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Glossary

ABC	Australian Broadcasting Corporation
ABS	Australian Bureau of Statistics
ACMA	Australian Communications and Media Authority
ASL	Anti-Siphoning List and associated legislative scheme
ASTRA	The Australian Subscription Television and Radio Association
AUSFTA	Australia-United States Free Trade Agreement
DBCDE	Department of Broadband, Communications and the Digital Economy
ENG	Electronic Newsgathering
FTA	Free-to-air
HAS	Household Assistance Scheme
NITV	National Indigenous Television
SBS	Special Broadcasting Service
STV	Subscription Television
UHF	Ultra High Frequency
VAST	Viewer Access Satellite Transmission
VHF	Very High Frequency

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Executive Summary

The Australian Government's Convergence Review has been established to investigate the implications of changing information and communication technologies for current regulatory frameworks. This report focuses, in particular, on the regulatory frameworks applying to the television broadcasting sector. The report is composed of three sections:

- The first section provides a stocktake of the current level of government support for Free-To-Air (FTA) television broadcasters, as well as the regulatory obligations imposed on all broadcasters.
- The second section discusses the economic contribution of the Subscription Television (STV) sector to Australia.
- The third section looks at how the regulatory framework for promoting Australian content is likely to change as a result of Convergence and what policy options are available to enhance the delivery of Australian content in the long term.

The level of government support and obligations imposed on broadcasters

Net government support provided to the commercial FTA broadcasters in 2010-11 was estimated to be approximately \$0.8 billion, with an additional \$1.3 billion in net government support estimated to have been provided to the national and community broadcasters. Overall, it was estimated that just over \$2.7 billion in net government support will be provided to the commercial FTA broadcasters and \$5.1 billion to the national and community broadcasters from 2011-12 to 2014-15. The sources of support for FTA broadcasters are shown in Table i below.

Partly in return for this government support, a number of obligations are imposed on broadcasters. The main obligations relate to what content can be shown on television and when it can be shown, restrictions on advertising, contingencies in cases of emergencies and requirements such as closed captioning. A number of these obligations also apply to STV with Australian content requirements for STV being in the form of a minimum expenditure requirement for Australian drama. The National Broadcasters are also required to meet a number of objectives and obligations as outlined in their respective Charters, although no specific Australian content requirements are imposed on them at present.

The economic contribution of STV

The STV sector contributes to the Australian economy in a variety of ways, both directly (in terms of the value it adds to national GDP and employment) and indirectly through providing greater product innovation and consumer choice.

The direct economic contribution of STV broadcasters and their in-house production activities was estimated to be \$544.1 million in 2009-10.

In addition, the contribution of the STV sector also extends downstream through the purchasing of Australian content from the production sector. A 2010 ASTRA survey found that the sector had spent \$578.4 million on first-run Australian content. The value added by this spending on Australian content was estimated to be \$223 million.

While this cannot be directly added to the contribution of STV broadcasters due to possible overlaps between the two, it was estimated that the overall contribution of the STV sector to the Australian economy was approximately \$700 million in the 2009-10 financial year.

The 2010 ASTRA survey also found that the sector employed 7,410 people on a full time equivalent basis both directly and indirectly (through platform outsourcing). Finally, STV has also been responsible for a significant increase in programming variety and product innovation, the economic gains from which are large but more difficult to quantify.

Table i: Summary of net government support to FTA TV broadcasters (\$2011 million)

	2010-11 Financial year	Forward estimates from 2011-12 to 2014-15 [#]
Commercial broadcasters		
Additional funding associated with the digital switchover *	104.3	496.3
Access to spectrum	505	1,615.6
Net licence fees and apparatus licence fees paid	-231.8	-960.8 [^]
Anti-siphoning scheme	415.1	1,561.4
Total	792.6	2,712.5
National and community broadcasters		
ABC Assistance with digital transmission	86.6	368.6
ABC Television Programming	599.8	2,357.6
SBS Assistance with digital transmission	65.8	264.7
SBS Television Programming	190.6	800.7
Community broadcasters	12.6	57.2
Indigenous broadcasters including NITV	30	119.8
Access to spectrum	352.4	1,144.1
Apparatus licence fees	-0.1	-0.3
Total	1,337.7	5,112.4
Grand Total	2,130.3	7,824.9

Source: Deloitte Access Economics

Note: * Includes support for regional broadcasters. [^]It is assumed that licence fee rebates are not continued beyond the 2011-12 financial year. If these rebates were to be continued at a rate of 25%, the level of licence fees paid by the Commercial Broadcasters in the forward estimates would fall to \$815.7 million. [#] This is the period for which budget estimates are available. These figures are estimates only as changes to regulations or government support may occur in the interim. The level of inflation is assumed to be 2.5% (the midpoint of the RBA's inflation target) throughout the report.

Promoting Australian content in a converged world

The current regulatory framework has sought to reflect a sense of Australian identity, character and cultural diversity through a variety of mechanisms, including support for the national broadcasters, drama expenditure requirements for STV, producer offsets and content quotas for FTA broadcasters.

While content quotas have helped ensure Australian content continues to be shown, they provide little transparency in relation to the actual costs of meeting content obligations or what types of Australian content would be provided by the market, and may discourage broadcasters from substituting towards higher quality productions. Over time, content quotas are also likely to become less effective because as alternative delivery platforms enter the market, the scope to promote Australian content through restrictions on choice will be more limited due to increased competitive pressures. New approaches to promoting Australian content will be needed in the future.

Long term regulatory frameworks could be based on the following propositions:

1. Government policy needs to provide some support for types of content which would be undersupplied by the market including adult drama, children's programs, documentaries and local news and current affairs outside of major metropolitan areas.
2. Government policy does not need to support those types of content which will be provided anyway such as sport and light entertainment.
3. Convergence is likely to radically change the business models used by broadcasters.
4. Competition will mean that quotas are less effective in the long term and can no longer be imposed at the same level.
5. The use of market signals, both in relation to content obligations and support for the production of Australian content, provides scope for improved efficiencies and better outcomes.
6. Competitive neutrality should be applied across delivery platforms.
 - a. An important precondition to achieving competitive neutrality is to ensure that any regulatory advantages provided to commercial FTA broadcasters are removed and that any direct funding is made available to all market participants on a competitive basis.
7. There will be a greater need to promote quality Australian content that audiences want to watch if it is to be effective.

While over the next decade there may still be scope to rely on content quotas, in the long term any quotas will have to be smaller and focus on areas that would be undersupplied. A tradeable quota scheme could potentially play a role in enhancing flexibility and efficiency in this regard. In the long term there will be a need to rely more on production subsidies to enhance the quality of Australian content produced. Such subsidies should be allocated on a competitive basis and in ways that encourage producers to invest in higher quality productions. To the extent that the ABC and SBS are used to promote Australian content in the long term, additional funding should be contestable or otherwise subject to rigorous accountability.

In the transition period prior to reaching a long-term converged world, some policy options to provide greater flexibility to broadcasters, while also enhancing the quality of Australian content produced include:

- placing additional quality indicators on the sub-quotas and excluding sport and light entertainment from the overall quota;
- using a tradeable quotas scheme to increase efficiency and provide policy makers with greater information on the costs of meeting content obligations; and
- progressively moving towards a greater reliance on production subsidies to promote Australian content.

It should be noted that during the transition phase FTA broadcasters are still likely to benefit from a number of regulatory advantages such as, inexpensive access to spectrum and the anti-siphoning list, which would justify the imposition of higher content obligations on them. Policies such as a tradeable obligations scheme or a greater focus on the sub quotas (or potentially a combination of the two) could be used to give broadcasters greater flexibility in meeting their content obligations during this period while also ensuring that regulatory intervention is tailored more closely to areas of market failure.

Over time, policy makers will need to progressively move towards a greater reliance on production subsidies. While a significant amount of existing funds in the budget are allocated to Australian content, to support greater use of production subsidies these funds will need to be augmented either through consolidated revenue or alternative funding sources such as proceeds from the sale of spectrum, although the exact mechanism by which funds are raised would need to be considered in more detail by the Convergence Review Committee.

While all of the above options provide viable ways in which to promote Australian content in the future, there are benefits and challenges associated with each of these policy options which will need to be carefully considered by the Committee.

Finally, while much of the focus of content obligations is on FTA broadcasters, STV also plays a significant role in the production and distribution of Australian content and has natural incentives to provide significant levels of Australian content to meet consumer demands. As STV comes under increased competitive pressures from other delivery platforms, it is important to ensure that future regulatory frameworks do not place STV at a competitive disadvantage with other delivery platforms.

Deloitte Access Economics

1 Introduction

The internet is having a profound effect on the ways in which we receive, view, and transmit content and information. As the Convergence Review Emerging Issues Paper highlights, it is now possible to access the internet on your TV, listen to the radio on your computer and view videos on your mobile.

This has led to a need to rethink existing regulatory frameworks which were largely based on the delivery platforms that predominated in decades past. The Australian Government's Convergence Review has been established to investigate what these changes mean for the current regulatory frameworks and how they might be adapted to facilitate these developments.

This report consists of three distinct parts. The first part consisting of Chapters 2 to 4, comprises a stocktake of current and proposed support to FTA television broadcasters and the obligations imposed on all television broadcasters. It examines the nature and level of support provided to FTA broadcasters, the level of licence fees paid by them and the various obligations imposed on broadcasters, in particular those detailing what can be shown on TV and when.

The second part, consisting of Chapter 5, examines the size of the contribution STV makes to the broader economy. It also examines a number of other benefits provided by STV, including increased variety of programming, product innovation and the greater availability of Australian content for niche audiences.

The third and final part, consisting of Chapter 6, examines how the process of convergence is likely to lead to changes in how the provision of Australian content can be ensured in the future. The chapter looks at what factors are likely to influence future regulatory frameworks and outlines various policy options for enhancing the delivery of Australian content in both the transition period, prior to full convergence (but after the digital switchover), and later on in a converged media environment. The role of the national broadcasters and STV under future regulatory frameworks is also considered.

2 Overview of government support and obligations imposed on broadcasters

At present, a number of broadcasting obligations are imposed on both FTA and subscription television (STV) broadcasters while various forms of government support are provided to FTA broadcasters. The purpose of this chapter is to briefly set out the main types of support and obligations imposed on broadcasters that are considered in this report. Particular types of support and obligations are analysed in greater detail in Chapters 3 and 4.

This stocktaking exercise has been conducted without making any judgements on the effectiveness or appropriateness of this support in terms of achieving the Government's policy objectives. The purpose of this chapter is simply to provide an estimate of existing government support to FTA broadcasters and outline the obligations placed on all broadcasters.

2.1 Forms of government support to FTA broadcasters

Broadly speaking, government support to FTA broadcasters falls into five main areas:

- assistance with the digital switchover;
- the provision of access to spectrum and additional digital channels to those who hold a broadcast licence;
- barriers to entry for new commercial broadcasters;
- the anti-siphoning scheme which reserves the rights for certain sporting events for first acquisition by FTA; and
- direct funding for national and community broadcasters.

In this report the term 'commercial broadcasters' is used to refer to the commercial FTA broadcasters and their regional affiliates while the term 'national broadcasters' is used to refer to the ABC and SBS and the community broadcasters.

Separate estimates of support are calculated for the Commercial and National Broadcasters. In separating out support for each of these two groups, government assistance with the digital switchover and the anti-siphoning scheme have been attributed to Commercial Broadcasters, although part of this support also benefits the National Broadcasters. Assistance with the digital switchover provided solely to the National Broadcasters is attributed to them.

Estimates of net support for the Commercial Broadcasters and the National Broadcasters are provided in Table i of the executive summary above. In total, it was estimated that approximately \$0.8 billion in net government support was provided to the Commercial Broadcasters (after subtracting the television licence fees paid by them) and approximately \$1.3 billion to the National Broadcasters in 2010-11.

To place these numbers into perspective, net government support to commercial FTA broadcasters cost approximately \$93 per household or \$35 per person in 2010-11, while net government support for national and community broadcasters cost approximately \$156 per household or \$59 per person. Net government support for commercial FTA broadcasters is broadly comparable to the level of funding for the Australian Research Council in 2010-11 which amounted to \$747.8 million¹ and the level of drought assistance for rural areas in 2009-10 which was \$751.7 million.²

While access to spectrum comprises the largest source of support to FTA broadcasters, the value of access to spectrum derived in this report should be seen as an estimate only, particularly given the lack of recent spectrum sales in Australia and the fluidity of spectrum values both here and overseas. Estimates of implicit support from the anti-siphoning scheme are also based on the current legislation since the proposed reforms are yet to be passed.

The level of net government support to FTA broadcasters in this report is also estimated for the period 2011-12 to 2014-15 as this is the period for which budget estimates are available.

In interpreting the level of assistance associated with the digital switchover, it is important to recognise that significant assistance has been provided to broadcasters both in the past and beyond the forward estimates. In total, around \$1.2 billion has been allocated to the digital switchover since the introduction of the regional equalisation plan in 2000-2001.

2.2 Obligations imposed on broadcasters

In addition to the government support provided to Commercial Broadcasters, a number of obligations are imposed on FTA and STV television broadcasters, notably around:

- what content can be shown and when it can be shown;
- restrictions in relation to advertising;
- contingencies in cases of emergency; and
- other requirements such as closed captioning.

¹ Australian Research Council 2011, 'Agency resources and planned performance', Portfolio Budget Statement, available from: <http://www.innovation.gov.au/AboutUs/FinancialInformationandLegislation/BudgetInformation/Documents/PortfolioBudgetStatementsARC2011-12.pdf> (22 August 2011). This figure reflects total net resourcing for the Australian Research Council including funding from special accounts.

² Hicks, P 2011, 'Budget Review 2010-11: Rural Affairs', Parliamentary Library available from: <http://www.aph.gov.au/library/pubs/RP/BudgetReview2010-11/DroughtMeasures.htm> (26 August 2011). Government funded drought assistance has recently fallen in recent years as a result of the easing of the drought.

The content obligations for FTA broadcasters set out both overall transmission for Australian content as well as sub quotas for Australian drama, documentaries, children's and pre-school programming. Content obligations also apply to advertising and to local content to ensure that matters of local significance are broadcast. Content obligations on STV broadcasters take the form of an expenditure requirement in relation to Australian drama.

All broadcasters are also required to conform to relevant advertising codes and meet certain requirements in relation to closed captioning. STV broadcasters are also required to ensure subscription revenue remains their predominant form of revenue.

A number of obligations are also placed on the national broadcasters, including restrictions on advertising and the need to follow ministerial directions in matters of national interest. The national broadcasters are also subject to parliamentary scrutiny and are required to meet a number of additional policy objectives under their respective Charters.

These obligations placed on broadcasters are discussed in more detail in Chapter 4 while Australian content requirements are considered in more detail in Chapter 6.

3 Government support for FTA broadcasters

Various forms of government assistance are currently provided to FTA broadcasters. These include funding for infrastructure and equipment upgrades associated with the digital switchover, the provision of access to spectrum, restrictions on the entry of other commercial FTA broadcasters and general funding for both national and community broadcasters. This section provides a discussion of historical and ongoing government support for FTA broadcasters in each of these areas.

3.1 Assistance with the digital switchover

3.1.1 Main support programs

In recent years a large amount of assistance has been provided to FTA broadcasters to assist with the digital switchover. This support has been provided through a variety of different programs. This makes estimating total budgetary support associated with the digital switchover complicated as a number of support programs overlap and are administered through multiple agencies.

In recent years there have been four major announcements of support for the digital switchover (all of which included funding for a number of years forward):

- in the 2008-09 Budget, \$37.9 million was announced to fund the digital switchover taskforce and to provide the Australian Communications and Media Authority (ACMA) with additional funds to assess signal strength;
- in the 2009-10 Budget, \$138.7 million was provided to start the household assistance scheme and digital switchover information campaign;
- in the 2010-11 Budget, \$375.4 million was provided under the VAST or 'regional blackspots' program; and
- in the 2011-12 Budget, \$376.5 million was provided to extend the household assistance scheme to the rest of Australia and enhance community engagement with the digital switchover process.

While the above funding was provided through a number of different departments and costs for a number of programs have been subsequently revised, these announcements indicate that in total over \$900 million has been allocated towards the digital switchover in recent budgets. This is significantly larger than the figures shown in the forward estimates for 2011-12 to 2014-15 in Table 3.1 because some of the announced funding was spent prior to the 2010-11 financial year while some extends beyond the forward estimates. For example, the viewer access satellite transmission service (VAST) funding program is to be spent over a 12 year period.

If funding for regional broadcasters under the regional equalisation plan and television blackspots alternative technical solutions program is included, total funding allocated for the digital switchover (both historical and proposed) amounts to approximately \$1.2 billion.

Some of the main government support programs associated with the digital switchover include VAST, the Household Assistance Scheme (HAS), information and advertising associated with the digital switchover and additional funding to ACMA to plan for the digital dividend and television channel restacking.

VAST

VAST provides a new digital satellite television broadcasting service for viewers who are unable to receive digital television through terrestrial facilities. In the 2010-11 Budget, \$375.4 million in funding for VAST was provided over 12 years. This funding includes \$99.1 million to the end of 2013 for the satellite subsidy scheme. This will allow viewers in communities reliant on community run self-help towers to access the new satellite service because of the closure of these self help sites. The satellite subsidy will be a minimum of \$400 per household for the installation of satellite reception equipment. In relation to the VAST funding the government indicated in 2010 that it would spend \$40 million per annum on VAST over the next four years.³ So far two specific grants have been made for the Eastern and Western VAST areas:

- \$82.8 million has been provided to Eastern Australia Satellite Broadcasters Pty Ltd (a joint venture between Southern Cross and Imparja television) for the Eastern VAST; and
- \$44.7 million has been provided to WA Satco Pty Ltd for the Western VAST.

HAS

HAS allows eligible pension and Centrelink recipients to be provided with professional assistance to convert to digital television. HAS funding, has been provided in three stages:⁴

- Initially, \$3 million was allocated under HAS for the digital conversion of individuals living in the Mildura TV licence area, which was the first to experience the digital conversion.
- Secondly, \$69.3 million was budgeted for HAS to be extended to regional South Australia and Broken Hill, regional Victoria and regional Queensland out of the total of \$138.7 million in funding for the digital switchover in the 2009-10 Budget.
- Finally, \$308.8 million of the \$376.5 million in funding for the digital switchover announced in the 2011-12 Budget provided for HAS to be extended to the rest of Australia.

³ Conroy, S (Minister for Broadband, Communications and the Digital Economy) 2010, 'Digital television Australia-wide', Media Release, 05 January 2010, available from: http://www.minister.dbcde.gov.au/media/media_releases/2010/001 (22 August 2010).

⁴ Department of Broadband, Communications and the Digital Economy 2011, 'Digital Switchover Household Assistance Scheme Guidelines', available from: <http://www.digitalready.gov.au/info-centre/brochures/HAS-information.aspx> (11th October 2010).

Information and advertising associated with the digital switchover

The Government has also provided significant funding for information and advertising associated with the digital switchover. For example, \$44.1 million was provided for information and advertising and \$21.3 million was provided for the digital switchover taskforce in the 2011-12 budget, out of the total digital switchover budget of \$376.5 million. Funding for information and advertising associated with the digital switchover has also been provided in previous budgets.

Additional funding to ACMA

Additional funding has been provided to ACMA for technical planning associated with the digital dividend and television channel restacking. This includes \$23.6 million provided in the 2010-11 Budget to be spent over a period of six years and a further \$6.4 million from the 2011-12 Budget to be spent over three years. Extra assistance has also been provided to ACMA as part of the digital switchover in previous budgets.

3.1.2 Support for regional broadcasters

The Government has also provided a degree of support to broadcasters operating in regional areas with the digital switchover. The most prominent support for regional broadcasters has been in the form of licence fee rebates to cover 50% of the costs for regional broadcasters converting to digital television (under the 'Regional Equalisation Plan') which was costed at \$260 million when introduced in 2000-01. Most regional broadcasters have exhausted their entitlement under this program but a few broadcasters in certain states are still eligible for further funding.

