clearly considered to have the most social value of all the service options. Extra SD channels on Freeview received higher social value after group discussions, ending at a similar level to local TV, with wireless home networks falling just behind.

Figure 2.6, ranked importance of services – citizen perspective

Scores show percentage of participants who ranked each service 1st or 2nd



Source: 2007 qualitative research conducted by Opinion Leader Research

Participants were also asked to consider a future where either the majority of people would have access to the preferred service option OR most people would have access to the first and second preferred service options, but some people in rural areas would not. They were asked which scenario they wanted to see for society. The vast majority of participants opted for a future where everyone would have access to one service, as this was felt to be the fairest option.

Most could see some societal value in the service options (except for mobile TV). However, in general, when taking the citizen perspective for the six service options, none were seen to be of particularly high value to society, especially in comparison to other services such as the postal service or the NHS

Qualitative research necessarily has a smaller and less robust sample size and method than quantitative research, so comparisons with the quantitative research should be made with this in mind.

Despite these limitations in comparability it is clear that the results of the deliberative research show a great deal of consistency with the quantitative research, so this gives us increased confidence in the findings from the qualitative and quantitative research conducted in 2006 and 2007.

Section 3

Key sub-group opinions

The quantitative research allows us to focus on some important groups of citizens. We identified groups who expressed views that were significantly different from the UK average. Their views are detailed here;

Those with no interest in digital technology

Around 16% of respondents indicated that they had little interest in digital technology. This group ranks mobile and wireless services lower than average. They rank local TV top from a personal and societal point of view.

Low-income groups

Approximately 16% of UK adults live in a home with an annual income of less than £15.5k. Similarly to those with no interest in digital technology, the results indicate that they rank mobile and wireless services slightly lower than average. They also rank local TV top from a personal and societal point of view. Differences found in the survey are not statistically significant, so should be treated with caution.

People in rural areas

There are no significant differences in ranking order in rural areas compared to the UK average.

People in UK nations

The majority of the UK's population, and consequently our research sample, live in England. The research did identify some indicative (but not statistically significant) differences in opinion in Wales, Scotland and Northern Ireland.

In **Wales**, extra SD channels on Freeview and improved mobile phone and mobile broadband services were ranked slightly higher than average from a personal perspective. Extra SD channels also received a higher rank from a societal point of view, while HDTV and Mobile TV were ranked lower than average from a societal perspective.

In **Scotland**, extra SD channels were ranked higher than average from both a personal and societal point of view. Local TV services were ranked lower than average from both personal and societal perspectives.

In **Northern Ireland**, extra SD channels were ranked lower than average from both a personal and societal point of view. Wireless home network services were ranked lower than average from both personal and societal perspectives.

HDTV subscribers

This group, accounting for around 2% of UK homes, are important as its members have experienced watching HDTV at home and are therefore well informed to assess its value. However, we also recognise that this group represents early adopters of this technology and so may not represent the view of the 'late majority' – assuming take-up continues to increase.

From a societal perspective this group ranks HDTV marginally higher than the UK average. It also rates HDTV significantly higher from a personal perspective – positioning it as the top service.

HD-ready TV owners who have Freeview only at home

We estimate that this group currently accounts for about 9% of UK homes (2 million in total). With digital TV penetration likely to increase and sales of HD-ready sets likely to grow we expect this group to increase in size over the coming years. Again, caution should be applied to the views of early adopters of technology.

This group also ranks HDTV services higher than average – in second place from a personal perspective and in joint second place from the point of view of society.

Local TV viewers

Local TV services are currently only available in some locations in the UK, so this group is in a geographically dispersed minority.

Viewers of Channel M (a television channel backed by Guardian Media Group, covering the Manchester area) are more positive about local TV, ranking it top from a societal perspective and joint top from their personal point of view.

Mobile video content viewers

This group currently accounts for over a fifth of UK adults. It includes all those who currently watch video content on portable devices, such as mobile phone handsets, laptops, portable DVD players, and other portable media players. These citizens are likely to have the best understanding of the potential value of mobile TV services.

Despite having more experience of watching mobile video content, this group, in common with the UK average, ranks mobile TV in last place from a personal and societal point of view. They also rank wireless home networks higher from a personal and societal perspective.

Section 4

Summary of views on services researched

Extra SD channels on Freeview

Quantitative research

Citizen and society perspective

The quantitative research found that among respondents, extra SD channels on Freeview achieves the joint highest ranking of the six service options; 40% selected it as either their first or second choice in terms of **UK and societal importance**. There is a high degree of consensus among the sample as to this service's place in their social hierarchy – nearly all sub-groups across the research put it in first or second place.

