REPORT

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Creative Industries Economic Analysis

Final report

Prepared for

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Summary

The Department of Innovation, Industry, Science and Research (DIISR) and the Creative Industries Innovation Centre (CIIC) have engaged the CIE to conduct a study analysing the creative industries in Australia. The study aims to develop a framework for defining and measuring the creative industries and provide a statistical summary of its economic dimensions.

Framework for defining and measuring the creative economy

- The creative industries include the following segments:
  - music and performing arts;
  - film, television and radio;
  - advertising and marketing;
  - software development and interactive content;
  - writing, publishing and print media; and
  - architecture, design and visual arts.
- This study focuses on business units involved in the creation section of the value chain for creative products. It does not include activities that subsequently add value, downstream from the creative process.
- It is possible to look at employment in the creative economy from the perspective of both industries and occupations. A broader estimate of employment in the creative economy includes specialist creatives, support workers in the creative industries and creatives embedded in other industries.
- Various characteristics of the creative industry makes it more difficult to measure than traditional industries.

Key creative economy metrics

- Based on IBISWorld estimates, the industry gross product of the creative industries was around $31.1 billion in 2007-08. This is a contribution to GDP of around 2.8 per cent, more than a number of traditional industries such as agriculture, communications and electricity, gas & water supply.
- Over the three years to 2007-08, the creative industries grew at an average rate of 3.4 per cent in real terms, in line with the broader economy.

- When viewed over a longer time period, the creative industries have grown at a significantly faster pace than the aggregate economy. Over the eleven years to 2007-08 the creative industries expanded at an average annual rate of 5.8 per cent, compared to average GDP growth of 3.6 per cent over that period.
- According to the 2006 Census, there were around 288 000 people employed in the creative industries, or around 3.2 per cent of total employment. Based on more recent IBISWorld estimates, there were around 317 000 people employed in the creative industries in 2007-08.
- According to the 2006 Census, there were around 278 000 people employed in creative occupations, around 3.1 per cent of total employment.
- Using the creative trident approach increases the estimates of the creative workforce significantly to around 438 000, or 4.8 per cent of total employment.
- Those employed in the creative industries tend to have higher incomes than average.
- Productivity growth in the creative industries was around the same as the broader economy over the three years to 2007-08.
- Australia is net importer of creative content.

The creative economy by segment

- Over recent years, the music & performing arts segment has contributed around 3.5 per cent of the total industry gross product (IGP) of the creative industries and around 7.0 per cent of total employment. Over the three years to 2007-08, real industry gross product of the segment contracted, while employment growth was slower than the aggregate economy.
- The film, television & radio segment contributes around 15 per cent of the total IGP of the creative industries and employees around 12 per cent of the workers. In recent years, growth in both industry gross product and employment has exceeded the wider economy.
- The advertising & marketing segment contributes around 3 per cent of the industry gross product of the creative industries in aggregate and also employs around 3 per cent of the workers. Both industry gross product and employment growth has been relatively subdued in the segment, compared to the wider economy.
- Software development & interactive media is the largest creative industry segment, contributing around 44 per cent of creative industry gross product and employing 39 per cent of total creative industry workforce. While industry gross product has grown at a slower pace than the wider economy over recent years, employment growth has exceeded total employment growth.
- Businesses in the writing, publishing & print media segment contributed around 22 per cent of the total industry gross product of the creative industries and

employs around 14 per cent of the total workforce. Growth in both industry gross product and employment has been lower than the aggregate economy.

- The architecture, design & visual arts segment employs around 25 per cent of total employment in the creative industry. This segment also contributes around 12 per cent of total industry gross product. Industry gross product and employment growth has been broadly in line with the aggregate economy over recent years.

Creative businesses

- In 2007, there were around 107 000 businesses operating in the creative industries. While this has been broadly steady over recent years, the creative industries have higher entry and exit rates than the average over the wider economy.
- Most businesses in the creative industries are small.