The Department of Broadband, Communications and the Digital Economy (DBCDE) annual budget estimates indicate that the Government has in recent years also provided regional broadcasters with a variety of additional support to help with the infrastructure costs associated with the digital switchover including:

- support for the construction of television towers; and
- funding to address television black spots.

The program to install television towers involved total expenditure of \$1.5 million over the period from 2008-09 to 2010-11. Total expenditure on the 'television black spots-alternative technical solutions' program was \$16.7 million over the six years of the program from 2002-03 to 2007-08.

Government funding for regional broadcasters has also been provided partly through the National Transmission Network Residual Funding Pool which operated to subsidise certain community radio, remote commercial radio and remote commercial television services as a result of the privatisation of the National Transmission Network. This funding program was ended in the 2011-12 Budget. Over the last decade \$11.7 million in funding was provided for this scheme. As the current recipients are mainly regional commercial broadcasters, funding for this in the 2010-11 Budget is included under regional broadcasters in the estimates in Table 3.1.

3.1.3 Overall costs associated with the digital switchover

Table 3.1 shows the total costs of the digital switchover in the 2010-11 financial year and provides forward estimates of the cost to July 2015. Support for DBCDE in Table 3.1 is based on estimates of the costs associated with the digital switchover provided in the DBCDE 2011-12 Budget Statement. Support to ACMA and the Department of Human Services is based on measures announced in previous Federal Budgets.⁵

Table 3.1: Estimated government support for the digital switchover (\$2011 million)

Program	2010-11 financial year	Forward estimates from 2011-12 to 2014-15
DBCDE	81.4	417.3
ACMA	15.6	31.3
Department of Human Services and Centrelink	4.9	44
Regional broadcasters	2.4	3.8
Total	104.3	496.3

3.2 Access to Spectrum

At present FTA broadcasters (both commercial and national) are provided access to a significant amount of broadcasting spectrum as part of their broadcasting licences. In return for access to spectrum and other regulatory advantages, commercial broadcasters are required to pay annual television licence fees based on their advertising revenues.

This section provides some indicative estimates of the value of the broadcasting spectrum and the amount of licence fees paid by commercial broadcasters. A market based valuation is used to estimate the value of the broadcasting spectrum which is then compared to two benchmarks based on book values and research on the value of spectrum for mobile providers. The market based valuation falls in between these two benchmarks.

Due to the fluidity in spectrum auction values and size of the spectrum used by broadcasters, it is emphasised that the valuation of the broadcasting spectrum derived here is indicative only and will need to be revised when the digital dividend and Electronic News Gathering spectrum ("ENG spectrum") is auctioned in 2012.

3.2.1 The amount of spectrum being valued

FTA broadcasters (both commercial and national) have access to two different parcels of spectrum. The first parcel is used for broadcasting while the second parcel is used for electronic news gathering.

⁵ Note that these estimates have not been broken down into specific programs (e.g. VAST and HAS) since funding for these programs is provided over a long time frame and there have been some minor revisions to previously announced funding amounts in the interim.

The broadcasting spectrum

The first parcel of spectrum, the broadcasting spectrum, consists of the following bandwidths (DBCDE 2010):

- Very High Frequency (VHF) television Band I: 45–52 MHz (channel 0) and 56–70 MHz (channels 1 and 2);
- VHF television Band II: 85–108 MHz (channels 3, 4 and 5);
- VHF television Band III: 137–144 MHz (channel 5A) and 174–230 MHz (channels 6, 7, 8, 9, 9A, 10, 11 and 12);
- Ultra High Frequency (UHF) television Band IV: 526–582 MHz (channels 28 to 35); and
- UHF television Band V: 582–820 MHz (channels 36 to 69).

In their Digital Dividend Green Paper, DBCDE (2010) noted that:

A total of 57 channels (15 VHF and 42 UHF) are used to provide analog television services across Australia. This means that analog television broadcasting currently makes use of 399 MHz of spectrum.

The FTA broadcasters have also each been allocated 7 MHz of additional spectrum for the purpose of broadcasting their digital channels. The FTA broadcasters have used this additional spectrum to broadcast additional channels in both standard definition and high definition formats. These digital channels have been fitted around the broadcasters' existing analog spectrum, that is, within the 399 MHz discussed above. The spectrum allocated for broadcasting purposes is not subject to a 15 year licence period as for other spectrum licences and, hence, the FTA broadcasters effectively hold an in-perpetuity licence for the designated spectrum.

Not all of the 399 MHz allocated to FTA broadcasters is used by the commercial and national/community broadcasters. Large parts of the spectrum remain unallocated in particular geographic areas while some segments are set aside to prevent interference.

At present, out of all the spectrum which has been allocated for television channels (which as noted above is less than the full 399 MHz since large parts of the 399 MHz remain unallocated), 57% of the allocated or planned television channels are used by the three commercial networks and 43% by the national and community broadcasters.⁶ A similar proportion of allocated television channels is used by commercial FTA broadcasters in capital city markets. In this report, the proportion of broadcasting spectrum available to Commercial Broadcasters and the proportion available to the National Broadcasters is split according to these respective shares.

When the switchover to digital television occurs at the end of 2013, the FTA broadcasters will be required to relinquish their analog channels. Since digital television channels can be broadcast more efficiently and, hence, use less spectrum, restacking these channels can allow for the release of additional spectrum which is no longer needed by broadcasters. This is referred to as the 'digital dividend'. The digital dividend, as determined by the Minister, will be 126 MHz and will include the block 694 MHz to 820 MHz. This digital

⁶ These calculations were made on the basis of an Australia wide listing of television stations provided on the ACMA website. This list is available from: http://vk3khh.gak.net.au/tv_lists/f_tv_lists.html.

dividend is part of the 399 MHz of broadcasting spectrum currently used by the FTA broadcasters.

Once the digital switchover occurs, digital television will operate in VHF Band III, UHF Band IV and UHF Band V. It is understood that digital television will make use of the 174 – 230 MHz bandwidth and the 526 – 694 MHz bandwidth which allows for 32 channels.⁷ The Minister has also indicated that 14 MHz will be reserved for digital radio services in the 174 – 230 MHz range.⁸ This means the FTA Broadcasters will retain access to 30 channels⁹ or 210 MHz of bandwidth after the digital switchover.

The ENG Spectrum

The second parcel of spectrum used by FTA broadcasters is in the range from 2500 MHz to 2690 MHz, which is exclusively licensed and allocated to the commercial FTA broadcasters and the ABC for electronic news gathering. STV also makes use of the ENG spectrum but is required to seek access through the FTA broadcasters. This band has been identified internationally for wireless access services.

ACMA has decided to convert this part of the spectrum to spectrum licences for wireless access services. No definitive timeline has been set for this, although conversion is likely to be completed sometime in 2013 or 2014 (ACMA 2010a). For the purpose of estimating forward estimates of the value of access to electronic newsgathering spectrum in this report, conversion is assumed to occur at the end of 2013.

After conversion occurs, Commercial Broadcasters will be given access to 50 MHz of spectrum (2570 – 2620 MHz, the mid-band gap) in the form of spectrum licences as well as access under apparatus licences to significant portions of alternative spectrum in the 2010 – 2110 MHz and 2200 – 2300 MHz range. ACMA indicated in its response to submissions on future arrangements for ENG (ACMA 2010a) that the following bands will be made available for ENG:

- shared use of the bands 2025–2110 MHz and 2200–2300 MHz;
- exclusive use of the band 2010–2025 MHz, at least in capital city areas; and
- access to 1980–2010 MHz and, with the caveat that mobile-satellite services may be introduced into these bands in the future, with ACMA investigating the viability of long-term sharing between ENG and mobile-satellite services.

Subsequent communication from ACMA has indicated that the Commercial Broadcasters will be given access to significant portions of the 2010 – 2110 MHz and 2200 – 2300 MHz

⁷ Australian Communications and Media Authority (ACMA) 2011, 'Clearing the digital dividend – Planning principles for restacking digital television channels RIS', available from: <http://ris.finance.gov.au/2011/06/09/clearing-the-digital-dividend-planning-principles-for-restacking-digital-television-channels-australian-communications-and-media-authority-acma/> (26 August 2011). This planning paper does not indicate that digital television will make use of the 137-144 MHz section of VHF Band III.

⁸ *Australian Communications and Media Authority (Realising the Digital Dividend) Direction 2010* (the minister's direction).

⁹ Australian Communications and Media Authority (ACMA) 2011, 'Clearing the digital dividend – Planning principles for restacking digital television channels RIS', available from: <http://ris.finance.gov.au/2011/06/09/clearing-the-digital-dividend-planning-principles-for-restacking-digital-television-channels-australian-communications-and-media-authority-acma/> (26 August 2011).

bandwidths with the 1980–2010 MHz and 2170–2200 MHz bands to be shared on a non-exclusive basis with STV and other spectrum users. However, it may be several years before ENG relocation arrangements are finalised (ACMA 2010a).

Based on ACMA (2010a) it appears that the Commercial Broadcasters will be given exclusive access to the 2010-2025 MHz band and will be given access to the 2025 – 2110 MHz and 2200 – 2300 MHz bandwidths, but will have to coordinate use of this band with other users in the coming years including earth stations, the Department of Defence’s aeronautical mobile telemetry systems and fixed links (ACMA 2010a). It is difficult to value future access to these bands since it is difficult to ascribe a relative value to spectrum that is shared with other users. In particular, shared spectrum is likely to be worth considerably less since it cannot necessarily be used by mobile or wireless access providers due to occasional interference from Defence and other users.

It is not yet clear how much FTA broadcasters will be required to pay for these spectrum and apparatus licences. Currently, broadcasters pay apparatus licence fees of \$128,607 per broadcaster to access the ENG spectrum.¹⁰

Summary of spectrum available for broadcasters

Table 3.2 summarises the amount of spectrum available to FTA broadcasters before and after the digital switchover. Prior to the digital switchover FTA broadcasters will have access to 589 MHz of spectrum in total consisting of 399 MHz of broadcasting spectrum and 190 MHz of ENG spectrum. The ENG spectrum is currently split equally between the three commercial FTA broadcasters and the ABC with each broadcaster having access to 47.5 MHz of spectrum.¹¹

After the digital switchover in December 2013 and the allocation of 14 MHz of spectrum for digital radio services, FTA broadcasters will have access to 210 MHz of spectrum for digital television broadcasting.

It is difficult to determine how much additional spectrum available for ENG purposes should be valued given that some of it is to be shared with other users, and it is unclear how much Commercial Broadcasters will be required to pay for the various parts of this spectrum. In the future, it appears that the Commercial broadcasters will have exclusive access to 50 MHz of spectrum for ENG purposes in the mid band gap, 15 MHz of spectrum in the 2010 – 2025 MHz bandwidth, shared access to 185 MHz of spectrum in the 2025 – 2110 and 2200 – 2300 MHz bandwidths and shared access to a further 60 MHz in the 1980 – 2010 and 2170 – 2200 MHz bandwidths with STV and other spectrum users.

However, as noted above, while shared spectrum is likely to have some value to users, it is difficult to estimate the value of shared spectrum given the co-ordination costs involved in using shared spectrum. The risk of interference also means that such spectrum is unlikely to be highly valued by mobile and wireless access providers until other users are allocated

¹⁰ Australian Communications and Media Authority 2011, ‘Regulation Impact Statement: Future arrangements for the 2.5 GHz radiofrequency spectrum band and long-term arrangements for ENG’, available from: <http://ris.finance.gov.au/files/2011/06/02-2.5GHz-RIS.pdf> (29 August 2011).

¹¹ Australian Broadcasting Corporation 2006, ‘Submission to the Australian Communications and Media Authority on Strategies for Wireless Access Services Spectrum Planning Discussion Paper SPP 1/06’, available from: http://www.acma.gov.au/scripts/nc.dll?WEB/STANDARD/1001/pc=PC_100536 (30 August 2011).

to specific parts of the spectrum, which may take some time. For this reason, an explicit valuation is not placed on access to shared spectrum in the forward estimates.

Assuming that FTA broadcasters are required to pay market rates for the 50 MHz of mid band gap spectrum allocated through spectrum licences (which is not clear at this point in time), after the digital switchover broadcasters will be given exclusive access to 210 MHz of broadcasting spectrum and 15 MHz of ENG spectrum in the 2010 – 2025 MHz bandwidth.

The final row of Table 3.2 indicates the total amount of spectrum available to broadcasters both prior to and after the digital switchover that is valued in this report. The amount of spectrum valued after the digital switchover is somewhat conservative, given that it does not include the shared ENG spectrum provided to Commercial Broadcasters and assumes that market rates will be paid for access to ENG spectrum in the mid-band gap (which remains unclear at this stage).

Table 3.2: Broadcasting spectrum available for FTA broadcasters

Spectrum	Pre digital switchover (2011 to 31 December 2013)	Post digital switchover (from 1 Jan 2014)
800 MHz range	399 MHz (57 channels)	210 MHz (30 channels)
2.5 GHz range	190 MHz	50 MHz (paid for through spectrum licences) and some shared access to other spectrum
Total being valued in this report	589 MHz*	225 MHz* (assuming spectrum licences for 2.5 GHz range reflect market value)

Note: * See Table 3.4 for the breakdown of the total spectrum being valued between Commercial and National Broadcasters. Briefly, the proportion attributed to the Commercial Broadcasters is based on them using 57% of the broadcasting spectrum and having access to 3 x 47.5 MHz sections of spectrum in the 2.5 GHz range with the remainder being allocated to the national broadcasters.

Source: Deloitte Access Economics.

The next section discusses the approach taken to valuing the whole 589 MHz of spectrum utilised by FTA broadcasters prior to the digital switchover and the 225 MHz which will be available post 2013.

The value of spectrum in this report is split between the Commercial and National broadcasters based on the number of channels they use. As noted above, roughly 57% of the 800 MHz broadcasting spectrum is used by the Commercial Broadcasters while the remainder is used by the National Broadcasters. The Commercial Broadcasters also have access to 75% of the ENG spectrum. While the broadcasters do not actually use all the spectrum allocated to broadcasting, this spectrum is still valued on the basis that were it not allocated to broadcasting, it could be allocated to other uses. This is consistent with ACMA's spectrum management principles of enabling and encouraging spectrum to move to its highest value use or uses as discussed in the Convergence Review discussion paper.¹²

¹² Department of Broadband, Communications and the Digital Economy Convergence Review 2011, 'Discussion paper: Spectrum allocation and management', available from: http://www.dbcde.gov.au/digital_economy/convergence_review (accessed 29 September 2011).

3.2.2 Valuing access to spectrum

Estimating the value of access to spectrum is not straight forward. A number of different factors potentially affect the value of spectrum:

- whether the spectrum is available in urban or regional areas – auction results indicate that spectrum in urban areas is generally more valuable than spectrum in regional areas, but we note that this is not always the case as addressed later in this section;
- what part of the spectrum is being allocated – different frequencies have different propagation properties which, in turn, directly impacts the scale, scope and ultimately the cost of the broadcasting infrastructure necessary to utilise the spectrum;
- the availability of suitable amounts of paired spectrum;
- the spectrum requirements of particular devices;
- international standards and commercial availability of suitable technology and equipment and devices which can be used on particular parts of the spectrum; and
- the profitability of services provided through that spectrum and the ‘life cycle’ of technology in use (for example spectrum used for technology which is in decline may be less valuable to an incumbent spectrum holder than for new entrants).

The sections below outline how spectrum has been valued in Australia in the past, the impact of technological changes on likely spectrum valuations and the approach taken to valuing spectrum in this report.

Historical valuations

In 2000, the Productivity Commission broadcasting report assessed the value of spectrum held by commercial broadcasters at roughly \$200 million per year (\$282.3 million in 2011 dollars) on the basis that operators of mobile telephone systems at the time paid \$824,000 a year for each MHz of spectrum used. This provides a potential basis for valuing the spectrum held by broadcasters today, although the emergence of new technologies and demands for the spectrum is likely to have raised its value in the interim.

The Productivity Commission (2000) also noted that access to spectrum could potentially be valued by the degree to which the commercial broadcasters valued their broadcasting licences, which at the time was over \$3 billion. However, the Productivity Commission noted that these valuations encompass not only the value of access to spectrum, but also the benefits of protection from new entry, the impact of the anti-siphoning scheme and the values of the broadcasters’ ‘brand’.

A number of spectrum auctions were also held in Australia in 2000 and 2001 but the results of these auctions fluctuated considerably. A total of \$1.33 billion was paid for two 30MHz bands of paired spectrum in the 1800 MHz range in March 2000, while only \$1.17 billion was paid in March 2001 for two 60 MHz lots of paired spectrum and some unpaired spectrum in the 3G auction of the 2GHz range. All lots were sold with 15 year licences. The valuation derived by these auctions on a MHz per year basis fell either side of that estimated by the Productivity Commission, suggesting that accurate valuation of spectrum remains difficult.

The impact of technological changes

Since 2000, some significant technological changes have occurred with potential implications for the value of spectrum. First, demand for spectrum has risen due to increased demand for new mobile technologies such as 4G and other data requirements such as machine to machine communication capabilities. For historical reasons, the availability of spectrum space for these uses is limited. The spectrum currently used by broadcasters has been referred to as ‘waterfront property’ by some observers, given its ability to carry signals over long distances and consequently reduce the need for building as many carrier towers.

At the same time, changes in technology mean that mobile providers have been able to do more with less bandwidth and new spectrum will become available from 2012 as a result of existing spectrum licences coming up for renewal. The Digital Dividend Green Paper released by DBCDE in 2010 notes that:

‘Developments in technology and demand for new services have increased demand for spectrum. This demand is greatest in bands between 400 MHz and 3.5 GHz... Internationally, the take up of mobile telecommunications services is increasing at a significant rate. The majority of spectrum licences from the most recent auction of 700 MHz digital dividend spectrum in the United States were acquired by telecommunications providers. While mobile providers are likely to be particularly interested in broadcasting spectrum other interested users include defence, emergency services and other entrants to the broadcasting industry.’

These developments make it difficult to correctly value the broadcaster’s access to spectrum based on results from the 2000 and 2001 auctions, particularly given the fluidity of auction values in the past and internationally. Accordingly, this section seeks to provide a broad indication of what the value of the spectrum held by broadcasters might be today.

The approach to valuing spectrum

In theory, the spectrum held by broadcasters should be valued on the basis of what would be obtained for it in an auction.¹³ This is consistent with allocating spectrum to its highest value use, as noted in the Convergence Review Discussion Paper on spectrum.¹⁴ Spectrum auctions are often carried out on the basis that the winner is required to pay the next highest bid (this is known as a second price or Vickrey auction). In such auctions, bidders have an incentive to bid their true valuation of the good which results in an efficient outcome – the spectrum is allocated to the party which values it the most. However, bids tend to be secret and, hence, the winning bid cannot be observed directly. Instead, because of the structure of the auction, the actual price paid by the winner will reflect the

¹³ Where there are externalities, the social value of spectrum can depart from the price achieved at auction as the Government has recognized in its approach to the renewal of some licenses where an incumbent and, possibly, its customers have invested in a particular use for that spectrum. However, such considerations may affect decisions to reallocate spectrum but not be directly relevant for the purpose of this report.

¹⁴ Department of Broadband, Communications and the Digital Economy Convergence Review 2011, ‘Discussion paper: Spectrum allocation and management’, available from: http://www.dbcde.gov.au/digital_economy/convergence_review (accessed 29 September 2011).

true value of the second highest bidder – i.e. the value of the spectrum in its next best alternative use. The approach of valuing spectrum based on its next best alternative use (or opportunity cost) has recently been adopted by ACMA.¹⁵

In this report the valuation of spectrum is based on recent international auction results for digital dividend in the 800 MHz bandwidth. These auction prices will reflect the valuation of the second highest bidder for a particular parcel of spectrum at the auction. Mobile providers have been the main bidders in these auctions internationally, reflecting the high level of demand for this spectrum by the mobile industry.