Personal perspective

Almost half the respondents (43%) rank extra SD channels on Freeview in their top two services for **personal importance**. Again, there is a consensus among respondents and the additional user group samples as to this service's place in their personal hierarchy – on average all groups place it in first or second place.

Extra SD channels on Freeview are relatively more important to users of Freeview with an HD-ready TV set, with 62% of this group ranking it in the top two.

Qualitative research

Participants' views on the idea of having extra SD channels on Freeview remained relatively positive throughout the day. They felt that this option was good for society overall because it would be accessible to everyone and would offer people good value for money.

When comparing it with the other service options, extra SD channels on Freeview was felt to be one of the best options in providing both social and personal value. Ultimately, support for this option was dependent on what new channels would be offered.

Channels that are like the five main public-service broadcasting channels and news channels were rated as the most valuable types of content in both the quantitative and qualitative research – see the detailed research reports for further detail.

Local TV on Freeview

Quantitative research

Citizen and society perspective

Local TV is ranked third of the six service options. Over a third of respondents select local TV as either their first or second choice in terms of UK and societal importance (35%). There is a high degree of consensus among the demographic groups as to local TV's place in their social hierarchy - for example, older citizens' responses differ little from those of younger citizens - and most place it in second or third place.

Those who have watched one of the local TV channels available today are relatively more likely to rank local TV in the top two from the societal perspective.

Personal perspective

Four in ten respondents rank local TV in their top two for personal importance (41%). From this individual perspective there are a few differences: those aged over 55 are more likely than younger citizens to rank it in their top two. There are indications (though not significant) that those in rural areas rank local TV higher than average.

Qualitative research

Local TV was considered to have high social value, thanks to its perceived potential to bolster people's involvement in the community. Amongst respondents in Manchester who had seen an existing local TV channel views were mixed – some were positive about the local news and information, but others criticised the quality of programming and production.

However, some participants felt that the quality of programming would be low and they would not want to watch it. Many felt that their local area would be unable to provide sufficient news and information to warrant a 24-hour channel.

In discussion on a future scenario in which ITV regional programming stopped, participants felt that provision of local TV on Freeview would increase in importance.

HD channels on Freeview

Quantitative research

Citizen and society perspective

A quarter (23%) of respondents rank HD channels on Freeview in their top two from a societal perspective. This places HDTV in fifth position. Those with HD-ready TV sets who have Freeview only at home rank HD channels on Freeview higher than average.

Personal perspective

HD channels on Freeview has a relatively greater personal than societal importance. It is ranked among the top two by 27% respondents. This places it in fourth position overall. Those aged 35 to 54 ranked it relatively highly. HD-ready TV owners rate HD channels on Freeview higher than average – and it is ranked in first place among HDTV subscribers.

Qualitative research

Many participants liked HDTV for the better quality picture. They were particularly positive when seeing it side by side to SDTV. However, most struggled to think of ways in which HD channels on Freeview could be seen to provide value to society as a whole, particularly in comparison to the other service options. A common refrain across the workshops was that HDTV was a luxury, not a necessity, and that other services demonstrated had more value for society.

When discussing a specific future scenario in which respondents were told that three-quarters of people had HD-ready TV sets, and set-top boxes had dropped in price to be easily affordable to most people, there was a range of views as to whether or not this meant that HD channels should be available on Freeview. Some felt that if the technology were available, it should be offered on free-to-view TV, and they would expect Freeview to keep up to date with subscription channels in terms of provision of new technology. Others, seeing less benefit in HDTV, could not see strong arguments for its provision on Freeview, especially not at the expense of other channels or services.

When given three future options on the mix of SD and HD channels that might be available on Freeview, most chose an option where there was a similar number of SD channels as available today and an additional five HD channels

Improved mobile phone and mobile broadband services

Quantitative research

Citizen and society perspective

Forty per cent of respondents rank improved mobile phone and mobile broadband services as either first or second most important in terms of value to the UK. This places it in joint top position overall.

Most age groups rank the societal importance of this service relatively highly – those aged 45-54 more so than the over 65s and ABC1 social groups rating it higher than C2DEs.

Personal perspective

The relative personal value of this service appears to be lower. A quarter (26%) of respondents rank improved mobile phone and mobile broadband services as either first or second choice in terms of personal importance. This places it in fifth place overall.