Location of the creative industries

- The creative workforce is most highly concentrated in the larger states, particularly in New South Wales.

Comparison with previous studies

- Estimates of the dimensions of the creative industries (or similar constructs) published in previous studies can vary significantly.
- The main reason for the variation are:
  - they use different raw data sources;
  - they relate to different time periods; or
  - they use different definitions of the creative industries.

Framework for performance monitoring

- Few data sources are sufficiently disaggregated to be able to construct measures relevant to the creative industries and are available on an annual basis. Two exceptions are IBISWorld industry reports and the ABS's Counts of Australian Businesses (Catalogue No. 8165.0).
- Annual performance monitoring should focus on growth rates of key variables such as:
  - industry gross product;
  - employment;
  - real productivity;
  - number of businesses and business exit and entry rates.

1 Introduction

The importance of creativity and innovation in driving tangible economic outcomes has been recently rediscovered. It is becoming increasingly apparent that there is a vibrant and valuable group of economic activities that create and transform the imagination as well as goods and services. This study seeks to provide greater clarity about the economic dimensions of creative industries as a driver of wealth creation, employment, competiveness and prosperity.

What is creativity?

The Australian Concise Oxford English Dictionary (1987) views that creativity involves invention, 'showing imagination as well as routine skill'.

A few moments of reflection should be all that is needed to observe the role that creativity has always played in enriching our lives. Phases in human biological, social and economic evolution are ordinarily defined in terms of creative achievements. The stone age, for example, was also accompanied by an explosion of abstract thought captured and preserved in paintings on cave walls. The bronze and iron ages were aligned with the creation of new ideas and folk lore that were embodied in new artefacts, as well as shaping the ability to do things such as navigate at night and cross oceans. It is hard to separate the application of the creative imagination through the renaissance, reflected in literature, music, art and design, from the profound changes in the social and economic order and physical structures of the time.

Creativity is a pervasive force. In Australia we have seen for some years now that:

> 'Creativity, like inventiveness, is a fundamental curiosity. It's our imaginative capacity to generate new ideas, images and ways of thinking; new patterns of behaviour; new combinations of action. It is an innate and universal human trait.'[1]

So, creativity involves using the imagination to create something new and original.

Creativity and innovation

Creativity is closely linked to innovation. Creativity is central to the process of making something new and applying it. It is the spark that ignites change. There are

1 Prime Minister's Science, Engineering and Innovation Council (PMSEIC), 2005, *The role of creativity in the innovation economy*, Independent Working Group.

many examples where creative ideas inspired imagination and research for technical solutions. It is hard to dismiss entirely the possibility that the communicators held in the hands of the fictional Star Trek crew on foreign planets and other imaginative works have inspired mobile phone technicians to strive for lightweight flip mobile phones that are now commonplace and affordable worldwide.

There is a symbiosis between innovation, technological change and the creative industries. The creative areas of the economy do not merely 'produce' creative ideas for use by others. Creative areas and activities have been rapid adopters of some of the major technologies that have transformed lives, industry and the economy. Thus creative activities such as drama production quickly embraced film, radio and television technologies. The embrace was so close that it is difficult to discern if creative activities supported these mass media or if it was the other way around. In any case, the two are now interconnected.

Continued technological change, especially the development of the internet and convergence of once separate activities is fuelling a further round of creativity and innovation. Film making today makes considerable use of IT technologies. IT activities such as games and other applications make use of film making skills. The widespread availability of true broadband internet access and content such as films and shows is blurring the distinction between broadcasting and the internet.

Creativity and the economy

Some new ideas are also emerging about the social and economic role of creativity. Richard Florida (2003), for example, identified the emergence of a creative class. The distinguishing characteristics of the members of this class are that its members 'engage in work whose function is to create meaningful new forms'. Importantly Florida sees this class as a driver of wealth and prosperity. Attracting the class is important to accelerating economic growth in a region, while a loss in members would foreshadow decline. Essentially creativity is driven by the presence of people with creative skills and occupations.