In the case of spectrum in the 2.5 GHz range, results from recent domestic sales in the 1.8 – 2.3 GHz range are available. However, results from international auctions of 2.5 GHz spectrum have yielded considerably lower valuations once spectrum in the 800 MHz band is released. Since in Australia both parcels of spectrum are planned to be released at a similar time, results from recent international auctions are also used to value the 2.5 GHz spectrum. Two relevant benchmarks for the valuation of spectrum in this report are also discussed.

Auction results in the 800 MHz range

Recently, there have been a number of auctions of spectrum in the 800 MHz band internationally. For example, the US auctioned off 62 MHz of spectrum in the 700MHz band arising as a result of their digital dividend in March 2008, raising a total of \$19.6 billion, the winners all being telecommunications companies.

Since there have been no recent sales of spectrum in the 800 MHz band in Australia, these international results can be used to provide a guide as to what the value of the 800 MHz spectrum is likely to be in Australia. Although the value of spectrum across countries will vary according to differences in population levels and the amount of spectrum allocated, spectrum analysts typically use valuations in terms of MHz per population to control for these factors across countries. There are, however, some other factors which cannot be controlled for as easily including population density, the level of competition in markets which use spectrum, and regulatory frameworks.

Ultimately it is unclear how the value of Australian spectrum in the 800 MHz range is likely to compare internationally. Some factors suggest the value of this spectrum in Australia is likely to be relatively high. Australia has a relatively large proportion of the population living in capital cities and sales of Australian spectrum in the 2.3 GHz range that took place in 2010 and 2011 have yielded prices on a per MHz per population basis largely similar to that in the US (after having adjusted for the discrepancies in the licence terms, see discussion of sales in the 2 GHz range below) which values spectrum relatively highly compared to other countries (see Table 3.3). Broadcasting licences in Australia are also granted in perpetuity as are spectrum licences in the US and thus will be more valuable

¹⁵ Australian Communications and Media Authority 2010, 'The ACMA response to public submissions: Opportunity cost pricing of spectrum', available from: http://www.acma.gov.au/scripts/nc.dll?WEB/STANDARD/1001/pc=PC_311707 (12 September 2011).

than shorter spectrum licences such as the 15 year licences issued in Sweden which are included in the Table 3.3.¹⁶

However, other factors suggest Australia's valuation might be relatively low compared to other countries. First, Australia has a low population density. Secondly, the value of spectrum, per MHz per population, might be lower for large amounts of spectrum such as that held by broadcasters (i.e. there may be diminishing marginal returns for large amounts of spectrum). The diminishing marginal value of additional spectrum may be partly offset by dividing the broadcasting spectrum up between a number of different uses but is still likely to reduce the average valuation per MHz per population.

Table 3.3 contains some results from recent sales in the 700 and 800 MHz bands internationally. The results in Table 3.3 indicate that based on the average price per MHz per population across these four countries, the value of 399 MHz scaled to the Australian population would be \$8.0 billion. However, the results varied considerably across countries with 399 MHz of spectrum in Australia being worth \$5 billion based on Sweden's auction results and \$10.2 billion based on the US auction results.

Table 3.3: Prices paid for spectrum in the 800 MHz band

Country	Date	Amount raised in national currency	\$A per MHz/population at time of sale*	Scaled to the Australian population and adjusted to 399 MHz (A\$ billion)^
Germany	May 2010	€3.58 billion	0.97	8.8
Sweden	March 2011	2 billion krona	0.56	5.0
Spain	July 2011	€1.65 billion	0.72	6.5
US	March 2008	\$19.6 billion	1.13	10.2
Italy	September 2011	€2.96 billion	1.06	9.6
Average			0.89	8.0

Note: * Exchange rates were based on official RBA rates as at the time of sale and population estimates were based on Eurostat and the US Census Bureau. Australia's population was based on the ABS Australian Demographic Statistics, December Quarter 2010 (cat. no. 3101.0).

^ Calculation based on \$A per MHz/population x 22.667 million (Australia's population) x 399.

Given the uncertainty created by various factors as to how Australian spectrum valuations are likely to compare internationally, this report assumes that the value of spectrum in Australia in the 800 MHz range is equal to the average valuation of the five countries listed in Table 3.3, being \$8.0 billion.

¹⁶ The fact that broadcasting licences are perpetual is not likely to lead to a major increase in valuations compared to a 15 year licence period. In net present value terms, assuming reasonable commercial discount rates, the value of spectrum under a 15 year licence is likely to be only slightly lower than a perpetual licence.

Recent sales in the 2 GHz range

One approach to valuing the 190 MHz of ENG spectrum in the 2.5GHz band used by broadcasters is to use results from recent Australian trades. There have been a number of trades in the 2 GHz range in recent times:

- Austar sold 97.7 MHz of spectrum in the 2.3 GHz and 3.4 GHz range in February 2011 to NBN Co for \$120 million. This spectrum covered a population of 6.19 million in a mixture of outer metropolitan, regional and rural areas.¹⁷ On the basis of these numbers, and ascribing all of the value paid to the 2.3GHz licenses, this spectrum was sold for slightly under \$0.20 on a MHz/population basis. The two parcels of spectrum were due for renewal in July 2015 and December 2015 respectively.
- Unwired sold 7 MHz of spectrum in the 2.3 GHz band to Energy Australia for \$10 million in early 2010 covering Sydney, Newcastle and the Central Coast. This spectrum was due for renewal in July 2015. Based on the population in these areas,¹⁸ this spectrum was valued at approximately \$0.28 on a MHz/population basis.
- Qualcomm sold 10MHz of paired spectrum in all capital cities in the 2.1GHz band to Optus in February 2010. Optus reported to the media that the price paid was roughly equivalent to the \$206 million it had paid for its 10MHz in the 2001 auction, on a straight line depreciation basis.¹⁹ Since the spectrum is up for renewal in October 2017 and assuming some time was factored in for regulatory approval by the ACCC and Foreign Investment Review Board, this implies that this spectrum was sold for approximately \$100 million. Given that 14.3 million people resided in the capital cities in 2010²⁰ this implies a value of approximately \$0.35 per MHz per population.

Given the period before renewal, these transactions suggest that the value of spectrum under a 15 year licence would be worth approximately \$0.70 per MHz per population.²¹ Assuming that spectrum in the 2.5 GHz range is valued at \$0.70 per MHz per population on the basis of a 15 year spectrum license, the 190 MHz ENG spectrum would be worth just over \$3 billion.

However, this valuation should be seen as an upper bound on the value of spectrum in the 2.5 GHz range since these domestic sales largely reflected sales of spectrum with lower frequencies and thus greater propagation properties than spectrum in the 2.5 GHz range and also because such a valuation is relatively high by international standards.

Overseas, auctions of spectrum in the 2GHz range have shown significant price variation, netting A\$0.22 per MHz per population in Sweden in 2008 and A\$0.37 per MHz per capita in Hong Kong in March 2009, but substantially lower values in Finland, Norway and New

¹⁷ Austar internal analysis.

¹⁸ Australian Bureau of Statistics, 'Australian Demographic Statistics, Cat No. 3101.0, December 2010.

¹⁹ Bingemann, M, 'Optus spends big on new 3G spectrum', *The Australian*, Feb 05 2010.

²⁰ Australian Bureau of Statistics, 'Australian Demographic Statistics, Cat No. 3101.0, December 2010.

²¹ While the value of a perpetuity licence would be slightly higher, access to the electronic news gathering spectrum is not provided to the broadcasters in perpetuity but rather short-term apparatus licences which will be converted to 15 year spectrum licence in the future. This report values access to this spectrum on the basis of a 15 year spectrum licence.

Zealand.²² However, in some of these countries conditions attaching to the licences auctioned served to artificially lower the ultimate price paid by the winning bidders (ie, restrictions on bidding from incumbent mobile operators with the intention of stimulating new entrants into the market).

While higher values were achieved in auctions in US and Canada, with a Canadian auction of spectrum in the 2 GHz range in 2008 netting A\$1.29 per MHz per population and an earlier US auction in 2006 yielding approximately A\$0.71 per MHz per population, those countries which have recently released spectrum in the 800 MHz range alongside spectrum in the 2.5 GHz range (in particular Italy and Spain) have received much lower valuations for any 2.5 GHz spectrum released simultaneously (below \$0.10 per MHz per population), as market participants focused on obtaining spectrum in the 800 MHz bandwidth.

These results suggest that once suitable amounts of bandwidth in the 800 MHz bandwidth is released, the valuation of spectrum in the 2 GHz bandwidth may fall considerably. This implies that a valuation of the 2.5 GHz spectrum of \$0.70 per MHz per population is likely to be an upper bound on the value of this spectrum.

If the valuation of spectrum in the 2.5 GHz range was \$0.22 per MHz per population (which is the average valuation for spectrum in the 2 GHz range in recent sales by the five countries listed in Table 3.3),²³ the value of this spectrum would be just under \$1 billion.

Given that the results of auctions overseas have tended to indicate that the value of spectrum in the 2.5 GHz range has not been particularly high once spectrum in the 800 MHz range is released, this report values the 2.5 GHz spectrum in Australia at \$0.22 per MHz per population. This is in the middle of the range of values that have been obtained in recent auctions of 2 GHz spectrum internationally.

Summary of valuation

Based on a valuation of \$0.89 for spectrum in the 800 MHz range and \$0.22 in the 2.5 GHz range, the total value of spectrum used by broadcasters prior to the digital switchover is estimated to be \$9 billion as shown in Table 3.4.

Based on Table 3.3, the value of this spectrum would range from \$6 to \$11.2 billion depending on whether the values realised in the 800 MHz range in Australia are more consistent with those realised in Sweden or the US.

²² Australian Communications and Media Authority 2010a, 'Review of the 2.5 GHz band and long-term arrangements for ENG: Discussion Paper, available from: http://www.acma.gov.au/WEB/STANDARD/pc=PC_312322 (29 August 2010).

²³ The prices in \$A on a per MHz per population basis for the five countries were \$0.71 for the US, \$0.22 for Sweden, \$0.08 for Italy, \$0.04 for Spain and \$0.03 for Germany.

Table 3.4: Valuation of broadcasting spectrum prior to the digital switchover

Part of Spectrum	MHz valued	A\$ per MHz per population	Value (A\$ billion)
800 MHz range	399	0.89	8.05
2.5 GHz range	190	0.22	0.95
Total	589		9.0
Total held by Commercial Broadcasters	57% of 399 MHz of broadcasting spectrum and 75% of spectrum in the 2.5 GHz range.		5.3
Total held by National Broadcasters	43% of 399 MHz of broadcasting spectrum and 25% of spectrum in the 2.5 GHz range.		3.7

Source: Deloitte Access Economics.

Note: Commercial FTA broadcasters are assumed to use 57% of the total broadcasting spectrum based on the fact that they use approximately 57% of total allocated channels. The commercial FTA broadcasters use three of the four allocated proportions of the electronic news gathering spectrum. Since all allocations are equal they have access to 75% of this spectrum.

The following subsections consider two potential benchmarks for the value of broadcasting spectrum in Australia shown by Table 3.4.

Benchmark 1: Spectrum Value Partners

The first potential benchmark is provided by the Spectrum Value Partners (2009) report, which assessed the value of spectrum in the 800 MHz range to mobile providers for the Australian Mobile Telecommunications Association. The report found that on a net present value basis (calculated over a 20 year period from 2008 to 2028 with a terminal value applied at the end of the period), the value of providing 140 MHz of spectrum to mobile providers ranged from \$7.2 to \$10.7 billion. The middle scenario, which assumed that mobile broadband was complementary to fixed broadband but did not replace it entirely, arrived at a value for the spectrum of \$9.147 billion.

While mobile providers are likely to be interested in acquiring more than 140 MHz, the Spectrum Value Partners report finds that the final 20MHz increase in spectrum from 120 MHz to 140 MHz, adds less than 3% of additional value in the middle scenario. This suggests there are diminishing returns to additional spectrum for mobile providers and that mobile providers are unlikely to value additional increases in spectrum beyond 140 MHz as highly.

There are, however, other entities that may value the additional spectrum held by broadcasters. For example, if restrictions on the entry of new FTA broadcasters were lifted, new entrants to the broadcasting industry may be interested in acquiring spectrum. Others, such as defence and emergency services, law enforcement agencies, national security agencies, and community groups may also be interested in acquiring some of the spectrum used by broadcasters (DBCDE 2010). In particular, the Police Federation of

Australia has actively been campaigning for greater access to broadcasting spectrum.²⁴ In the 2.5 GHz bandwidth, wireless access providers are likely to be among the major bidders for spectrum given that they have been allocated this bandwidth internationally. By allocating spectrum to multiple users, the extent of diminishing returns for large amounts of spectrum is likely to be reduced.

If the spectrum in the 2.5 GHz range is assumed to be worth \$0.95 billion (based on the analysis discussed above) and given that the middle scenario considered by Spectrum Value Partners indicates that the broadcast spectrum is worth another \$9.15 billion this would imply that the spectrum used by broadcasters prior to the digital switchover should be worth at least \$10.1 billion. The total valuation implied by the Spectrum Value Partners analysis may be even higher if entities other than mobile providers also place a high valuation on access to spectrum in the 800 MHz range.

Benchmark 2: FTA licence valuations

A second potential benchmark of recent auction results is to compare them to the values attributed to television licences in the commercial FTA broadcasters' annual reports. These valuations are not an ideal way of estimating the value of spectrum since they include the value of protection from the entry of a fourth network, the value of a broadcaster's brand and the value of the anti-siphoning scheme, as well as the (negative) impact that broadcaster's content obligations may have on asset values. The valuations may also be relatively conservative as they may not adequately take into consideration how technological changes will affect the value of access to spectrum.

As noted above, these licences were valued by the Productivity Commission at \$3 billion in 2000. The financial reports of Channel 7 indicate that they currently value their television licences at \$1.8 billion²⁵, whereas Channel 10 values theirs at just under \$1.1 billion. Unfortunately, as Channel 9 is privately owned, this sort of information is not available from them.²⁶ Given that Channel 9 has a higher market share of advertising revenue than Channel 10, but a lower market share than Channel 7 at present, these values suggest that overall the Commercial Broadcasters are likely to value their licences at between \$4 – \$4.5 billion. This is consistent with the value of these licences growing in line with inflation since 2000.

This valuation is lower than the imputed value of spectrum held by the Commercial Broadcasters in Table 3.4 of \$5.3 billion. However, these book values may reflect historical valuations rather than current market valuations and may also reflect the lower profitability of the industry following the GFC.

²⁴ Police Federation of Australia 2011, 'Dark age or digital age? The future of front-line policing during disasters', Media Release, 08 August 2011 available from www.pfa.org.au/files/uploads/PFA_Media_Releasev2.pdf (22 August 2011).

²⁵ West Australian Newspaper Holdings Group Ltd, 'Proposal to acquire Seven Media Group- Explanatory Statement', available from: <http://www.aspecthuntley.com.au/asxdata/20110308/pdf/01159724.pdf> (29 July 2011).

²⁶ Ten Network Holdings Limited, 'Annual Report for the year ended 31 August 2010', available from: <http://tencorporate.com.au/lib/pdf/2010/2010FullYearResults.pdf> (29 July 2011).

Conclusion

Our two benchmarks have fallen either side of the valuation of \$9 billion shown in Table 3.4. This valuation was based on the Broadcasting spectrum being valued at \$8 billion and the ENG spectrum being valued at just under \$1 billion as implied by the review of recent international auction results in the 800 MHz band and 2 GHz band. While domestic sales suggest the valuation of the ENG spectrum used by broadcasters could be as high as \$3 billion, recent auctions in Italy and Spain have realised relatively low values for 2 GHz spectrum once spectrum in the 800 MHz range came onto the market, so this report adopts a more conservative estimate of just under \$1 billion for the ENG spectrum.

The first benchmark considered, the Spectrum Value Partners analysis, indicates that the value of the spectrum used by broadcasters is likely to be at least \$10.1 billion and potentially considerably higher. This is consistent with the upper end of the range of estimates derived from international auction results. On the other hand, valuations of television licences suggests that commercial FTA broadcasters do not value their spectrum quite as highly as would be implied by international auction results, although both benchmarks were broadly consistent with the main valuation.

Overall, a value of \$9 billion, based on previous international auction results and domestic sales in the 2 GHz band, would seem to be a reasonable estimate for the value of spectrum held by broadcasters prior to the digital switchover. As shown in Table 3.4, since 43% of available channels are used by national and community broadcasters and 25% of the ENG spectrum, the value of the spectrum used by the ABC and SBS in the analog era is estimated to be around \$3.7 billion while the value to the Commercial Broadcasters is estimated to be around \$5.3 billion.

To determine the value of access to spectrum on an annual basis, this report uses the same weighted average cost of capital for mobile providers as is used by the ACCC in their mobile termination cost model.²⁷ This model estimates what is a reasonable return for the capital expenditure incurred by a hypothetical large scale mobile provider operating in the Australian market, based on assumptions for the WACC parameters used by the ACCC in other areas, historical data and international evidence on the relative risk of mobile providers relative to the market. Based on this evidence the model adopts a 'vanilla' weighted average cost of capital of 9.53%. This may be thought of as a reasonable WACC for a mobile provider undergoing capital expenditure (such as paying for access to spectrum) in Australia.

Assuming a 9.53% return on assets, access to spectrum for the Commercial Broadcasters is worth approximately \$505 million per year.

After the digital switchover in December 2013, the amount of spectrum available to FTA broadcasters falls to 225 MHz from 589 MHz. Based on the average valuation found in

²⁷ Wik-Consult, 'Mobile Termination Cost Model for Australia: Report for the Australian Competition and Consumer Commission', January 2007, available from: <http://www.accc.gov.au/content/index.phtml/itemId/783052> (29 August 2011).

recent international auctions, access to 225 MHz of spectrum for commercial broadcasters would be valued at \$235.5 million per year in 2011.²⁸

Table 3.5 below shows how the annualised value of broadcasting spectrum is calculated both before and after the digital switchover. As noted above, broadcasters are assumed to have access to 589 MHz (399 + 190) of spectrum prior to the end of 2013 and 225 MHz of broadcasting spectrum (210 + 15) after the end of 2013 as a result of the auctioning of the Digital Dividend and ENG spectrum. It should be noted that the valuation after the digital switchover does not include any access to shared spectrum which is proposed to be given to Commercial Broadcasters, and assumes market prices will be paid for spectrum in the mid band gap. The list of inputs on which Table 3.5 is based is provided in Appendix A.

Table 3.5: Annualised value of Australia's broadcasting spectrum (\$2011 million)

Period	Value	Annualised value	Annualised value for commercial FTA broadcasters	Annualised value for national and community broadcasters
Pre digital switchover (up to end of 2013)	8,996.8*	857.4^	505.0~	352.4~
Post digital switchover (2014 onwards)	4,311.3 *	410.9^	235.5~	175.4~

Source: Deloitte Access Economics

Note: * This valuation is based on what the relevant parcels of spectrum are estimated to be worth in 2011 (see Table 3.4 for further details on how the value of spectrum in 2011 was estimated).

^ The discount rate is assumed to be 9.53% and the annualised value of spectrum is assumed to grow in line with inflation.

~ The proportion of broadcasting spectrum used by commercial FTA broadcasters is assumed to be 57% and the proportion of electronic news gathering spectrum used by commercial FTA broadcasters is 75% (see discussion in section 2.2.1 for further details).

The value of access to spectrum in the 2010-11 financial year and the forward estimates, based on the annualised valuations in Table 3.5, are shown in Table 3.6.