In terms of the proportions of respondents selecting this service as either first or second choice, improved mobile phone and mobile broadband services is the use which elicits the greatest differential between social importance (40%) and personal importance (26%).

Qualitative research

Participants ranked improved mobile phone and mobile broadband services high for themselves and for society from the start of the day, and this position was strengthened over the course of the day's discussions. It was the most popular service option overall with the benefits to consumers and citizens easily identifiable.

Participants were asked to consider a future scenario in which more and more people were working from home, and while travelling, and organisations were adopting more flexible working styles. A great number of benefits could be seen in such a future; in particular the opportunities it would afford working parents to spend more time at home and with their children. However, many felt that it would make the divide between the office and home ill-defined, resulting in people working longer hours than ever before.

Wireless home networks

Quantitative research

Citizen and society perspective

Among respondents, wireless home networks rank fourth overall in terms of societal importance, with 28% selecting this as either their first or second choice.

Personal perspective

Wireless home networks rank third overall in terms of personal importance, with 35% of respondents selecting this as either their first or second choice.

As would be expected, on a personal level, those who currently use wireless broadband at home rate it higher. Those under 25 years old also ranked this service higher.

Qualitative research

Wireless home networks were a popular service option for consumers and were ranked at a medium level for their perceived social benefits. In many respects, participants saw both positives and negatives in increased access to the internet, particularly relating to impact on family life.

While this option ranked highly throughout the day, improved mobile phone and mobile broadband services were seen to be of higher value as a service option, as they were seen to provide similar benefits but with fewer negative repercussions.

Mobile TV

Quantitative research

Citizen and society perspective

Mobile TV achieves the lowest ranking of the six service options. However, a significant minority (15%) of respondents did select it as either their first or second choice in terms of UK and societal importance. There is a high degree of consensus among the demographic and technology sub-groups as to mobile TV's place in their social hierarchy – most placing it in sixth place.

Personal perspective

One in ten of respondents sample ranks mobile TV in their top two for personal importance, with those aged under 45 being far more likely than older citizens to do so.

Qualitative research

Mobile TV was seen to have low personal and even lower social value for most participants who did not rate it as highly as the other service options. Many participants were particularly concerned by the potential negative impact to society of mobile TV being available. Overall, it was seen as a luxury rather than a necessity for consumers and society.

Section 5

Methodology and limitations

The research conducted in 2007 consisted of both **quantitative** and **qualitative** research.

Research has been conducted by many organisations identifying the value of individual services that might use the digital dividend. Ofcom's research is different from most of these studies as it asked respondents to make comparisons and trade-offs between these services. The 2007 research asked participants to rank and rate six different service options in terms of importance to them personally and to UK society. The questions were designed to give respondents the opportunity to indicate degrees of preference between the service options.

The **quantitative** research was a survey of 1,999 UK citizens conducted for Ofcom by independent market research agency, Ipsos MORI.

The sample consisted of a representative sample of 1,049 UK adults (aged 15+). The error margins at the 95% confidence interval for a sample of this size are approximately $\pm 2-3\%$. This means that, according to statistical sampling theory, for any given percentage from the sample we can be 95% sure that the real proportion of UK adults holding this opinion lies within two to three percentage points of the figure quoted. The survey was conducted face to face.

We were interested in the opinions of a number of small population sub-groups, such as local TV viewers and HDTV subscribers. Since these groups represent only small proportions of the UK population, a standard UK survey sample would not include robust samples amongst these groups. To address this, additional booster interviews were conducted so that a robust measure of opinion could be obtained from these small, but important groups. A minimum quota of 200 interviews was set amongst these groups, giving a confidence interval of $\pm 4-7\%$ at the 95% confidence interval. The booster interviews were conducted by a combination of face-to-face interviews and online self-completion questionnaires. In total 950 booster interviews were conducted.

We have ensured that robust samples were achieved amongst the following groups:

- HDTV subscribers;
- those with HD-Ready TV sets but no HDTV subscription;
- those with TV screen sizes of less than 28";
- those who have watched a local TV channel;
- those who currently access data services on a mobile device;
- those who watch audiovisual content on a mobile device;
- those who have wi-fi at home;
- those who have no interest in communications or multi-media technology;
- low income households; and

- urban and rural locations.

Respondents in the quantitative research took part in a 25-minute structured face-to-face interview³. The six service options researched⁴ were explained before general attitudinal and behavioural questions were asked about each of them. Finally, respondents were asked to rank and rate the services' importance in terms of their own personal preference and from the point of view of what they felt best for UK society as a whole.