John Howkins (2002) also points to the emergence of a creative economy. This consists of transactions in creative products. Howkins presented evidence to suggest that the creative economy was already a relatively large and growing part of modern economies (although he did not provide figures for Australia).

There is a strong link between creativity and innovation and productivity growth. Productivity growth is a key driver of the economy's long-term growth potential and real incomes and therefore economic wellbeing.

The term creative economy now refers to the growing role of creative industries and creative people in our economy and society. Analysts' view that is becoming a crucial emerging concept for Australia because the creative economy will secure our competitiveness in the global future (Cunningham, 2008).

This study

The Department of Innovation, Industry, Science and Research (DIISR) and the Creative Industries Innovation Centre (CIIC) have engaged the CIE to conduct this study. The CIIC is one of six Innovation Centres that are an integral part of the Commonwealth Government's Enterprise Connect initiative aimed at supporting Australian small and medium sized enterprises (SMEs). This will be achieved by providing specialist advice and services to further improve their business performance.

The CIIC was launched in February 2009 and will assist firms in the creative industries sector to make a larger contribution to the Australian economy. The CIIC helps small and medium size (SMEs) businesses improve their productivity and competitiveness by providing professional business advisory and development services. The Centre also builds collaboration between researchers and businesses, and assists creative businesses to access the latest technologies and market specific information. The CIIC will deliver creative firms with a wide range of targeted services including:

- A comprehensive Business Review.
- Financial support to help firms implement recommendations of the Business Review.
- Ongoing mentoring and advice to firms as they implement change.
- New firm incubation.
- Linking firms with the best market knowledge and research available.
- Help with accessing other Government programs and cutting red tape.
- Industry intelligence, workshops and networking opportunities.

The CIIC offers services to firms across Australia. The Centre is headquartered in Sydney, and has a network of Business Advisers located around the country working one-on-one with firms. The CIIC intends to assist creative industry businesses, especially those that are SMEs. It has flagged its intent to focus upon firms in design, publishing, writing, architecture, visual arts, television, radio, advertising, film, performing arts, music, games, and interactive content.[2]

It is important for the CIIC Board to have an understanding of the economic aspects of the creative industries which it will serve. Economic aspects that it has indicated a wish to learn more about include the size of the creative industries and growth compared to other industries, employment and wages.

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[2] CIIC website, http://www.enterpriseconnect.gov.au/Innovation/Pages/CreativeIndustriesInnovationCentre.aspx, accessed 27 May 2009.

While there are many statistics about aspects of activity in many creative industries there is little research and few statistics that looks at them as a whole and which span those activities and businesses that the CIIC is intending to provide services to. It will also be important for the CIIC Board to monitor performance in the creative industries to understand the challenges faced by businesses.

This report endeavours to satisfy the needs of the CIIC regarding the Australian creative industries.

Report structure

The remainder of this report is structured as follows:

- Chapter 2 defines the creative industries and develops a framework for measurement;
- Chapter 3 provides a statistical overview of the creative industries;
- Chapter 4 provides further details on each creative industry segments;
- Chapter 5 describes some of the characteristics of the businesses operating in the creative industries;
- Chapter 6 provides information on the location of the creative workforce and creative industry businesses;
- Chapter 7 compares the estimates presented in this study, with other reports; and
- Chapter 8 presents a framework for updating key indicators to allow the CIIC Board to monitor the performance of the creative industries over time.

2 *Analytical framework*

> 'The creative economy is a difficult category to nail down, but it is bigger and broader than we think, and it is much more than culture and the arts. It joins together a broader range of industry sectors than those that traditionally have been classified as cultural, giving birth to the notion of the creative industries. But it also goes beyond a sectoral focus to embrace how creative roles or occupations are increasingly being found throughout the economy.' (Cunningham, 2008).

While there have been a number of attempts at measuring the creative industries, no standard definition has yet emerged. Indeed there is unlikely to be a universal definition of the creative industries that meets all needs. Instead, the most appropriate definition depends on the purpose of the exercise. This chapter progresses through filters that assist in the definition of the creative industries that should assist the CIIC in its purpose and develops a framework for measurement.