The estimates in these tables should be treated as indicative only and will need to be revised as more accurate estimates of the value of spectrum become available in the future. Such estimates will become available once the digital dividend and electronic news gathering spectrum is auctioned in 2012.

²⁸ In calculating the forward estimates the value of access to spectrum is expected to grow in line with the rate of inflation and the return on assets is assumed to remain constant at 9.53%. Broadcasters will also have access to some shared ENG spectrum which are not included in this calculation.

Table 3.6: Value of access to spectrum (\$2011 million)

	2010-11 Financial Year	Forward estimates from 2011-12 to 2014-15
Commercial Broadcasters	505.0	1,615.6
National Broadcasters	352.4	1,144.1

Note: Value of access to spectrum is assumed to grow over time at 2.5% p.a. in line with inflation. The digital switchover is to be completed on 31 December 2013.

Source: Deloitte Access Economics.

3.3 Licence fees and rebates

In return for government support through the provision of access to broadcasting spectrum and the right to broadcast, the commercial broadcasters are required to pay television licence fees. Currently, different rates are charged to different commercial licensees depending on the level of their advertising revenue. The highest fee that can be charged under the legislation is 9% of a licensee's total advertising revenue.²⁹ These licence fees enter into government revenue and should be subtracted from the cost of other government support provided to broadcasters.

In 2010-11 a licence rebate was provided to FTA broadcasters to deal with the cost of the digital switchover and the cost of meeting Australian content obligations. This was estimated at the time to cost \$209.5 million (after taking into account increases in taxation revenues). The applicable rebates were 16.5% of 2009-10 licence fees, 41.5% for 2010-11 licence fees and 25% for 2011-2012 licence fees, which are to be paid in the following financial year.³⁰

The latest estimates of total licence fees collected by the Australian Communications and Media Authority (ACMA) are contained in ACMA's 2010-11 annual report. In the 2010-11 financial year \$281.2 million in licence fees were collected from commercial television broadcasters. Subtracting the rebates given to regional broadcasters under the regional equalisation plan and the \$45.7 million in rebates collected under the new licence fee rebate scheme, the net amount paid by the Commercial Broadcasters in television licence fees was \$231.4 million in 2010-11.

Estimates of the cost of the television licence fee rebates for subsequent years are contained in the 2010-11 Budget and are shown in Table 3.7.

²⁹ Television Licence Fees Act 1964 section 6A.

³⁰ Based on the way fees are calculated, this amounts to a rebate of 33% of the fees incurred in the 2010 calendar year and 50% of licence fees payable for the 2011 calendar year as stated by the Minister. Further information on the licence fee rebates can be found in the Television Licence Fees Amendment Regulations 2010 (No. 1) Explanatory Statement.

Table 3.7: Projected cost of television licence fees rebate (\$2011 million)

	2011-12	2012-13	2013-14
Licence fee rebate	121.5	74.5	
Increase in corporate tax revenue	20	9	-2
Total	101.5	65.5	2

Source: Commonwealth Budget 2010-11, Budget Paper No. 2.

Based on the expected licence fee rebates shown in Table 3.7, forward estimates of the total television licence fees predicted by the Budget can be calculated. These are shown in Table 3.8.

Table 3.8: Budget estimates of future television licence fees revenue (\$ million)

	2011-12	2012-13
Television licence fees	292.8	298
Rebate	121.5	74.5
Net television licence fees	171.3	223.5

Source: Deloitte Access Economics based on the Commonwealth Budget 2010-11, Budget Paper No. 2.

The budget estimates of future television licence fee revenue contained in Table 3.8 are used in this report up to the end of the 2012-13 financial year. However, in calculating the forward estimates in Table 3.9, the value of television licence fees beyond 2012-13 are assumed to grow at a rate of 4% per annum consistent with historical growth in advertising revenues over the period 2003-04 to 2009-10.

Table 3.9 shows the net television licence fees (including apparatus licence fees) paid by the Commercial and National Broadcasters in 2010-11 and the expected fees over the period from 2011-12 to 2014-15. At present the annual cost of renewing an apparatus licence is \$128,607 according to ACMA.³¹ Both these fees are subtracted from other government support provided to FTA broadcasters in Table i of the Executive Summary above.

Table 3.9: Net television and apparatus licence fees paid by broadcasters (\$2011 million)

	2010-11 Financial Year	Forward estimates from 2011-12 to 2014-15
Commercial Broadcasters	231.8	960.8*
National Broadcasters	0.1	0.3

Note: The value of television licence fees in the forward are assumed to grow in line with budget estimates to 2012-13 and at 4% per annum after that consistent with historical growth levels. *It is assumed that licence fee rebates are not continued beyond the 2011-12 financial year. If these rebates were to be continued at a rate of 25% the level of licence fees paid by the Commercial Broadcasters in the forward estimates would fall to \$815.7 million.

³¹ Australian Communications and Media Authority 2011, 'Regulation Impact Statement: Future arrangements for the 2.5 GHz radiofrequency spectrum band and long-term arrangements for ENG', available from: <http://ris.finance.gov.au/files/2011/06/02-2.5GHz-RIS.pdf> (29 August 2011).

3.4 Barriers to new FTA broadcasters

3.4.1 Barriers to new entry

There are a number of significant barriers to entry of a new FTA broadcaster, these include high fixed costs, availability of spectrum and licences.

Legally, following a review under section 35A of the Broadcasting Services Act a new commercial television licence could be allocated under section 35B of the Act. Section 35A requires the Minister to conduct a review under section 35A before January 1, 2012. The review must have regard to factors such as the objects of the Act, the availability of spectrum and public consultations.

While evidence suggests that a fourth television network is not high on the government's agenda with the Minister 'reportedly' ruling out a fourth network in 2009,³² the official line remains that no decision on new commercial television broadcasting licences is to be made until the completion of the statutory review at the end of 2011.

It is difficult to quantify the effect of the restriction on entry of a fourth television network, as it takes the form of foregone benefits. In particular, it is difficult to assess how successful a new entrant would be given the associated fixed costs. The relative success of a new entrant would, in turn, influence the likely effect on advertising prices.

Provided the current restriction on entry (pending a governmental review) does, in fact, prevent the entry of a new broadcaster, this will have negative effects on both television viewers and advertisers. The entry of an additional broadcaster is likely to lead to a more diverse range of programming being offered, allowing advertisers to more precisely target particular demographics and would also, most likely, lead to the cost of advertising time falling as the quantity available increases.

Overall, if a restriction on allocating new commercial television broadcasting licences prevents entry this is likely to result in advertising prices being kept higher making advertisers worse off and insufficient diversity in programming, making viewers worse off. However, it is difficult to put a quantitative value on the benefits of not having a fourth network, particularly given that it is not clear how successful a potential fourth network would be. Moreover, the FTA broadcasters ability to offer multiple channels means that now there is greater diversity for consumers than prior to the launch of these channels.

In 2004 JP Morgan estimated that based on overseas experience, a fourth television licence could be auctioned for around \$750 million.³³ However, no details of this study were able to be obtained for this report. Moreover, the value of a television licence is likely to have fallen since 2004 as a result of the existing players now having access to multiple channels which is likely to crowd out potential entry.

³² Elliot, G, 'Fourth commercial TV channel off agenda', *The Australian*, September 21, 2009.

³³ JP Morgan Research 2004, 'Licensed to kill? Implications of a new TV license in Australia.'

3.5 The anti-siphoning scheme

The anti-siphoning list and associated legislative scheme (ASL) prevents the television rights to certain sporting events from being acquired by STV broadcasters before FTA broadcasters have purchased the rights to televise these events. The list is enabled by section 115(1) of the Broadcasting Services Act 1992 which states that the Minister may specify by notice in the Gazette an event or events of a kind the televising of which should in the opinion of the Minister be available free to the general public. This notice is the anti-siphoning list. The anti-siphoning provisions were originally introduced in 1992 as part of the *Broadcasting Services (Subscription Television Broadcasting) Amendment Act 1992, No.171*.

The aim of the ASL is to ensure that the public has free access to broadcasts of ASL events, with events chosen for the list on the basis that they are considered to be of national importance and cultural significance. However, it is not clear what the threshold for the national importance and cultural significance test is, as it is at the discretion of the Minister— and many ASL sports events are never televised on FTA television.

3.5.1 Current rules and guidelines

The mechanism by which the ASL operates is as a condition on subscription television broadcasting licences. STV broadcasters cannot acquire rights to televise events on the ASL unless:

- the FTA television rights to the event have not been acquired within 12 weeks of its commencement by a FTA broadcaster (the Minister may override this if of the view that FTA broadcasters have not had a reasonable opportunity to acquire these rights); or
- the right to televise is held by ABC or SBS; or
- a commercial FTA broadcaster covering more than 50% of the national population has the right to televise the event.

There is nothing preventing FTA broadcasters from on-selling rights to events on the anti-siphoning list to STV and there is no requirement for them to acquire rights to listed events or show listed events whose rights they have acquired. However, there is a requirement that if events are shown they must not be premiered on FTA digital only channels although they can be simulcast on these channels or shown later.

3.5.2 Proposed reforms to the anti-siphoning scheme

A number of reforms to the ASL were announced by the Minister in November 2010. These reforms are meant to be implemented this year although legislation has not yet been passed. Table 3.10 provides a comparison of the current scheme with the proposed reforms. A key change is that events on the list have been divided into two main categories of events (Tier A and Tier B), with the requirement that Tier A events must be televised in full and live on the primary channel, or in the case of Tier B events within four hours of commencement on any FTA channel for FTA broadcasters to retain their rights over them.

Table 3.10: Major proposed changes to the anti-siphoning scheme

Obligation	Current scheme	New scheme
Use of multi-channels	FTA broadcasters cannot premiere ASL events on their digital multi-channels.	FTA broadcasters permitted to premiere Tier B events on their digital only channels.
Coverage obligations	No requirements to televise listed events whose rights the broadcaster has obtained.	Tier A events must be televised live in full on a FTA primary channel. Tier B events must be televised on any FTA channel in full and commence within 4 hours.
Must-offer rules	No requirement for broadcasting rights to anti-siphoning listed events to be used.	Must-offer requirements will mean that FTA broadcasters must use the rights they acquire to ASL events or offer those rights to other broadcasters.
Extension to automatic delisting period	ASL events may be acquired by STV broadcasters if FTA rights not acquired by a FTA broadcaster 12 weeks prior to the event.	ASL events may be acquired by STV broadcasters if FTA rights not acquired by a FTA broadcaster either 26 weeks prior to the event or 52 weeks prior to the start of a multi-round competitions such as the AFL or NRL.

Source: Conroy (2010).

Under the proposed reforms a number of sporting events will be removed from the list including *inter alia*:

- four of the eight AFL matches in each premiership round;
- five of the eight NRL matches in each premiership round;
- ICC World Cup cricket matches not involving Australia before the semi-finals;
- Rugby Union world cup matches not involving Australia played before the quarter finals;
- preliminary rounds of Wimbledon and the quarter finals onwards of the French Open tennis;
- the British Open golf tournament in its entirety; and
- Rugby League test matches involving Australia played outside Australia, New Zealand and the UK.

An interim anti-siphoning list was created on the 21st of December 2010 to operate prior to the passage of the proposed reforms. This list was largely similar to the previous list although a few events such as the British Open Golf, French Open tennis and the Indy car championships were removed from the list while a few other events were added including 20/20 cricket matches and FIFA world cup qualifiers involving Australia.

3.5.3 Economic benefits of implementing the proposed reforms

The economic benefits of moving to a strict ‘use it or lose it’ scenario for sporting events on the anti-siphoning list were examined by Access Economics in 2008. The strict ‘use it or lose it’ scenario considered was one under which all events which are not broadcast nationally within an hour of commencing would be available to STV. This actually opens up broadcasting scope more than the proposed reforms which give broadcasters a four hour window in which to broadcast Tier B events.

A move to a strict ‘use it or lose it’ model was found to increase revenue for both STV broadcasters and sporting codes. The net increase in revenue was found to be \$381 million (\$415 million in 2011 dollars). While further increases in revenue may arise from removing the anti-siphoning list altogether these are likely to be small in comparison to implementing a strict ‘use it or lose it’ model given that the wider audience enjoyed by FTA broadcasters means they are likely to have higher valuations of many of the premier sporting events which they currently choose to broadcast. The increase in industry revenue associated with moving to a ‘use it or lose it’ model is shown in Table 3.11.

For the purpose of the current report, no attempt has been made to compare a strict ‘use it or lose it’ model to the government’s proposed reforms to the ASL as the legislation is yet to be passed and may be the subject of ongoing review. The proposed reforms would, however, move closer to a ‘use it or lose it’ model.

Table 3.11: Effect of moving to a ‘use it or lose it’ model for the ASL on industry revenue

Model	Change in industry revenue 2010-11 financial year	Forward estimates from 2011-12 to 2014-15
‘Use it or lose it’	415.1	1,561.4

3.6 Funding of national and community broadcasters

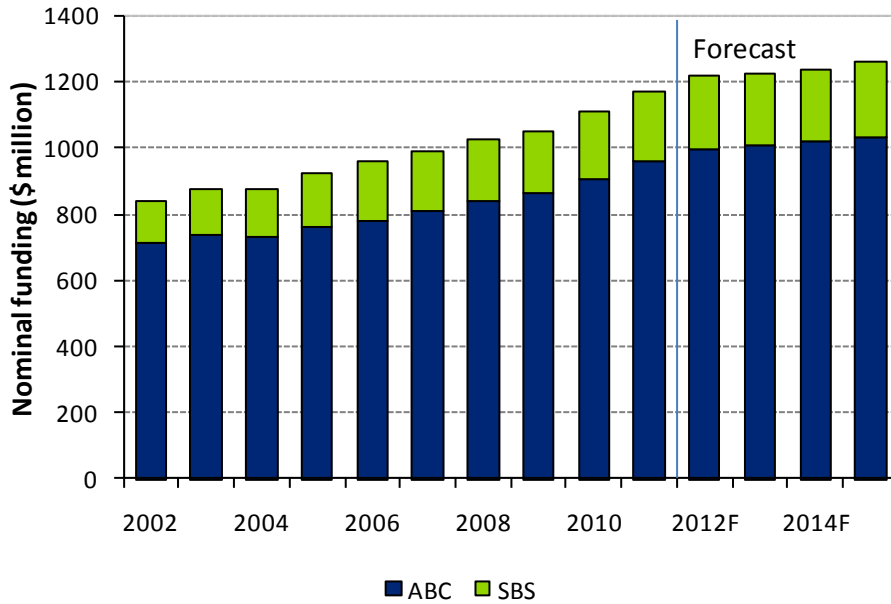
3.6.1 National broadcasters

Based on the Department of Broadband, Communications and the Digital Economy (DBCDE) Budget Statement 2011-12, the amount of government support provided to the ABC in 2010-11 was \$599.8 million for television content with a further \$86.6 million being provided for digital transmission services. The amount of government support provided to SBS in 2010-11 was \$190.6 million for television content and \$65.8 million for digital transmission services.

The growth of total government funding for the national broadcasters in nominal terms is shown in Chart 3.1. These charts are based on total funding which includes funding for both television and radio. There has been a growth in nominal funding for both agencies over the last decade, particularly for SBS. Chart 3.2 shows changes in real total funding of the SBS and ABC over time. Total real funding for the ABC has been relatively constant over

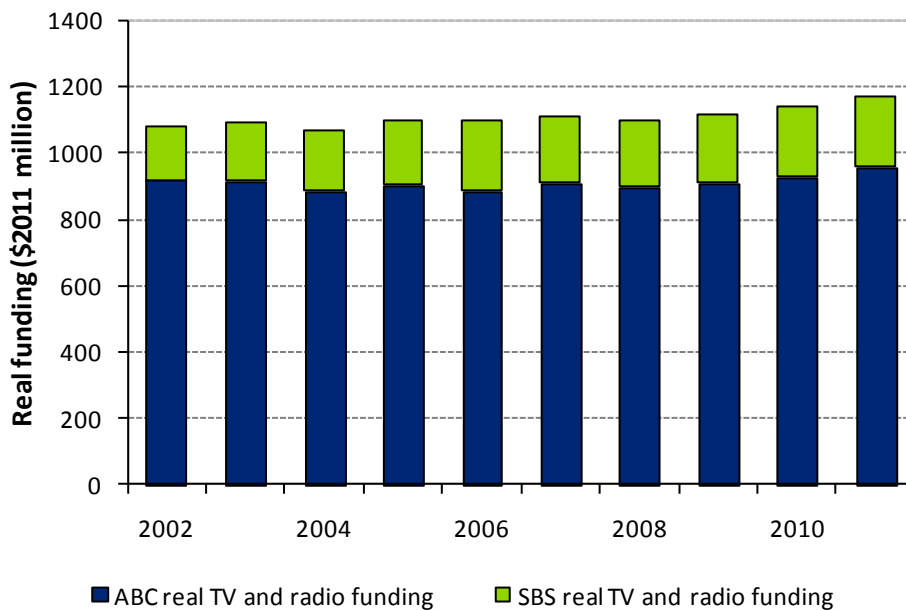
this period. By contrast, real government funding of SBS rose by 29.2% from 2001-02 to 2010-11.

Chart 3.1: Total nominal funding of the national broadcasters over time



Source: DBCDE Portfolio Budget Statements. Note: This graph shows total funding received which includes funding for both television and radio. Funding details for television alone is provided in Table 3.12.

Chart 3.2: Total real funding of the national broadcasters over time



Source: DBCDE Portfolio Budget estimates.

Note: Funding was converted to March 2011 prices using the consumer price index contained in ABS (2011) Cat. No. 6401. This graph shows total funding received which includes funding for both television and radio. Current funding levels for television alone are provided in Table 3.12.

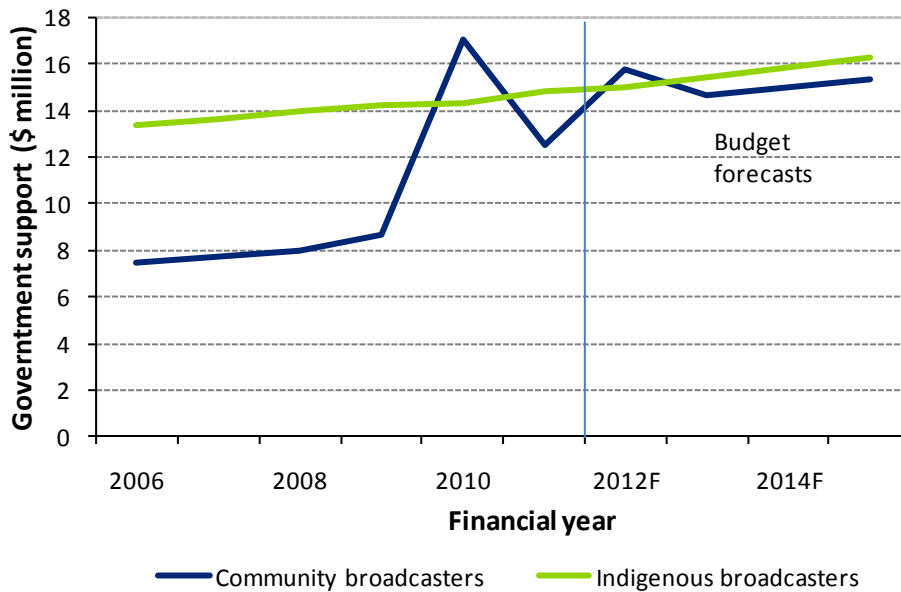
3.6.2 Community broadcasters

The 2010-11 DBCDE budget indicated that government funding for community broadcasters would be \$12.6 million. The Budget also provided funding of \$14.8 million for indigenous broadcasting organisations.