Full details of the sample and questionnaire are available in the quantitative research report.

The **qualitative** research consisted of five deliberative workshops among UK citizens from London, the South East, Manchester and Glasgow. Participants were recruited to be representative of the UK in terms of age, gender and social group. We also ensured representation from rural areas by recruiting respondents to travel from different areas to the workshop venues. The groups were made up of participants with a mix of current technology ownership, and in Manchester we ensured representation from viewers of local TV service, Channel M. The workshops were conducted for Ofcom by independent market research agency, Opinion Leader Research.

Deliberative research is a tried and tested research methodology that is particularly well suited to the DDR. The deliberative workshops allowed participants to spend time considering the services and concepts of personal and societal value we sought to test. The format allowed us to demonstrate services, discuss them in detail and then consider a number of hypothetical future scenarios in which, it could be argued, the value of some of the services were enhanced. By the end of the day respondents were able to give an informed and considered view on the service options.

The workshops lasted a full day and each had over 20 participants. During the course of the day, participants were shown demonstrations of the services, and took part in detailed sub-group discussions on each of the services and how they could be valuable to consumers and to UK society.

Workshop participants were asked to rank the six services in order of importance to themselves as consumers and to UK society as a whole. This exercise was conducted four times in each group:

- at the beginning of the day;
- after seeing the service demonstrations;
- after detailed discussions on social value;
- after discussing potential future scenarios.

Full details of the sample, the discussion agenda and the demonstrations are available in the qualitative research report.

Input to the DDR

The market research was commissioned to form part of the evidence base for Ofcom's statement on the DDR. Citizen and consumer views and opinions formed an important part

³ Some of the booster interviews amongst hard to reach groups were conducted online.

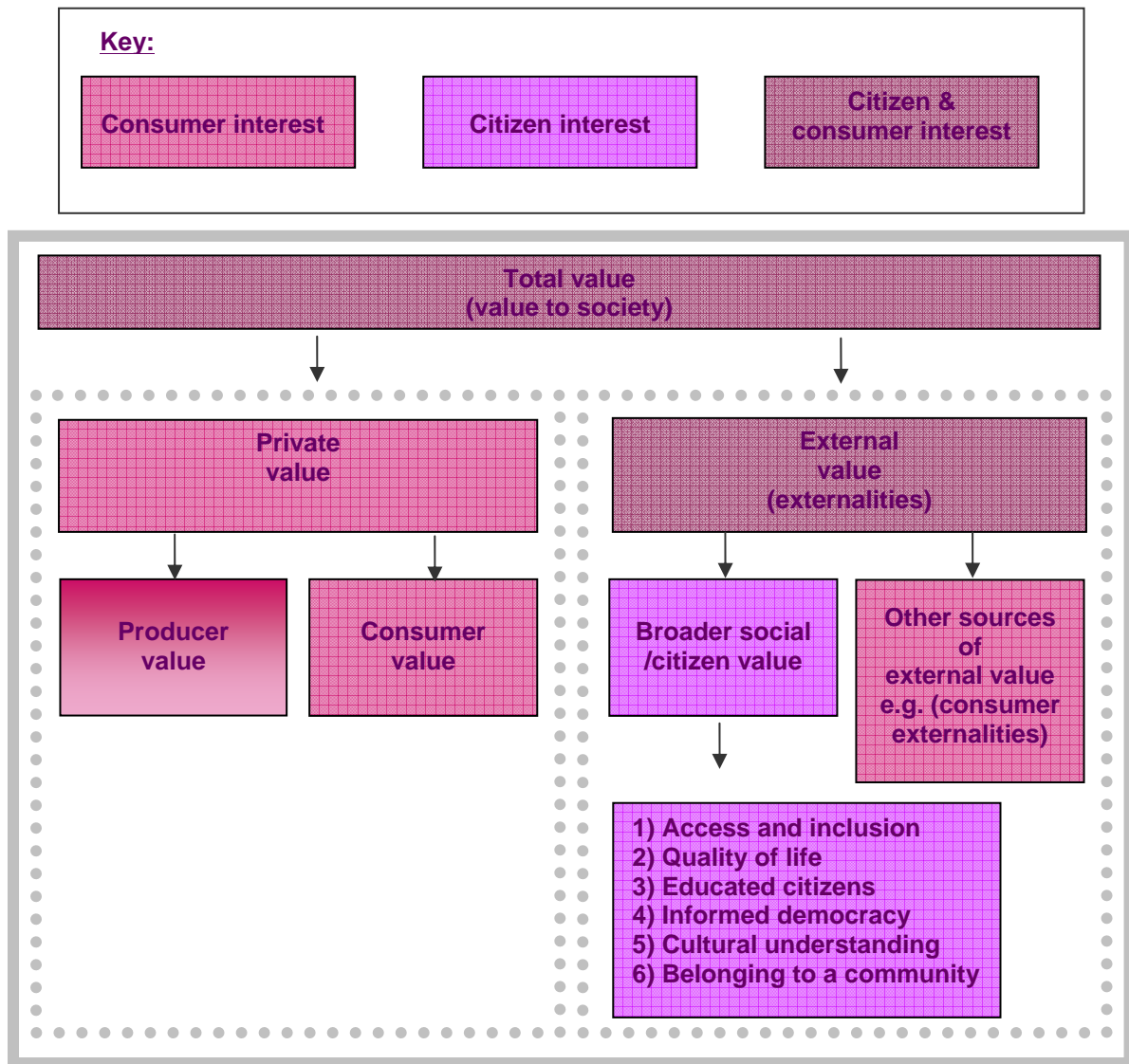
⁴ Extra SD channels on Freeview, Local TV on Freeview, HD channels on Freeview, Improved mobile phone and mobile broadband services, Wireless home networks and Mobile TV.