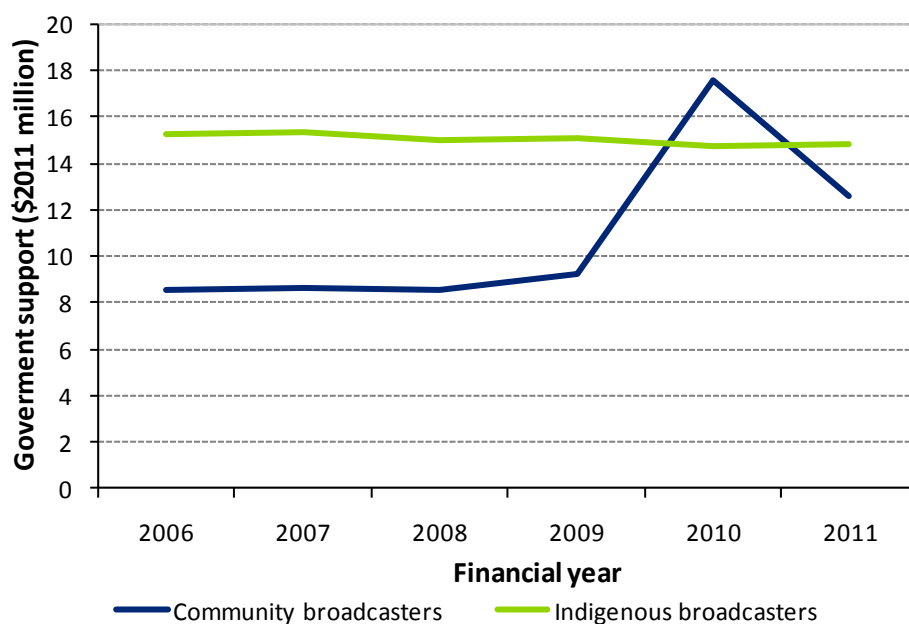
Chart 3.3 shows how nominal government funding for community broadcasters has evolved over time. Nominal funding for community broadcasters has grown considerably over time, while funding for indigenous broadcasters has grown more gradually. In real terms, Chart 3.4 indicates that government funding of community broadcasters has been relatively higher over the last two years while funding for indigenous broadcasters has been relatively constant over time.

These charts do not include the additional support that has been provided for National Indigenous Television (NITV). In total \$15.2 million annually was provided to National Indigenous Television (NITV) in both 2010-11 and 2011-12. This built on the \$48.5 million which was allocated to NITV over the four years to June 2010.

Chart 3.3: Nominal government funding of community broadcasters over time



Source: DBCDE and DEWHA Portfolio Budget estimates.

Chart 3.4: Real government funding of community broadcasters over time

Source: DBCDE and DEWHA Portfolio Budget estimates.

Note: Funding was converted to March 2011 prices using the consumer price index contained in ABS (2011) Cat. No. 6401.

Table 3.12 below shows total government funding for the national and community broadcasters associated with television and digital transmission services.

Table 3.12: Funding for national and community broadcasters (\$2011 million)

Funding recipient	2010-11 Financial year	Forward estimates from 2011-12 to 2014-15
ABC (television)	599.8	2,357.6
ABC (funding for digital television transmission services)	86.6	368.6
SBS (TV)	190.6	800.7
SBS (funding for digital television transmission services)	65.8	264.7
Community broadcasters including national transmission network	12.6	57.2
Indigenous broadcasters including NITV	30	119.8
Total funding for television content and digital television transmission	985.5	3,968.6

Note: No forward forecasts of funding for National Indigenous Television beyond 2011-12 have been announced. However, it is assumed that funding of NITV remains at existing levels over the period of the forward estimates.

4 Obligations imposed on broadcasters

In return for being awarded a broadcasting licence, a number of obligations are imposed on television broadcasters. These obligations are outlined in Schedule 2 of the Broadcasting Services Act 1992 and include:

- restrictions on political advertising;
- restrictions on advertising of tobacco and pharmaceutical products;
- requirements to identify political matter and keep records of political matter broadcast;
- content obligations (both in terms of Australian content and children's content);
- allowing authorised delegates of the Minister to have control over the content broadcast in emergencies; and
- restrictions on the broadcasting of material which is RC, X 18+ and R 18+.

These particular obligations apply to both commercial FTA broadcasters and STV broadcasters.

In addition to these obligations, both commercial FTA broadcasters and STV broadcasters must abide by their respective codes of practice (the Commercial Television Code of Practice and STV Broadcast and Narrowcast Codes of Practice) which set out community standards in programming, methods of ensuring protection of children, classification of programs; accuracy and fairness in news and current affairs; program promotions and news updates; closed captioning [closed captioning is not addressed in the STV Codes]; advertising and complaints handling processes. Both are also subject to detailed obligations in relation to what can be advertised, distinguishing advertising from program content, classification of advertising, advertising to children and food and beverage advertising *inter alia*. STV broadcasters are also required to ensure that subscription revenue (rather than revenue from advertising) is the predominant source of their revenue.

There are a number of other obligations which apply only to commercial FTA broadcasters such as a requirement to broadcast matters in the national interest as required by the Minister. Commercial FTA broadcasters must also ensure that 80% of total advertising time between 6 a.m. and midnight consists of advertisements produced in Australia, and are also subject to specific time limits in relation to advertising time.

The most prominent obligations applying to commercial FTA and STV broadcasters are the content requirements. The Australian Content Standard establishes that commercial FTA broadcasters must ensure:

- 55% of their broadcasting content between 6.00am to midnight is Australian content (initial showings of sporting programs shown between midnight and 2.00am are also counted towards this requirement);
- they meet annual Australian drama scores which are calculated based on the length and production format of drama productions;

- broadcast at least 96 hours of first release Australian children’s drama and at least eight hours of repeated Australian children’s drama;
- at least 260 hours of Australian children’s programs must be broadcast each year (more than 50% of which must be first release);
- at least 130 hours of Australian pre-school programs must be broadcast; and
- at least 20 hours of first release Australian documentaries must be broadcast.

STV broadcasters face different content requirements. The *Broadcasting Services Act 1992* prescribes that subscription television broadcasting licensees that broadcast drama channels, and drama channel package providers, are required to invest at least 10% of their total program expenditure on new Australian drama.

The national broadcasters do not have any particular Australian content requirements but are subject to other statutory obligations. For example, the ABC is required to maintain a news service³⁴, is prohibited from broadcasting advertisements³⁵ and is subject to Ministerial directions in relation to broadcasting matters which are deemed to be in the national interest.³⁶ SBS is similarly subject to Ministerial directions in relation to matters in the national interest³⁷ SBS must not show advertisements for more than five minutes in each broadcasting hour.³⁸ The ABC and SBS are also subject to broader parliamentary scrutiny.

³⁴ *Australian Broadcasting Corporation Act 1983*(Cth) s 27.

³⁵ *Australian Broadcasting Corporation Act 1983*(Cth) s 31.

³⁶ *Australian Broadcasting Corporation Act 1983*(Cth) s 78.

³⁷ *Special Broadcasting Service Act 1991* (Cth) s12.

³⁸ *Special Broadcasting Service Act 1991* (Cth) s45(2)(b).

5 The economic contribution of the sector

5.1 Introduction

The STV sector contributes to the Australian economy in a variety of ways and so there are a number of approaches to measuring its contribution. The most common measure of economic contribution is to look at what the sector adds to GDP, this is the value added by the sector. In this analysis the sector is first defined and then its gross contribution is estimated before being narrowed down to a value added (composed of gross operating surplus and labour income).

A complicating factor for the STV sector is that it is spread across at least two sectors (as defined by the ABS) namely the production and broadcasting sectors. This means that an analysis must be undertaken for both the broadcasting and production arms of the industry, which makes it difficult to precisely estimate the economic contribution of the sector.

Overall, the contribution of the STV sector to the Australian economy was estimated to be approximately \$700 million in the 2009-10 financial year. While data limitations make it difficult to precisely estimate the economic contribution of the sector prior to 2006-07, based on industry revenue growth the total economic contribution of the STV sector since 1995 is estimated to have been over \$5 billion in 2009-10 dollars.

The fact that STV is spread over two sectors also makes it difficult to accurately measure the number of individuals employed by the sector, although employment is an important aspect of the economic contribution of the sector. Employment in the sector was estimated by a recent ASTRA survey to be equal to 7,410 full time equivalent (FTE) positions in 2009-10.

The sector also contributes to the Australian economy in more subtle, less easy to measure, ways. This occurs through factors such as technological innovation, development of skills and, as is investigated in depth in this report, through providing greater choice to consumers. Consumers value having a broader range of options to choose from as they are able to watch programs more closely suited to their tastes. Economic theory provides a means to measure, or at least gauge the importance of, this value of choice. From a broader policy perspective, more choice also means greater potential to have programs that appeal to the niche demands of the Australian market, particularly demands for Australian content.

5.2 Traditional measures of contribution

The economic contribution of a sector can be measured by both:

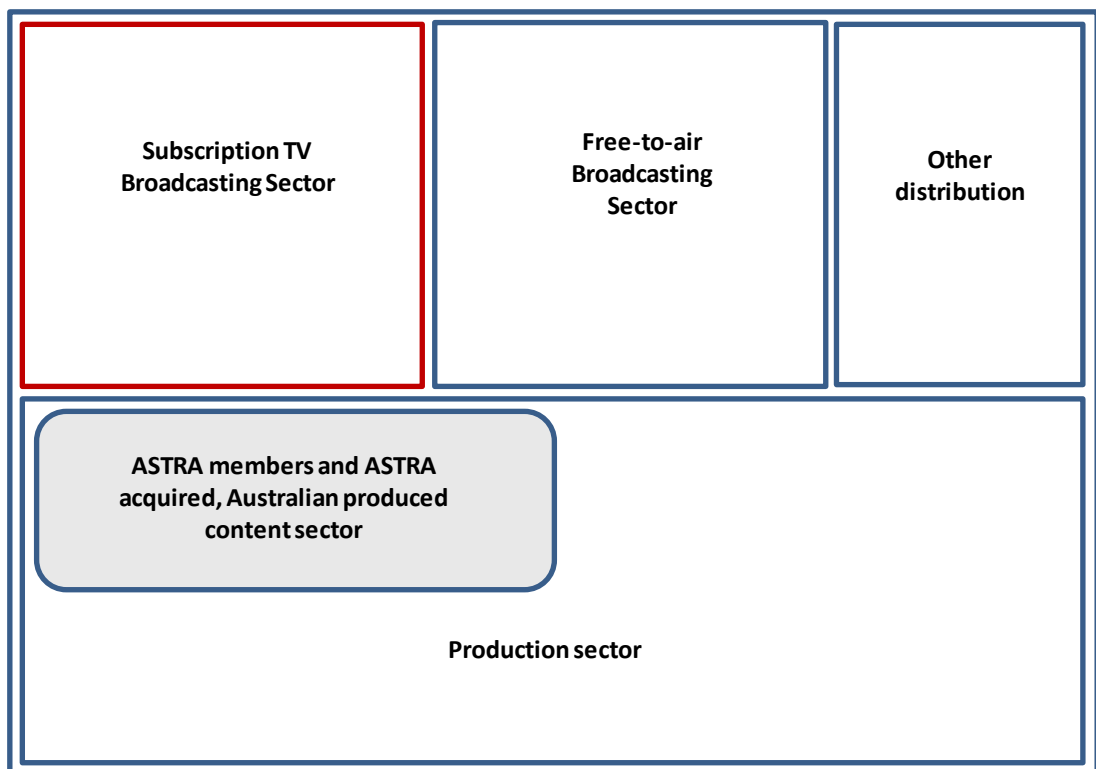
- the value added, that is, what the sector contributes to Australian Gross Domestic Product (GDP); and
- the Australian-based employment generated.

For the STV sector, these measurements can vary depending on where the boundary of the sector is drawn.

5.2.1 Defining the sector

The Australian Bureau of Statistics (ABS) defines the STV sector as including businesses where their primary activities are associated with both cable and satellite network and broadcasting operations. For a business that undertakes both broadcasting and in-house production, but with the primary focus of the business being in broadcasting, those production activities would be included as part of the STV sector (and analogously for in-house production by FTA broadcasters). The STV sector explicitly excludes both free-to-air broadcasting and any production activities where the business has its primary focus on production activities (ie out-sourced production). Figure 5.1 outlines the stylised relationship between the STV sector, the Free-to-Air sector and the Production sector as defined by the ABS.

Figure 5.1: The STV sector with the overall TV sector, stylised overview



Source: Deloitte Access Economics

The Australian-produced first-run content for STV (produced or acquired by ASTRA members that are not primarily broadcasters), indicated by the blue oval, is not separately identified by the ABS, and sits within the broader production sector. It is worth noting that given slight definitional differences and the primary focus of each business involved, parts of the production sector may overlap into the ABS-defined STV sector.

An indication of the contribution of STV to the production sector can be derived from ASTRA survey data. This data indicates that, in 2010, the STV sector spent \$578.4 million on producing Australian-based first-run programming. The STV sector would have also spent considerable amounts on second or subsequent screenings of Australian content that were first run on FTA. While the data is normally compiled on the basis of first-run content, the revenues that Australian-based production companies receive from second or subsequent screenings of Australian content on STV forms an important revenue stream for those companies, and contributes towards the business case and viability of production Australian content. That is, in the absence of opportunities for those additional revenues from STV, Australian-based production companies would face lower revenues for their content. However, industry definitions and revenues tend to be compiled on the basis of first-run content, making these complex distribution revenues models harder to attribute to the type of broadcast.

5.2.2 Describing the sector

In Australia, there are currently more than 90 English-language television channels available to subscribers of the three major subscription groups. Some 75 of these are unique subscription-only channels, eight are time-shifted subscription-only channels and seven are free-to-air television channels. There is an additional five menu, channel guide and help service channels. Furthermore, there are movie channels offering pay-per-view services, audio services, radio services and two foreign language television services.

The sector has undergone a number of technology driven changes in recent years. Primary among these have been the high degree of digitisation and earlier access to movie content. Traditionally, movie content has been offered in strict timing “windows,” first to the exhibition sector, then to the retail and rental channel and then to STV providers. While the exhibition window has still been maintained the trend has been towards allowing content to be provided through STV at the same time as retail and rental channels.

The sector includes local operators of subscription television services, FOXTEL and Austar and Fetch TV. As of June 2008 FOXTEL and Optus TV subscriber numbers are reported together because Optus TV features FOXTEL packages available only to existing customers as does Telstra. There are multiple competitors to the STV sector including the FTA broadcasters, as well as international companies such as Google and Apple TV who are signing worldwide distribution rights with major studios and content providers. SelecTV was founded in 2005 as a low cost option to subscription television services. However, as of 15 November 2010, SelecTV discontinued its service and FOXTEL and Austar obtained the rights to make a marketing offer to Select TV customers. FOXTEL had more than 1.6 million subscribing households in late 2010. Most of these households were located in urban areas. Austar has a smaller number of subscribing households, but a larger proportion of the regional customers with around 760,000 subscribing households. As of late 2010, the operators had a combined of around 2.4 million subscribing households. Before moving on to consider the economic contribution of the sector, some other statistics can give a good

idea of its size and recent growth. Table 5.1 shows the increase in market penetration for STV and the value of this sector.

Table 5.1: STV sector indicators

	2006	2007	2008	2009	2010
Market penetration	23.1%	25.2%	27.9%	29.4%	30.9%
Market value (\$AU million)	1,689	2,051	2,443	2,661	2,779

Source: PWC 2011

5.2.3 Measuring economic contribution

The direct economic contribution to GDP of the subscription television sector is the value added by labour and capital inputs employed directly by the industry. Direct activities of the industry include producing the content, distributing the content, and consumer use through watching or buying the content.

This means that, although the numbers presented below are aggregate figures, they incorporate the contribution of the large number of components which go into broadcasting and producing STV. For example, the estimates below incorporate the effect of:

- Broadcasting sector
 - investment in broadcasting infrastructure, such as cables and set top boxes;
 - installation of STV equipment in customers' homes;
 - staff dealing directly with customers, such as call centre operators; and
 - back office staff, such as finance and administration;
- Production sector
 - investment in production infrastructure, such as sets and filming and lighting equipment;
 - staff dealing directly with production of content, such as directors and location scouts; and
 - back office staff, such as program development, financing and administration.

Economic contribution of the STV broadcasting sector

Previous Access Economics studies have measured the direct economic contribution of the STV sector in Australia (as indicated by the red box in the above figure) at \$544 million in value added for the reference year 2009-10. These calculations are set out in Table 5.2.

Table 5.2: Economic contribution of the STV sector, 2009-10

Subscription television sector	2006-07	2009-10
Gross Output (\$M 2009-10)	2,494.1	3,320.1
Of which:		
Gross operating surplus	185.8	247.3
Labour income	223.0	296.9
Value added	408.8	544.1

Source: Access Economics, Economic Contribution of the Film and Television Industry, August 2011. Figures for 2006-07 are from the earlier March 2009 version of this report and adjusted to \$2009-10 using the consumer price index from ABS (2011) Cat. No. 6401.

The total gross output of the sector was around \$3.3 billion in the reference year. After subtracting the cost of inputs, the \$544 million in value added is generated from \$247 million in Gross operating surplus (GOS) of the sector and \$297 million in labour income. Conceptually the GOS is equal to the earnings before interest tax depreciation and amortisation of the sector (EBITDA) but may depart from it due to specific accounting treatments. The estimated figures for 2009-10 are 33% higher in real terms than the ABS data for 2006-07 reflecting the strong growth of the sector in recent years.

Economic contribution of STV local production activity

The economic contribution identified above represents the subscription TV broadcasting sector as defined by the ABS but the industry also makes a significant contribution through the production of content (the grey box in Figure 5.1, which is outside the ABS defined sector). As previously discussed, survey data collected by ASTRA from its members indicates that \$578.4 million in first-run Australian-based production activity was generated by the STV sector in 2010, see Table 5.3.

Of this, \$412.9 million is content produced by ASTRA members, about \$47.1 million is accounted for by promos produced by ASTRA members and a further \$118.4 million is acquired from Australian-based third-party production companies, that is first-run on STV.

Table 5.3: Production activity of the STV sector, 2009

STV - Australian first-run production content	\$M (2009)
Production	412.9
Acquired	118.4
Promo, Interstitials & Hosting	47.1
Total	578.4

Source: ASTRA

This total level of production commissioned or acquired is comparable to the Gross Output identified for the sector earlier. To identify the economic contribution this gross amount must be reduced down to the value added. The economic contribution, as measured by value add, is estimated to be \$223 million. The value added is broken down into \$121 million in GOS with wages paid by the sector in the reference year being \$102 million, shown in Table 5.4.

Table 5.4: Direct economic contribution of the STV production sector, 2009

STV - Australian first-run production content	Direct
Gross Output (\$M 2009)	578.4
Of which:	
Gross operating surplus	121.1
Labour income	102.1
Value added	223.1

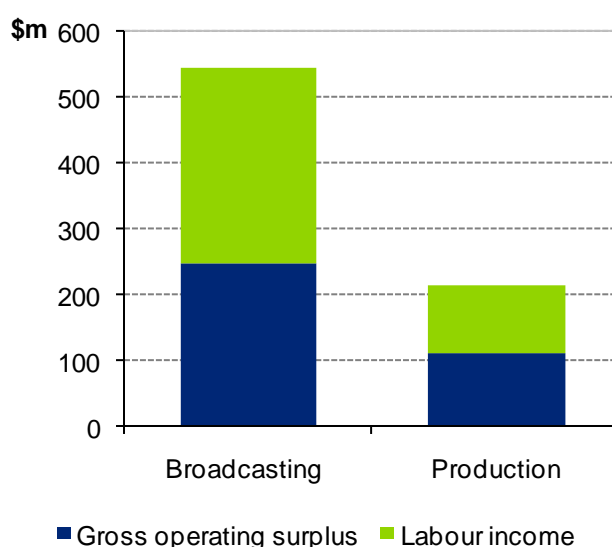
Note: The value added comprises gross operating surplus and labour income but has been rounded down to the nearest decimal point.

Source: Deloitte Access Economics

As noted above, these estimates are likely to be a lower bound on the level of support provided by STV to the production of Australian content, since the revenues generated from second and subsequent screenings on STV of Australian content (first screened on FTA) are an important part of the overall viability of Australian production companies.

The STV sector overall

An important caveat when considering these figures is that the value added from local production cannot be directly added to the \$544.1 million STV broadcasting sector from the ABS, as there may be some overlap relating to in-house production by businesses where the primary activity is broadcasting. Having said this, the overall value added of both arms of the sector is presented in the chart below. The analysis suggests that the sector is roughly evenly balanced between capital and labour income (with labour taking a slightly larger share). The broadcasting arm of the sector also makes up the majority of value added.

Chart 5.1: Direct economic contribution by STV, 2009-10

As noted above it is not possible to simply add together the broadcasting and production arms of the STV sector, given the potential for overlap between the sectors. Some of the expenditure on Australian content undertaken by STV, such as that which is acquired

directly from production companies, falls entirely within the production sector whereas most promotions are done internally. Considering these overlaps it is estimated that the contribution of the STV sector to the Australian economy was approximately \$700 million in the 2009-10 financial year.

While data limitations make it difficult to precisely estimate the economic contribution of the sector prior to 2006-07, based on industry revenue growth the total economic contribution of the STV sector since 1995 was estimated to have been over \$5 billion in 2009-10 dollars.³⁹

The contribution of STV is compared to other sectors of the economy is shown in Table 5.5. As discussed earlier, STV is a component of multiple sectors as defined by the ABS and so should be expected to be smaller than the sectors listed by the ABS. As such, Table 5.5 compares STV as a percentage of some sectors listed by the ABS.

Table 5.5: STV compared to sectors defined by the ABS

Sector	STV as a percentage of ABS sector (%)
Internet publishing and broadcasting	153-191
Gas supply	61-76
Water transport	51-64
Forestry and logging	50-63
Internet service providers, web search portals and data processing services	48-60

Source: ABS 2011

This comparison indicates that the economic contribution of STV is itself, far larger than the contribution of internet publishing and broadcasting and is comparable to other significant Australian industries such as gas supply and water transport.

Employment

There are two recent sources available to gauge the employment generated by the STV sector. First is the recent Access Economics report, used above to identify the contribution of the STV broadcasting sector. The second source is the recent ASTRA member survey, used above to quantify the contribution of the STV production sector.

Access Economics' earlier research and modelling indicate that the STV sector created around 3,500 FTE positions in 2009-10, as is shown in Table 5.6.

³⁹ To calculate the economic contribution of STV over time, the direct value added for the broadcasting sector calculated for the 2006-07 and 2009-10 years in 2009-10 dollars were adjusted over time based on annual growth in total industry revenue. For production spending, the value added as a proportion of total spending in 2009-10 was applied to ASTRA survey data for the previous four years. For years prior to this, production spending was adjusted based on annual growth in industry revenue and then adjusted to determine the value added based on the ratio applying in 2009-10. It was assumed that there was a 30% overlap of production spending that was captured in the broadcasting sector.

Table 5.6: Employment in the STV sector, 2009-10 (Access Economics)

Subscription television sector	
Employment (FTE)	3,514.20

Source: Access Economics, Economic Contribution of the Film and Television Industry August 2011

Turning to the second data source, the recent ASTRA survey indicates that the STV sector generated just over 4,920 FTEs in the 2010 reference year. A further 2,490 FTE positions were estimated to have been created as a result of platform outsourcing, that is content acquired from third-party production companies. This indicates that based on the ASTRA Survey STV is responsible for a total of 7,410 FTEs, see Table 5.7.

Table 5.7: Employment in the STV sector, 2010 (ASTRA member survey)

Employment	FTE
STV production and distribution, ASTRA members	4,920
Platform Outsourcing (ASTRA estimate)	2,490
Total	7,410

Source: ASTRA (2011).

Comparison between the two sources is made difficult by the imprecise and varying definitions of the sector, which were discussed earlier, and by the possibility of mismeasurement of part-time employees, particularly when gathering survey data.

5.3 Investment

As noted earlier, the value added by the STV broadcasting sector includes the returns from its investment in technology and innovation. That is, for example, it includes the contribution of Telstra and Optus in providing cable infrastructure, the provision of set top boxes and the like. As investment in this type of technology and innovation is captured as a return, it represents the flow of economic activity being generated by the investment but may not give a complete picture of the stock of investment made.

FOXTEL alone has made around \$2.2 billion in capital investment between 1995 and 2010 included in this expenditure is a \$600 million dollar upgrade to digital transmission beginning in 2002, with further funding of \$550 million in 2004 (FOXTEL 2010). The physical goods created through this capital investment range from the set top boxes deployed, interactive remote control technology, hard drive based recording and time shifting of programs, mobile content provision, internet based recording and 3D broadcasting (FOXTEL 2010) and range of other investments..

Austar has also engaged in significant technology and infrastructure investments over the last decade in building its subscriber base. Austar's annual reports indicate that, in total, it spent just under \$890 million on capital investments over the period 2001 to 2010.

Infrastructure suppliers to the subscription television sector including Telstra and Optus have also make very considerable investments in cable and satellite distribution networks. These investment figures are not included in FOXTEL or Austar numbers above.

In addition to this, there are broader benefits created by investment in technology and innovation. These broader benefits are based on the public good nature of innovation such as the learning-by-watching benefits that accrue to other firms as well as the public. These benefits will be considered in section 5.5 of this report.

5.4 Consumer choice

In addition to STV's direct and indirect contribution to the broader economy, another important aspect of STV is its role in enhancing consumer welfare through providing greater product variety and facilitating product innovation. This section of the report discusses the additional benefits of product variety and product innovation created by STV for consumers.

5.4.1 The benefits of variety

In addition to lower prices and higher quality, consumers also value product variety. This is because a consumer is more likely to find a product which more closely matches their preferences. The basic "love of variety" approach therefore allows for consumers to value variety, so that (for example) one unit each of two different types or varieties of a good is preferable to two units of the same variety of the good. As a practical example, this approach would imply that a consumer would prefer owning a red jumper and a blue jumper to owning two identical red jumpers.⁴⁰ Another good example is breakfast cereals, many consumers prefer to have a variety of different cereals to choose from rather than consuming the same brand year after year.

In the context of television, being able to watch Iron Chef as well as Master Chef is likely to increase the welfare of many consumers who regard them as different products, although to other consumers these programs may seem more or less the same. A more extreme example is the provision of specialised sports stations (such as One and FOX SPORTS) as well as specialised children's stations (such as ABC3 and Nickelodeon).

An increase in product variety has some important economic implications:

- First, it allows economists to quantify both analytically (and, under appropriate assumptions, empirically) the increase in consumer wellbeing which comes about as a result of greater product variety.
- Second, and more importantly, it allows economists to compare the gain in consumer wellbeing from greater product variety with the gain to consumers of a fall in the price of a single variety. In other words, using this approach, one can derive "price-equivalent" comparators of changes in variety. Changes in both prices and variety affect consumers – but the economic approach allows one to directly compare the effects of both kinds of changes.
- Third, since standard measures of competitiveness tend to ignore product variety, it follows that standard measures of the burden of regulation will also tend to underestimate the burden of regulations. Hence, the approach allows economists to more accurately measure the costs to consumers of regulations in situations where variety is important.

⁴⁰ The basic approach was pioneered by Dixit, A. and Stiglitz, J. (1977) "Monopolistic Competition and Optimum Product Diversity," *American Economic Review*, 67: 297-308.

5.4.2 Approaches to quantifying the benefits of product variety

In the economic literature, there are currently two broad streams to quantifying the benefits of product variety. Both rely on an underlying ability to compare reductions in price to increases in variety.

The first stream to modelling product variety analytically is based on the work of Avinash Dixit and Joseph Stiglitz. Dixit and Stiglitz (1977) noted that while economies of scale may allow firms to lower costs by producing a large quantity of a single product, this will come at the cost of a reduction in the variety of goods available to consumers. In this case, the advantage of lower prices needs to be balanced against the reduction in consumer welfare from reduced variety.

This trade-off is part of the reason why, in many industries, we see either:

- a large number of firms each producing a slightly different product (called monopolistic competition and present in markets such as take away restaurants near employment centres); or
- a few firms selling a large number of different varieties (for example the different channels provided by STV or the different products provided by large supermarkets).

The economic model derived by Dixit and Stiglitz can be used to show, under appropriate assumptions, that an increase in the number of varieties available makes consumers better off. This approach was recently used by Deloitte to estimate the benefits that consumers have experienced from increases in variety in retail stores. This analysis suggested that a 1% increase in variety could be equivalent to a permanent increase in weekly earnings of about \$12.74 a week, for an average Australian.

A second strand of research follows on from Hausman (1997). Hausman was able to show that, starting from a specific pricing level, the welfare effect of a new product is equivalent to the welfare effect of a reduction in this price. Hausman applied this model to estimate that delays in the introduction of telecommunication services reduced benefits to US consumers by billions of dollars a year. More recently, the approach has been applied to improvements in the variety of books available as a result of online retailing (Brynjolfsson *et al* 2003). Brynjolfsson found that enhanced product variety increased benefits to US consumers by between around US\$700 million to US\$1 billion in the year 2000. This was estimated to be around seven to ten times greater than the benefit from reduced prices in the market. Also along this line, Goolsbee and Petrin (2001) found that the benefit to consumers, above what they pay, of having access to satellite television was around \$50 a year.

An alternative approach to valuing variety was set out by Bils and Klenow (2001). This approach focuses more on macroeconomic aggregates and considers how new varieties alter spending patterns, drawing expenditure away from certain areas and into others. Bils and Klenow specifically identify the growth in consumer spending on cable television as being the main determinant of growth in spending on television overall. More generally, it seems as if consumers have rapidly shifted away from more static categories and towards more dynamic categories of goods.

This research provides a strong indication that the benefits of variety are often very large. However, these approaches are difficult to translate into the market for audio visual services, for FTA, programming is effectively given away while, for STV, new channels are often bundled into existing packages. This makes it difficult to identify a relationship between prices and varieties, as can be done for more traditional markets such as books or groceries.

Having said this, attempts have been made to estimate or model this relationship. The Office of Economic Research (OER), a part of the US International Trade Commission, uses an estimate of 1.9 as the elasticity of substitution for subscription TV in its modeling for the US market (2004). This elasticity of substitution is comparable to that of other consumer products listed by the OER.

Applying the methodology recently used by Deloitte, which is derived from Dixit and Stiglitz (1977), suggests that if STV was associated with a 1% increase in total product variety available to consumers (across all goods and services- not just television), when converted to a reduction in prices this could be equivalent to a permanent increase in income of around \$788 a year for the average worker.⁴¹

A complicating factor in interpreting these results is that the increase in product variety provided by STV does have some effects on the FTA broadcasters. For example, there may be some programs which are purchased by STV that would otherwise be shown on FTA. The extent to which STV is likely to reduce the variety of programs shown on FTA is unclear. Blockbuster sporting events are likely to continue to be shown on FTA as the potential advertising revenue raised from such events is large. However, STV broadcasters may be able to outbid FTA broadcasters in relation to some smaller sporting events and specialised programming which would otherwise have had sufficient audience shares to be shown on FTA. Those not subscribing to STV are also likely to have a relatively high elasticity of substitution and thus are likely to be less affected by reductions in programming variety.

5.5 Broader benefits

The variety of programming offered by STV also helps achieve other policy objectives. These broader policy objectives are twofold: first, the provision of greater breadth and depth of programming, helps reflect Australia's cultural diversity and broad tastes and interests and, second, the ability to cater to specialised consumer tastes supports the production of Australian content. That is to say, an important driver of demands for specialised programming is likely to be the desire of Australians to see specific types of Australian content (such as sporting events, historical or natural documentaries, comedy or drama). By being able to better meet particular consumer tastes, STV makes an important contribution to key policy goals.

In addition to helping meet these policy objectives, STV also provides benefits to society through its role in fostering innovative programming. Many of the programs which premiere on STV are later released in similar formats on FTA. While the producers of these

⁴¹ This is calculated as $\frac{1}{1.9-1} \% \times \$1,359.10 \times 365.25$ where \$1,359.10 is average weekly earnings taken from ABS (2011c).

programs are primarily responsible for the ideas behind these programs, they receive substantial support throughout the broadcasting process from the broadcaster or channels which have agreed to air them. Examples of innovative programming by STV include the creation of the Lifestyle channel and the FOX Footy Channel, both catering to audiences that had been previously under-served. Programming such as *Beauty and the Beast*, the mini-series *The King*, *Love My Way* and Australia's *Next Top Model* have also demonstrated the ability of STV to produce new Australian programming with appeal to a broad audience (FOXTEL 2010).

It should be noted that this process of product innovation is not entirely one way - programs premiering on FTA may also be later shown or modified for STV - thus both platforms contribute in important ways to the innovation process.

STV also creates benefits from innovation in broadcasting and network technologies, in addition to the innovation in programming discussed above. Some of the benefits of innovation in this type of physical innovation are captured in the value added that was identified in Table 5.2 but many are not. Innovation has strong public good characteristics in that the research behind an innovation is non-rivalrous (once the research is created it can be used by many firms) and often non-excludable (it is difficult to exclude users from accessing the results of research).

More concretely, once a firm has invested resources into creating a new product, method of product delivery or technology then it becomes relatively easy for many other firms to replicate the innovation. This learning-by-watching behaviour is often referred to as a spillover (Productivity Commission 1995) or externality. This means that investment in innovation by STV generates benefits for the Australian economy beyond the direct value added. For example, investments by the STV sector in developing and implementing technologies such as internet based scheduling and distribution of programming could be harnessed by other media broadcasters in Australia to allow them to more easily implement similar technologies.

5.6 Conclusion on economic contribution

Overall, the STV sector makes significant contributions to the Australian economy, both in traditional national accounting measures, such as value added, as well as in employment and in terms of the level of choice provided to consumers.

Looking first at the most standard measures of economic contribution, the STV sector contributes to the economy through both its production and broadcasting arms. Analysis indicated that the broadcasting component added around \$544 million to the Australian economy in 2009-10, while the production component added around \$223 million in value. Some care should be taken in interpreting these figures as there is likely to be overlap between the two arms of the STV sector which could lead to some double counting. That being said, it is estimated that the STV sector added approximately \$700 million in value to economy in 2009-10 and created 7,410 FTE positions both directly and indirectly.

While data limitations make it difficult to precisely estimate the economic contribution of the sector prior to 2006-07, based on industry revenue growth the total economic

contribution of the STV sector since 1995 was estimated to have been over \$5 billion in 2009-10 dollars.

The value of variety provided by STV is a more unconventional, but no less important, measure of the sector's contribution to the Australian economy. Economic theory provides some methods to estimate the value of variety. These approaches have been applied to markets such as groceries and book sales and indicate that the benefits from increased variety are large, particularly when compared to other benefits such as reduction in prices. Adaptation of these approaches to television programming is difficult but analysis suggests that, if STV were to be associated with a 1% increase in total product variety available to consumers (across all goods and services- not just television), this could be equivalent to a permanent increase in income of around \$788 a year.

In addition to this, the ability of STV to better cater to broad and divergent demands aids in the policy goal of providing Australian content that is valued by the viewer. The ability to meet niche demand also allows for programming which fully reflects the many cultures found in Australia. Finally, STV contributes to innovation in programming, again adding to the variety presented to the consumer as well as providing valuable information to other producers about consumer demands.

6 Australian content

6.1 Introduction

As Australia moves towards a more converged media environment, the issue of how to promote the production and distribution of high quality Australian content becomes increasingly important. As the Convergence Review Discussion Paper highlights:

“The growth of content consumption on alternative platforms will mean that a growing proportion of content will not be subject to existing Australian content regulation.”

The growth of alternative delivery platforms means that existing regulatory frameworks will need to be reconfigured to cater for new delivery platforms and to ensure that high quality, appealing Australian content continues to be produced and consumed. In particular, future regulatory frameworks should:

- promote competitive neutrality across delivery platforms – by ensuring that content obligations do not disadvantage existing broadcasters relative to new delivery platforms and that any regulatory advantages provided to commercial FTA broadcasters are removed;
- encourage the development of higher quality Australian content – by relying more on production subsidies, allocated on a competitive basis in ways that encourage producers to invest in higher quality productions;
- promote greater contestability in relation to government funding to ensure that funds are allocated on a competitive basis to producers who are most likely to invest in high quality productions; and
- reduce the level of reliance on quotas to promote Australian content – while there may be some scope for using quotas in the long term, any quotas will need to be smaller and focus on areas that would be significantly undersupplied by the market such as drama, children’s programming and documentaries.

This chapter proceeds in three parts. The first describes the policy objectives underlying the current Australian content regulations and assesses how the current regulatory framework operates. The second considers how the current regulatory framework will need to change in the longer run as convergence results in increased competition from alternative delivery platforms. The final part assesses some policy options that could provide greater flexibility in the transition to a converged world.

6.2 The policy objectives of the Australian content regulations

The Australian content regulations currently seek to achieve two main policy objectives:

- developing and reflecting a sense of Australian *identity, character* and *cultural diversity*;⁴² and
- promoting the availability of television and radio programs about *matters of local significance*.⁴³

Various additional policy objectives are also imposed on the ABC and SBS in recognition of their special status and role as public broadcasters:

- the ABC is required to provide broadcasting programs that contribute to a sense of *national identity*... and reflect the *cultural diversity* of the Australian community;⁴⁴
- the ABC is also required to encourage and promote the *musical, dramatic* and other *performing arts* in Australia and provide a balance between broadcasting programs of wide appeal and specialized broadcasting programs;⁴⁵ while
- SBS is required to provide multilingual and multicultural radio and television services that inform, educate and entertain all Australians, and, in doing so, reflect Australia's *multicultural society*.⁴⁶

The policy objectives underlying the Australian content regulations appear to be aimed at achieving goals for both quantity of content shown and its quality. Namely, quality content that reflects and analyses the Australian character and identity, promotes a diversity of views about news and current affairs and represents Australia's multicultural society. Evidence from the economic literature suggests that the Australian households broadly supports the promotion of Australian content and place a valuation on Australian content which is similar to its cost of production.⁴⁷

At present a number of different agencies and regulations are used to achieve these policy objectives. For example, SBS and ABC are principally responsible for promoting Australia's cultural diversity and diversity in programming, while local content quotas are the main policy instrument for ensuring a reasonable quantity of Australian content is shown by the Commercial Broadcasters. Screen Australia, on the other hand, focuses on promoting highly creative and innovative Australian productions through grants, interest free loans and pro-rata equity investments, although Screen Australia's objects also require it to promote the commercial sustainability of Australian producers.⁴⁸ Thus Screen Australia has

⁴² Broadcasting Services Act s 3(1)(e).

⁴³ Broadcasting Services Act s 3(1)(ea).

⁴⁴ ABC Act s 6.

⁴⁵ ABC Act s 6.

⁴⁶ SBS Act s 6.

⁴⁷ For a detailed analysis of Australian households willingness to pay for Australian content see Papandrea, F 1999, 'Willingness to pay for domestic television programming', *Journal of Cultural Economics* 23: 149-166.

⁴⁸ Screen Australia Act 2008 (Cth) s6(1)(a).

a role in both supporting local producers and promoting the use of the open market where possible.⁴⁹

6.3 The current regulatory regime

The Australian Content Standard, which regulates what types of Australian content is shown on TV, states that commercial FTA broadcasters must ensure that:

- 55% of their broadcasting content between 6.00am to midnight is Australian content (initial showings of sporting programs shown between midnight and 2.00am are also counted towards this requirement);
- they meet annual Australian drama scores which are calculated based on hours shown in prime time, production format (e.g. series, mini-series, telemovie or feature film) and expenditure;
- they broadcast at least 96 hours of first release Australian children’s drama over a three year period including 25 hours in any given year and at least eight hours of repeated Australian children’s drama;
- they broadcast at least 260 hours of Australian children’s programs each year (more than 50% of which must be first release);
- they broadcast at least 130 hours of Australian pre-school programs;
- they broadcast at least 20 hours of first release Australian documentaries between 6am and midnight each year.