of the evidence considered by Ofcom in developing proposals for the consultation on the award of the digital dividend.

In particular, the market research evidence has been relied upon:

- to assess the total value to society generated by potential uses of the digital dividend; and
- to inform analysis of the willingness to pay for spectrum and for economic modelling.

When analysing total value to society in the DDR Ofcom has used the following classification of sources. These sources of value are discussed in greater detail in Annex 7 to the DDR consultation document.



Based on this categorisation we believe that responses to questions about individual preferences correspond to consumer value, while responses to questions about value to society correspond to total value. Hence, where value to society is in excess of private value there is additional value to society (i.e. external value) present.

However, it is possible that when answering questions about the value to society (in isolation from questions about private value) respondents may have focused on the external value, and in particular the broader social value, which may be generated from the use of the service. Therefore, the responses to the qualitative research in particular should be viewed with this in mind.

Limitations

There are of course limitations involved in any research, which we recognise and discuss in this section. We consider the research methodologies adopted to be appropriate and as robust as reasonably possible, given these limitations.

Limitations and uncertainties that apply to any research

- Sampling error means that the percentages quoted in quantitative research and differences between percentages can be viewed only in the context of levels of confidence. A large sample size representative of the UK population means that we can be more confident that percentages are close to the true figure for the whole population.
- Respondents are not always willing to answer questions openly. This is more of a concern with sensitive subject matter and is unlikely to have had a significant impact on this research.
- Even when respondents are willing to answer questions honestly, what they say they do, or think, is not always the same as their actual observed behaviour or views. This may be simply due to the limitations of memory, or may be caused by more complex psychological phenomena.
- The snapshot aspect of a research study means that even if sampling error is very low, we are only measuring opinion at the time of the research. Opinion is subject to constant change, not always in a steady direction, and can move relatively quickly in the realm of technological progress.
- In groups, we cannot be sure that people will reveal their true opinions because certain individuals may dominate the group. Also, social pressure tends to make individuals in a group situation lean more towards benefits for society as a whole rather than for the individual, whatever the individual may actually think. We have however, employed skilled moderators who used techniques to minimise this risk.

Limitations and uncertainties specific to this research

- The complex information being presented to respondents was possibly difficult for many of them to assimilate quickly. It may have been difficult for some respondents to make fine judgements about things that they had only just learned about.
- This is one reason why the deliberative research was undertaken, so that people could have the chance to take in information more slowly and discuss it before being asked about their opinions.
- With new services, respondents also often have to be shown the benefits in the real world, by early adopters, before they will join in themselves. On the other hand, a new service might seem attractive at first sight, though in reality it may prove to be less useful/ valuable. We have sought to minimise this effect by ensuring

representation of those using services in the quantitative research and by demonstrating services in the qualitative research.

Limitations and uncertainties involved in using this research in this project

- As the information derived from this research is being used in a strategic project of national importance, it is even more important to bear these limitations in mind.
- The research compared completely new mobile services with more familiar services on Freeview. Differing levels of familiarity may have had an impact on respondents' decisions. They may have over - or under-estimated the benefits of these services, based on their initial reactions.
- Consumer opinions and preferences can change. Caution should be applied when using evidence of today's opinions and preferences to make judgements about the future.