Moreover, regional Commercial Broadcasters must meet certain local content requirements based on a points system, which equates to a requirement that they produce approximately 360 minutes of local news or 720 minutes of other material of local significance over a six week period.

The Australian Content in Advertising (Television Program Standard 23) further establishes that 80% of advertising time between 6 a.m. and midnight must consist of Australian produced advertisements, although in practice the amount of Australian advertising considerably exceeds this threshold.⁵⁰ There are no mandatory Australian content quotas at present for the ABC, SBS or commercial FTA multi-channels.

These quota targets, with the exception of adult drama which uses a points system, are primarily focused around ensuring a reasonable quantity of Australian content is produced and shown rather than on enhancing the quality of programming.

STV broadcasters face different content requirements. STV licensees that broadcast drama channels, and drama channel package providers, are required to invest at least 10% of their total drama expenditure on new Australian drama, although the programs in which they invest do not necessarily need to be shown.⁵¹ The growth of STV in recent years, both in terms of subscribers and channels, has increased the required level of investment in

⁴⁹ Screen Australia Act 2008 (Cth) s6(3)(c).

⁵⁰ ACMA provides details on Annual Compliance Rates on its website:

http://www.acma.gov.au/WEB/STANDARD/pc=PC_91799 (23 August 2010).

⁵¹ *Broadcasting Services Act 1992* (Cth) s103N.

Australian drama over time, although STV also has natural incentives to invest in a high level of Australian content to meet consumer demand (as indicated by the high level of STV's investment in Australian content in recent years, see section 5.2.3 for further details).

The differing treatment of FTA and STV reflects their differing historical roles. As the Convergence Review Emerging Issues Paper highlights, the current regulatory regime for Australian content reflects the special status which the Commercial Broadcasters have traditionally enjoyed:

*'Traditionally, Australian and local content obligations formed part of a broader regulatory paradigm that reflected the special status that commercial broadcasters enjoyed. This status involves a range of additional obligations (to other platforms) such as Australian content requirements and the obligation to pay broadcast licence fees but also has a number of advantages – for example, access to spectrum and (at least currently) a level of protection in the marketplace through restrictions on the awarding of new broadcasting spectrum licences.'*⁵²

From a policy perspective, the appropriateness of the current regulatory trade off is difficult to assess. It is not clear what the costs of meeting Australian content obligations for FTA commercial broadcasters actually are and what level and type of Australian content would be provided in the absence of content regulations. Although information is available on the total level of expenditure on Australian content by the Commercial Broadcasters,⁵³ it is not clear how much of this expenditure would be undertaken in the absence of regulation.

The available evidence suggests that a reasonable level of total Australian content may still be provided by broadcasters in the absence of content quotas. Recent compliance rates indicate that:

- all commercial FTA broadcasters significantly exceeded their overall Australian content requirements in 2010 – the lowest proportion of Australian content shown by a network between 6.00am and midnight was 61% (Channel 10) which is comfortably above the existing 55% quota for overall Australian content;⁵⁴
- all of the top 40 rating programs were Australian;⁵⁵ and
- the documentary sub-quota of 20 hours was comfortably met by all broadcasters (although this is a low threshold)
- broadcasters only produced marginally above the minimum levels for children's and preschool programs and adult drama.⁵⁶

⁵² Department of Broadband, Communications and the Digital Economy, 2011, 'Convergence Review Emerging Issues Paper', p. 19.

⁵³ See Department of Broadband, Communications and the Digital Economy Convergence Review 2011, 'Discussion paper: Australian and Local Content', available from: http://www.dbcde.gov.au/digital_economy/convergence_review (accessed 29 September 2011), page 9.

⁵⁴ Australian Communications and Media Authority 2011, 'Compliance with Australian Content Standard & Children's Television Standards', available from: http://www.acma.gov.au/WEB/STANDARD/pc=PC_100662 (05 September 2011).

⁵⁵ Australian Communications and Media Authority 2011, 'Metropolitan commercial television licensees exceed Australian content quotas in 2010', Media Release available from:

http://www.acma.gov.au/WEB/STANDARD/pc=PC_410105 (09 September 2011).

While compliance rates are not ideal indicators of the level of Australian content which would be shown in the absence of regulation,⁵⁷ since even successful Australian programs might be removed if they proved too costly to produce, they indicate that many types of Australian content are likely to be provided in the absence of regulations. For example, the Convergence Review Discussion Paper highlights the significant growth in expenditure on sport and light entertainment (including variety) in recent years.⁵⁸ These two categories accounted for more than two thirds of total spending on Australian content by FTA broadcasters.⁵⁹

Recent compliance rates indicate that the areas in which Australian content is likely to be undersupplied are children's and preschool programs and adult drama. The Convergence Review Discussion Paper notes that these subcategories along with documentaries are relatively expensive to produce and that it is difficult for broadcasters to achieve a commercial return on these subcategories.⁶⁰ The Convergence Review Discussion Paper further notes that the 'sub-quotas are playing a role in maintaining the level of expenditure'⁶¹ for these subcategories.

This suggests that while Australian content quotas are playing an important role in protecting subcategories which would not otherwise be provided by the market (such as drama, children's and preschool programs and documentaries), there is less of a need to protect sport and light entertainment through the overall quota since reasonable levels of such content is likely to be provided by the market naturally.

A further difficulty posed by the current regulatory framework is that quantity targets discourage broadcasters from substituting towards higher quality productions rather than simply meeting quantity targets. This is problematic because as new delivery platforms enter the market, the scope to promote Australian content through restrictions on choice will be more limited. Future regulatory frameworks will thus have to focus on providing a flexible content regime that provides greater scope for broadcasters to invest in higher quality, internationally competitive Australian content.

6.4 Future market environment

A converged world will require very different regulatory frameworks for promoting Australian content than those that apply today. This section explores how the current

⁵⁶ Australian Communications and Media Authority 2011, 'Compliance with Australian Content Standard & Children's Television Standards', available from: http://www.acma.gov.au/WEB/STANDARD/pc=PC_100662 (05 September 2011).

⁵⁷ The fact that the level of total Australian content being shown in recent years has risen suggests that broadcasters may have been assisted by the option of showing non Australian programming on the multi-channels.

⁵⁸ Department of Broadband, Communications and the Digital Economy Convergence Review 2011, 'Discussion paper: Australian and Local Content', available from: http://www.dbcde.gov.au/digital_economy/convergence_review (accessed 29 September 2011), page 9.

⁵⁹ Ibid.

⁶⁰ Ibid, pages 7-8.

⁶¹ Ibid, page 8.

regulatory framework for protecting Australian content will need to change as competition from alternative delivery platforms grows.

The regulatory framework in a converged world

In a converged world, broadcasters are likely to face even stronger competition from both alternative media platforms such as IPTV and content delivered over the internet. This competition will be both domestic and international. As a consequence, broadcasters are likely to play more of a role as content aggregators and will be in competition with numerous international and domestic content aggregators. Broadcasters are also likely to face competition from content creators, who may use alternative delivery platforms to distribute their own programs to viewers.

While FTA television is likely to continue to be attractive for a sizeable part of the viewer market in a converged world – reflecting in part the commercial advantages associated with funding from advertising for programming with large audiences – there is also likely to be more limited scope to promote Australian content through restrictions on choice (i.e. time based quotas) because consumers will now have greater access to additional FTA channels and delivery platforms.⁶² Moreover, time based quotas will not work for internet based content and may prove counterproductive to the extent that they reduce the quality of Australian content shown. Thus while some form of time based content obligations may still be imposed on FTA broadcasters, policy will have to be increasingly directed towards fostering the production of high quality Australian content that viewers want to watch if it is to be effective.

These developments will have a number of implications for how regulatory frameworks are designed to promote Australian content in a converged world:

1. Regulatory frameworks for Australian content will have to be competitively neutral to ensure that current broadcasters are not placed at a disadvantage relative to new delivery platforms.
 - a. An important precondition to achieving competitive neutrality is to ensure that any regulatory advantages provided to Commercial Broadcasters are removed and that any direct funding is made available to all market participants on a competitive basis.
2. To promote Australian content there will have to be a much greater focus on policies that improve the quality of content produced.

Competitive neutrality should be a guiding principle of long term regulatory frameworks to ensure that Australian content regulations do not adversely affect the ability of current broadcasters (both FTA and STV) to compete with alternative delivery platforms. In relation to commercial FTA broadcasters, competitive neutrality also requires that any regulatory advantages (such as inexpensive access to spectrum, the anti-siphoning list and other

⁶² As the Convergence Review Discussion Paper notes there has already been a shift in viewership levels away from the primary channels in recent years towards the multi-channels which do not have Australian content obligations, see Department of Broadband, Communications and the Digital Economy Convergence Review 2011, 'Discussion paper: Australian and Local Content', available from: http://www.dbcde.gov.au/digital_economy/convergence_review (accessed 29 September 2011), page 15. Over time there is likely to be a fading of the traditional distinction between a FTA broadcaster's primary channel and multi-channels.

support) be removed. To the extent that some of these regulatory advantages continue to persist, they should be taken into account when determining the nature of content obligations on FTA broadcasters. As noted above, there are considerable difficulties in determining the appropriateness of this regulatory trade-off.

Secondly, there will need to be a greater focus in a converged world on policies to encourage producers of Australian content to invest in higher quality productions. To examine whether other policy instruments such as production subsidies or a minimum expenditure increase the incentive to produce higher quality productions relative to a time based quota, a simple economic model was developed, which is shown in Appendix B.

The simple model of production quality choice shows that a production subsidy which is set at a rate which is proportional to the level of overall expenditure (similar to the current production offsets) will result in a higher level of quality being chosen than a time based quota. This finding is based on appropriate assumptions about the nature of a broadcaster's costs and revenue. This occurs because a production subsidy essentially reduces the cost to broadcasters of investing in quality since part of the cost of further increases in quality will be offset through the subsidy.

The model in Appendix B also shows that a minimum expenditure requirement will lead to a level of quality being chosen by producers which is at least as high as under a time based quota. The key intuition here is that, to meet a minimum expenditure quota, a broadcaster could choose to produce fewer productions but spend more on each production, particularly if the fixed costs associated with creating a new production are relatively high. Whether a minimum expenditure requirement will lead to a higher level of quality being chosen than a production subsidy is not clear from the model and will depend on the size of the production subsidy and the extent to which a particular minimum expenditure requirement changes a broadcaster's behaviour.

It should be noted that this model only examines the effect of different policies on the level of quality chosen for Australian content not the overall quantity of Australian content produced (which is likely to be higher under a time based quota model). Nevertheless, the key insight of the modelling exercise is that to ensure high quality Australian content is produced, greater reliance will need to be placed on instruments such as production subsidies (provided the amount of any subsidy is proportional to a producer's investment in quality). A minimum expenditure requirement may also help achieve this objective, although may be more difficult to administer and calibrate properly than production subsidies.

These policy options are discussed in greater detail in section 6.5 below.

6.5 Policy options

As discussed above, the current regulatory regime is unlikely to meet the needs of a post digital switchover world. In particular, there is a need to develop more flexible, transparent policy instruments with a greater focus on enhancing quality to ensure that existing broadcasters are not disadvantaged in competing with new delivery platforms and that Australian content continues to resonate with consumers in a converged world.

In this section three potential options to support Australian content during the transition period are discussed including:

- building greater flexibility into the way FTA broadcasters meet their content obligations through a tradeable obligations scheme;
- redesigning existing quotas to focus more closely on delivery of quality Australian content that would not otherwise be provided; and
- progressively moving towards a greater reliance on production subsidies to promote Australian content.

The first two options aim to provide broadcasters greater flexibility during the transition period and strengthening the focus on quality. However, as noted in section 6.4, once Australia moves closer to a converged world, policy will have to be increasingly reliant on production subsidies. Therefore, while a tradeable obligations scheme and redesigning the existing quota system will provide viable options to promote Australian content in the transition period, in the long term there will be a need to rely more heavily on production subsidies to enhance the quality of Australian content produced. In terms of the categorisation used in the Convergence Review Discussion Paper,⁶³ a subsidy only option is likely to be the most viable option in a converged world given that quota like obligations are likely to prove less effective over time.

Each of these three options are discussed in greater detail below. All are feasible and would help achieve the government's policy objectives but there are issues associated with each of them which the Convergence Review Committee would need to consider further before making any recommendations as to the form in which these policies might be implemented. These options should also not be seen as mutually exclusive and a combination of these options could potentially be used to promote Australian content in the future.

6.5.1 A tradeable obligations scheme

One option that would build greater flexibility into the way FTA broadcasters meet their content obligations during the transition period is a tradeable obligations scheme. Under a tradeable obligations scheme broadcasters would be able to trade some proportion of their Australian content obligations among each other.

This would introduce greater elements of competitive behaviour into the delivery of Australian content, encouraging specialisation in the delivery of particular types of content. The main benefits of a tradeable obligations scheme would be to improve the efficiency with which Australian content is produced⁶⁴ and to provide greater information to policy makers about the true costs of meeting Australian content obligations.

⁶³ Department of Broadband, Communications and the Digital Economy Convergence Review 2011, 'Discussion paper: Australian and Local Content', available from: http://www.dbcde.gov.au/digital_economy/convergence_review (accessed 29 September 2011).

⁶⁴ As noted in the Convergence Review Discussion Paper on Australian and Local Content (*op cit*) a tradeable quotas system would allow for greater economies of scale in local news production and reporting in regional areas.

However, a tradeable obligations regime has been considered in some detail in the past (and not adopted). Significant concerns have been raised that without appropriate safeguards a tradeable obligations scheme could lead to a reduction in the number of buyers of Australian content and the diversity of Australian content shown. Moreover, a tradeable obligations scheme would at best play a complementary role in a post convergence regime, where greater reliance would need to be placed on production subsidies.

The main justification for revisiting a tradeable obligations regime lies in terms of its potential to aid the transition towards a converged media environment through managing risk and uncertainty in the medium term. Although a tradeable obligations scheme does aid allocative efficiency it should also:

- provide greater transparency to policy makers as to the costs of content obligations – which can be measured by the price at which certain content obligations are traded, thereby providing clearer information on the costs of particular types of content obligations, what content obligations are likely to be met absent of regulation and what future funding requirements for Australian content might be (see section 6.5.3);
- allow adjustments to be made to the obligations if they prove to be poorly calibrated by changing the requirements imposed on broadcasters;
- provide broadcasters with greater flexibility with which to meet their Australian content requirements - allowing them to specialise in broadcasting particular types of content or targeting particular audiences; and
- provide broadcasters with additional information that is useful for planning purposes.

A tradeable obligations scheme could also be structured around a greater focus on the sub-quotas which is considered in more detail in section 6.5.2.

The practical aspects of how a tradeable obligation scheme would work would need to be given closer consideration by the Convergence Review Committee at a later stage. Some possible parameters for how such a scheme might work are discussed briefly below:

How a tradeable obligations scheme might work

A tradeable obligations scheme could consist of two elements:

1. a minimum content quota that must be shown by all broadcasters (both in terms of overall Australian content and for the subquotas); and
2. a tradeable element which must be shown either by the broadcaster or another broadcaster.

A minimum content quota would be necessary to address some of the concerns raised in relation to a tradeable obligations scheme in the past⁶⁵ such as:

- the need for diversity in local news and current affairs reporting;
- the need for diversity in particular genres such as drama, children’s programs and documentaries; and

⁶⁵ Another concern raised in the past is that trading should not be permitted across broadcasting regions.

- the need to ensure that responsibility for delivering Australian content does not rest solely in the hands of one or two broadcasters.

To provide an example of how a tradeable quota scheme might work, consider a situation in which the government deems that to meet its policy objectives:

- on average across all broadcasters, 35% of broadcasting time between 6.00am and midnight on two channels should consist of Australian content;
- on average across all broadcasters the current sub-quota levels for Australian drama, Australian children's drama, Australian children's and pre-school programs, and documentaries must be met.

Incidentally, these requirements would increase the total amount of Australian content shown compared to the current regulations since the current requirements only require that 55% of content shown on a broadcaster's main channel between 6 a.m. and midnight be Australian content (no content requirements are currently imposed on the multi-channels).⁶⁶ These numbers are only being advocated and are only used to show how a tradeable quota scheme might work. Indeed as noted in section 6.5.2 since large amounts of sport and light entertainment would be provided anyway, there may be some justification for reducing the overall quota to take into account the fact that these categories are likely to be provided by the market anyway.

Suppose next that the government placed the following minimum (non-tradeable) requirements on each broadcaster:

- broadcasters must dedicate at least 20% of broadcasting time between 6 a.m. and midnight on the two channels identified above to Australian content; and
- broadcasters must ensure that they meet half the requirements in terms of hours and program expenditure for Australian drama, Australian children's drama, Australian children and pre-school programs and documentaries themselves (the other half being tradeable).

In this example, one broadcaster could choose to provide the minimum 20% of local content on each of its two channels and trade the remaining content obligations with the other two FTA broadcasters. If 15% were traded to each FTA broadcaster then these other two broadcasters would be required to show that 15% each across their two channels in addition to the 35% requirement outlined above.

In relation to the sub-quotas for documentaries, dramas and children's programs, one broadcaster could choose to provide the minimum amount and trade the remaining half of its obligations to be met by other broadcasters.

Challenges

While such a scheme would increase the total amount of Australian content shown and provide greater transparency as to the costs of meeting these obligations for policy makers

⁶⁶ In a post digital switchover world there is likely to be little practical difference between the previous main channels and the multi-channels so there is unlikely to be any need to specify the particular channels on which Australian content should be shown. The AUSFTA prevents the imposition of content requirements on more than two of a broadcaster's channels (see discussion in section 6.5 below).

there are some significant challenges associated with implementing a tradeable obligations scheme. These main challenges are around:

- preventing Australian content being moved to less popular channels;
- avoiding a reduction in quality of Australian content; and
- the potential for involving the national broadcasters in the scheme.

The potential for Australian content to be moved to less popular channels could be partly avoided by placing minimum non tradeable quotas on broadcasters, although this would not prevent this occurring entirely. Over time, this issue is likely to be less apparent because there will be a more muted distinction between a broadcaster's primary channel and multi-channels but the bigger issue will be how to continue to encourage people to watch Australian content once more channels and platforms become available. During the transition period, this could be partly achieved by including more quality indicators as part of the sub quotas. This is discussed further in section 6.5.2.

In relation to the second issue, while a tradeable obligations scheme will not automatically result in a reduction in quality since the same incentives to capture audience share will remain, there is a risk that quality may fall with a tradeable obligations scheme. This will depend on whether the broadcasters who are traded additional programs choose to focus on making higher quality programs to gain additional audiences or whether they choose to acquire less expensive programs. Including more quality indicators as part of the sub-quotas and complementing a tradeable obligations scheme with direct production subsidies would seem to be the most appropriate way of ensuring the overall quality of Australian content is enhanced during the transition period, although this is something that can be calibrated over time.

The last issue concerns the potential for involving the national broadcasters under such a scheme, which has been the subject of some concerns in the past. The challenge of including the ABC in a tradeable obligations scheme is discussed in greater detail in section 6.7.

While there are significant challenges associated with a tradeable obligations scheme that will need to be considered by the Committee, it does represent a feasible option to provide greater flexibility to broadcasters and transparency to policy makers during the transition period and is worthy of further consideration although it is acknowledged that the way in which such a scheme operates may be complex.

6.5.2 A greater focus on the sub-quotas

A second option, which could be a component of a tradeable obligations scheme, would be to focus more closely on ensuring quality Australian content is produced, in particular by focusing on the sub quotas. For example, the sub quotas could be converted to a points system whereby FTA broadcasters were given additional points for meeting certain expenditure levels, by showing content in peak time slots or meeting certain audience shares (although the latter should not be too prescriptive or it may result in significant transaction costs as broadcasters juggle programs across time slots or are forced to cancel expensive productions which fail to appeal to the middle ground). This sort of system is currently applied to adult drama but could easily be extended to other genres.

In return for extending and enhancing the points system to promote quality productions, the quantity of Australian content for particular sub quotas could be reduced. For example, instead of having to produce 96 hours of first release children’s drama over a three year period broadcasters could elect to produce only say 60 hours of children’s drama provided that they exceeded certain expenditure benchmarks.

This would give broadcasters the option of focusing on delivering a smaller number of higher quality productions or developing innovative programming which could potentially be exported overseas. This would also help in the transition to a converged world since it will be difficult to promote Australian content based solely on restraints on choice when more channels and platforms become available and thus there will be a need to focus resources on producing higher quality Australian content that audiences want to watch.

Given that the evidence provided in the Convergence Review Discussion Paper implies that categories such as sport and light entertainment are likely to be provided in large quantities by the market anyway, targeting the quota system to categories which are not likely to be provided by the market such as children’s programs, adult drama and documentaries also ensures that the quota system is more directly tailored to meeting the government’s policy objectives. In this respect, it would also make sense to remove sport and light entertainment from the overall quota (since they will be provided by the market anyway) or to consider removing the overall quota entirely and placing a separate sub-quota on news and current affairs.

6.5.3 Progressively moving towards a greater reliance on production subsidies

In a converged world, greater reliance will need to be placed on production subsidies to promote Australian content. These subsidies should be placed in a funding pool which should be distributed on a competitive, contestable basis to producers of Australian content, with a focus on supporting high quality productions. For example, there could be a competitive tendering process whereby funds are distributed to those producers who best meet certain selection criteria, with funding allocated in ways that specifically encourage greater investment in quality.

At present, production subsidies are primarily provided in the form of production offsets (although Screen Australia also provides some grants and low interest loans to producers). Future production subsidies could be structured in a similar indirect form, which would encourage greater investment in quality since the amount of the subsidy will be proportional to overall expenditure (consistent with the model in Appendix B and the way in which production offsets currently operate) or could even rise beyond certain levels of expenditure to encourage the development of higher quality Australian content.

While government support in the past has been directed primarily through Screen Australia and the national broadcasters, future funding arrangements should encourage greater contestability and competition among producers for fund. In a converged world the aim should be to fund creative and innovative productions, regardless of the channels in which producers choose to distribute the end product.

Nonetheless, the exact form in which an expanded production subsidy support scheme should be structured will need to be considered in more detail by the Convergence Review

Committee, and may need to be reviewed over time to ensure that it is achieving its policy objectives.

Funding

While a significant amount of existing funds in the budget are allocated to Australian content, to support greater use of production subsidies over time these funds will need to be augmented either through consolidated revenue or alternative funding sources. The advantage of funding production subsidies through consolidated revenue is that it would reduce the degree of distortions created by levying funds from other industries and would allow the level of support for Australian content to be made more transparent through the budget process.

However, one of the main challenges associated with using consolidated revenue to fund production subsidies is that it would make support for Australian content more dependent on the political and budget cycle which would increase the level of uncertainty for producers. This could in turn deter investment in ambitious projects and lead to greater uncertainty for employees. Thus, a move towards greater reliance on direct government support would need to be accompanied by greater guarantees that funding would be maintained over the political cycle.

There are some alternative funding sources available other than consolidated revenue. For example, one option might be to seek to obtain additional funds from industry sources, although the exact way in which such funds should be raised would need to be considered in more detail by the Convergence Review Committee.

Another option would be to set aside a proportion of the proceeds from the licensing of broadcasting spectrum, especially if FTA broadcasters eventually move to internet based delivery platforms and free up additional spectrum for sale. While in economic terms such a proposal would be essentially no different from using consolidated revenue, it would provide a way to ensure that funds continue to be available to promote Australian content in the future.⁶⁷

6.6 Constraints imposed by the AUSFTA

Any scheme to enhance the delivery of Australian content in the future is potentially constrained by various provisions agreed to as part of the AUSFTA. Thus, it is important to understand the effect of these provisions in designing any future scheme.

The relevant provisions for FTA commercial broadcasters state that:

- ‘Transmission quotas for local content imposed on free-to-air commercial analogue and digital (other than multi-channelling) television broadcasting services shall not exceed 55% of programming transmitted annually between 6:00 a.m. and midnight. Sub quotas for particular program formats (e.g., drama, documentary) may be applied within the 55% quota.’⁶⁸

⁶⁷ The main difference between such a scheme and using consolidated revenue is that it would prevent funds being moved to other policy priorities.

⁶⁸ *Australia-United States Free Trade Agreement, Annex I –Australia- 14.*

- This 55% quota ‘may not be imposed on more than two channels or 20% of the total number of channels (whichever is greater) made available by that provider’⁶⁹ and ‘no such transmission quotas shall be applied to more than three channels of an individual service provider.’⁷⁰

There is also a ratcheting provision, such that if the level of the transmission quota is reduced in the future it cannot be raised subsequently.⁷¹

The key provisions relating to STV broadcasters state that:

- A requirement to spend up to 10% of program expenditure on Australian production may be imposed on STV channels in the following areas (although no one channel is to be subject to an expenditure requirement in more than one area):
 - the arts;
 - children’s programming;
 - documentaries;
 - drama; and
 - educational programming.⁷²
- The expenditure requirement may be increased to 20% for Australian drama if a finding is made by the Australian government that this increase is necessary to meet its stated goal for such expenditure. This finding is to be made through a transparent process involving consultations with any affected parties including the US and needs to be non-discriminatory and no more burdensome than necessary.⁷³

Finally, there are also some provisions that discuss the application of local content rules on alternative media platforms:

- If a ‘free-to-air commercial television channel subject to a transmission quota is rebroadcast over another transmission platform, the quota may be applied to the rebroadcast channel.’⁷⁴
- If a ‘free-to-air commercial television broadcasting service provider moves a channel subject to a transmission quota to another transmission platform, the quota may be applied to that channel.’⁷⁵
- There is also some scope to impose local content requirements on interactive audio and/or video services although such measures can only be enacted after a transparent process is conducted involving any affected parties and must constitute the minimum necessary to achieve the policy objective.⁷⁶

⁶⁹ *Australia-United States Free Trade Agreement*, Annex II –Australia- 5.

⁷⁰ *Ibid.*

⁷¹ *Australia-United States Free Trade Agreement*, article 10.6.1 (c).

⁷² *Australia-United States Free Trade Agreement*, Annex II –Australia- 6.

⁷³ *Ibid.*

⁷⁴ *Ibid.*

⁷⁵ *Ibid.*

⁷⁶ *Australia-United States Free Trade Agreement*, Annex II –Australia- 6-7.

There is also a reservation in the AUSFTA permitting subsidies or grants to be used to promote Australian content or production.⁷⁷

However, according to DFAT the AUSFTA should not affect the operations of the ABC or SBS:

‘DFAT has stated that because nothing in the Agreement affects the ability of either Party to provide public services, and subsidies and grants are explicitly excluded from the scope of the Chapter, reservations are not required in Australia’s schedules in relation to publicly provided cultural activities, such as the public broadcasters (ABC and SBS), public libraries or archives, or in relation to Government funding available to Australian artists, writers and performers.’⁷⁸

As a result of these provisions the AUSFTA places some important limitations on how Australian content rules can be modified in the future. For example, the AUSFTA would only seem to permit the imposition of expenditure requirements on STV and the imposition of transmission quotas on FTA commercial broadcasters. AUSFTA also specifically limits the number of channels on which transmission quotas can apply to FTA commercial broadcasters.

These constraints mean that it is unlikely to be possible to have a single consistent regime based on transmission quotas or expenditure requirements applying across networks in the future, although the AUSFTA would appear to provide scope for the use of production subsidies to promote Australian content.

6.7 The role of the ABC

Providing high quality Australian content is an important element of the ABC’s Charter. Therefore, the ABC can, and should play a role, in delivering high quality Australian content and specialised Australian programming to local audiences. However, the role of the ABC in providing Australian content needs to be balanced against its other objectives and budgetary constraints.

While including the ABC in a tradeable quota scheme could potentially enlarge the size of the trading market and provide the ABC with an additional funding source, there are some significant concerns with including the ABC in such a scheme:

- the ABC is not currently permitted to accept payment for broadcasts;
- the scheme could potentially lead to a reduction in the independence and quality of programming by the ABC if it were to begin to focus more on collecting outside revenue by providing cheap Australian content to fulfil the quota obligations of other broadcasters; and

⁷⁷ *Australia-United States Free Trade Agreement*, Annex II –Australia- 7.

⁷⁸ Parliament of Australia 2004, ‘Senate inquiry into the free trade agreement between Australia and the United States of America’, available from: http://www.aph.gov.au/senate_freetrade/report/final/ch06.htm (05 September 2011).

- the national broadcasters serve other objectives such as promoting cultural diversity and providing specialised broadcasting programs and may struggle to achieve these objectives if they become depositories for unwanted Australian content obligations.

For these reasons, including the national broadcasters in a tradeable obligations scheme is problematic. However, the potential for including the national broadcasters in such a scheme over the long term could be considered given its potential to expand the size of the trading scheme.

As Australia moves towards a converged world in which there is even greater competition from IPTV and content delivered over the internet, the role of the ABC as a provider of Australian content may grow. To the extent that the ABC and SBS are used to promote Australian content in the long term, additional funding should be contestable by all producers or otherwise subject to rigorous accountability. In particular, there needs to be accountability around:

- the level of spending on Australian content by the ABC; and
- the extent to which the ABC is meeting its Charter objectives in relation to Australian content.

6.8 Implications for STV

At present, subscription television licensees that broadcast drama channels, and drama channel package providers, are required to invest at least 10% of their total program expenditure on new Australian drama,⁷⁹ although funded programs do not necessarily need to be screened. In practice, however, significant amounts of Australian drama is screened on STV and given the growth in subscriber numbers STV is playing an increasingly important role in the distribution of Australian content.

In addition to this requirement, STV has certain natural incentives to provide a reasonable quantity of Australian content because the STV business model is predicated on meeting consumer demand (particularly in relation to Australian sports programs) and catering to niche markets. This gives STV a natural incentive to provide niche Australian programming. The opportunity cost of screening Australian content is also lower for STV than FTA broadcasters given the multiplicity of channels available.

As noted above, an ASTRA industry survey indicates that STV had invested a total of \$578.4 million in first release Australian content in 2010. This expenditure included not just Australian drama but also news, sport, light entertainment, movies, lifestyle programs, documentaries, music and children's programming. Thus a large amount of Australian content is provided by STV due to customer demand rather than in response to Australian content regulations.

In the future, the policy options for imposing content obligations on STV would appear to be limited by the AUSFTA to either continuing the current expenditure requirements for drama (or adding it to other subsectors) or shifting towards a direct subsidy model. This limits the scope for altering the nature of content obligations for STV in the future.

⁷⁹ *Broadcasting Services Act 1992* (Cth) s 103N.

In a converged world, competitive neutrality will require that any obligations imposed on STV are similar to those imposed on alternative delivery platforms. However, an important precondition to achieving competitive neutrality is to ensure that any regulatory advantages provided to Commercial Broadcasters are removed.

It is also important from a competitive neutrality perspective to ensure that all content aggregators acquire their content by legal means. The business models underlying not only STV but also the commercial FTA broadcasters and IPTV are all potentially threatened by the growth in piracy which may ultimately reduce a producer's incentive to invest in high quality productions. While addressing this issue is complicated, strengthening copyright controls is a relevant consideration for the committee.

6.9 Conclusion on Australian content

A converged world will require very different regulatory frameworks for promoting Australian content from those that apply today. In a converged world, broadcasters are likely to face even stronger competition from IPTV and content delivered over the internet. This means that there will be less scope to promote Australian content through restrictions on choice given the greater number of channels and platforms that are available. As a result, future policy will need to be increasingly directed towards developing high quality Australian content that viewers want to watch if it is to be effective.

These developments mean that long term regulatory frameworks should:

- promote competitive neutrality across delivery platforms – by ensuring that content obligations do not disadvantage existing broadcasters relative to new delivery platforms and that any regulatory advantages provided to commercial FTA broadcasters are removed;
- reduce the level of reliance on quotas to promote Australian content – while there may be some scope for using quotas in the long term, any quotas will need to be smaller and focus on areas that would be significantly undersupplied by the market such as drama, children's programming and documentaries;
- encourage the development of higher quality Australian content –by relying more on production subsidies, allocated on a competitive basis to encourage producers to invest in higher quality productions; and
- promote greater contestability in relation to government funding to ensure that funds are allocated on a competitive basis to producers who are most likely to invest in high quality productions.

While content quotas can be imposed on broadcasters during the transition to a converged world to a greater extent, it is important that policy settings in the transition period provide broadcasters (both FTA and STV) with greater flexibility in meeting their content obligations and give policy makers more clarity on the costs of meeting Australian content obligations. A tradeable obligations scheme is one way to achieve this since it would improve allocative efficiency for broadcasters and provide clearer information to policy makers on the costs of meeting Australian content obligations. In conjunction with a tradeable obligations scheme there could be a greater focus on the sub quotas by including additional quality indicators and removing sport and light entertainment from the overall quota since they are likely to be provided anyway.

Over time, policy makers will need to gradually move from relying on content quotas to relying more and more on production subsidies, which could be financed either through general revenue or through a levy on new delivery platforms. While there are some challenges associated with all of the policy options considered here, which the Convergence Review Committee will need to consider, they do provide a feasible path for promoting Australian content into the future.

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Appendix A

Table A.1: Inputs and assumptions for Table 3.5

Input	Value adopted
Value of broadcasting spectrum on MHz/population basis	\$0.89
Value of ENG spectrum on MHz/population basis	\$0.22
Spectrum being valued prior to switchover	399 MHz of broadcasting spectrum, 190 MHz of electronic newsgathering spectrum
Spectrum being valued after switchover	210 MHz of broadcasting spectrum, 15 MHz of ENG spectrum
Australian population	22.667 million
WACC for the purpose of calculating an annualised value	9.53%
Growth in value of spectrum over time	2.5% p.a.
Proportion of broadcasting spectrum used by Commercial/National Broadcasters	57%/43%
Proportion of ENG spectrum used by Commercial/National Broadcasters	75%/25%

Source: Deloitte Access Economics.

Appendix B

In this appendix a relatively simple economic model is developed. The model shows how moving from a time based quota system to a production subsidy model will increase the quality of Australian content produced under appropriate assumptions. The discussion also shows how moving to a minimum expenditure requirement for Australian content will lead to a level of quality being chosen that is at least as high as that under a time based quota.

Importantly, this model does not consider the effect of different models on the quantity of Australian content shown (which would tend to favour a time based quota system) or the total cost of promoting Australian content to society. The model is thus more appropriate for a converged media environment where the multitude of channels and platforms available will mean that policies to promote Australian content will need to be more focused on quality rather than quantity.

The model

In the model the cost of funding a production is represented by $K + a(q)$, where K is a constant indicating the cost of producing a program which would be incurred even if there was no investment in quality (such as the cost of hiring basic equipment, untrained actors and formatting the program). On the other hand, $a(q)$ is a function that reflects the cost to the producer associated with a given investment in quality where q represents the level of investment in quality.

The benefit to a broadcaster from showing a production is represented by the advertising revenue they receive. Let advertising revenue be equal to $b(q)$, where b is a function that reflects the amount of advertising revenue generated by a given investment in quality.

It is assumed that both $a(q)$ and $b(q)$ are increasing in q . That is, a given increase in quality raises the costs for a producer, but also increases the level of advertising revenue generated because increases in quality attract more viewers.

A time based quota

Under these assumptions, a broadcaster who must produce an Australian show to meet a time based quota system would choose a level of quality (q) that maximises their profits, which are given in equation 1 below:

$$\pi = b(q) - K - a(q) \tag{1}$$

Where π indicates the level of a firm's profits. To determine what level of quality a broadcaster would choose it is necessary to differentiate equation 1 with respect to q and set it equal to 0 to find the first order condition. This yields the result $b'(q)=a'(q)$. Thus a broadcaster would choose a quality level q^* such that $b'(q^*)=a'(q^*)$, which is the point where the marginal revenue gained from an small increase in quality is equal to the marginal cost of increasing quality by that amount.

Production Subsidy

Next, consider a production subsidy which is structured so that a certain proportion of the cost of producing a program, $s > 0$, is provided to the producer from a funding pool. An example of this sort of mechanism is the producer offset. Under a production subsidy, the broadcaster's profit is given by:

$$\pi = b(q) - (1-s)K - (1-s)a(q) \quad (2)$$

In this scenario, the first order condition would be given by $(1-s)a'(q^s) = b'(q^s)$. It is then possible to show that $q^s \geq q^*$ for $s > 0$. This is the case because at a quality level of q^* , we know that $(1-s)a'(q^*) < b'(q^*)$, since $a'(q^*) = b'(q^*)$, which means that the marginal cost of increasing quality for a broadcaster (taking into account the subsidy) will be less than the gain in marginal revenue. In this case broadcasters will have an incentive to choose a higher level of quality since the gain in marginal revenue exceeds the marginal cost so that they will choose more than q^* under a subsidy.

Thus, a production subsidy will lead to $q^s \geq q^*$. This implies that a production subsidy will increase the quality of Australian content chosen relative to a time based quota.

While technically, it is possible for $q^s = q^*$ in cases where $b'(q)$ is greater than $a'(q)$ for all q , corresponding to a situation where broadcasters would choose the highest level of quality for all their productions regardless of whether a subsidy is available, since in practice significantly larger sums are spent on motion pictures which are generally regarded as being of a higher average quality than television programs, it is likely that there is a point where the marginal cost of increasing quality is greater than the marginal revenue gained from increasing quality for broadcasters. Thus in practice a production subsidy is likely to lead to a higher level of quality being chosen.

A minimum expenditure requirement

It can also be shown that minimum expenditure requirement leads to at least as high a level of quality as a time based quota. To show this it is necessary to use constrained optimisation techniques, in this case a Lagrange multiplier approach is used.⁸⁰ Setting out the Lagrange as:

$$L = b(q) - K - a(q) - \lambda(K + a(q) - M) \quad (3)$$

where M is the required level of expenditure, and differentiating with respect to quality yields: $b'(q) = (1+\lambda)a'(q)$. Since $K + a(q) \geq M$ to meet the expenditure requirement it is necessary to impose a complementary slackness condition to solve this equation requiring that $\lambda \leq 0$.⁸¹

⁸⁰ Readers interested in the methodology behind the use of Lagrange Multipliers should consult an appropriate mathematical economics textbook such as Sydsæter, K and Hammond, P 2002, 'Essential Mathematics for Economic Analysis'.

⁸¹ See Sydsæter, K and Hammond, P 2002, 'Essential Mathematics for Economic Analysis', p.531. This condition is also referred to as the Kuhn-Tucker condition. If this condition were not imposed there would be no solution to the problem, which although possible is unlikely for the reasons discussed in relation to a production subsidy.

If $\lambda=0$ then $b'(q)=a'(q)$ and the level of quality chosen will be q^* , as in the scenario for a time based quota. Based on the reasoning for a production subsidy (replacing s with λ) the level of quality chosen will be higher if $\lambda < 0$. This implies that the level of quality chosen under a minimum expenditure requirement would be at least as high as that under a time based quota.

Limitation of our work

General use restriction

This report is prepared solely for the use of ASTRA. This report is not intended to and should not be used or relied upon by anyone else and we accept no duty of care to any other person or entity. The report has been prepared for the purpose of the Convergence Review.