Industries in perspective

While there are many types of creative activities, the focus of this study is upon creative *industries*. The thing that separates industry from other activities, such as a hobby or pastime, is that an industry is an organised activity that is for economic gain, or to provide a service that is of economic significance.

An industry can also be viewed as a grouping of organisations or individuals which carry out similar economic activities. Typically organisations include businesses, but they can include any body that provides goods and services, including companies, non-profit organisations, government departments and enterprises (ABS 1993). Key facets of interest are groups of individuals and organisations that:

- use common production techniques;
- produce common products; and/or
- utilise common skills.

Contemporary government statistical frameworks used to categorise economic activity rely heavily upon the first two items in the above list to define industries. That is, industries are viewed as groups of organisations that do the same thing or make the same thing.

While this definition of an industry focuses upon common products, it is clear that activities that produce a range of products are often bundled together in an industry. Agriculture, for example, spans diverse activities that includes raising animals,

broadacre farming, such as wheat growing, and horticulture, that involves different products and skills. However, the overarching theme of all agricultural activities is cultivating land, raising crops, and feeding, breeding, and raising livestock. In the same way, creative industries are a composite of activities with an overarching theme of producing creative content.

Focusing on common skills has also been an important means of defining industries in the past. In medieval times, guilds were built around skills and the process of handing those skills onto future generations. In addition to representing the common interests of people in the guild, guilds also played a role in shaping social and cultural norms and conducted ceremonial activities, such as holidays of their patron saint, initiations, testimonials and even burials. Less emphasis is placed upon defining an industry (and social structures) around skills today reflecting economic and institutional arrangements, including contemporary approaches to industrial relations, which place a preference upon dealing with enterprises and collections of enterprises.

To capture information and obtain some insight about the creative industries it is useful to draw upon both basic dimensions of an industry or industrial activity. That is to focus upon:

- common techniques/products; and
- common skills.

Industry classifications

Industry classification schemes focus upon identifying groupings of businesses which carry out similar economic activities. The term business is used in its widest sense to include any organisation undertaking productive activities, including companies, non-profit organisations, government departments and enterprises. An industrial classification provides a standard framework under which business units carrying out similar productive activities can be grouped together, with each resultant group generally referred to as an industry.[3]

The Australia and New Zealand Standard Industry Classifications (ANZSIC) is the industry classification system used in Australia. ANZSIC has a structure comprising categories at four levels, namely Divisions (the broadest level), Subdivisions, Groups and Classes (the finest level). At the divisional level the main purpose is to provide a limited number of categories which will provide an overall picture of the economy suitable for publication in summary tables. Divisions are identified by a single alphabetical character. Subdivisions are represented by a 2 digit code, groups are represented by a 3 digit code and each class has a 4 digit code.

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3 ABS, 2006, *Australia and New Zealand Standard Industrial Classifications*, Catalogue No. 1292.0, Canberra.

The power of ANZSIC is that standard definitions of business units are applied, so that statistics are able to be collected and compiled without gaps or duplication. However, it seems that the economy and the nature and structure of industry in Australia has changed faster than the industry classifications. Similarly to other countries' classification systems, ANZSIC does not have distinct categories for industry groupings that the ordinary person in the street might expect. There is no distinct classification, for example, for the tourism industry or the information technology industry. Most importantly, when considering the needs of the CIIC, there is not a separate category for the creative industries in the 1993 ANZSIC.

ANZSIC was revised in 2006. The 2006 ANZSIC classifications better reflect the economy in operation today. They split the economy into 19 divisions and focus more upon the important role played by services and new technologies. While, ANZSIC still does not have a specific classification for the creative industries, many of its various levels would allow identification of many of the creative industries enabling users to do their own addition when seeking to measure it. A key constraint is that the new classifications are being phased in gradually. Some data sets published by the ABS are based on the new ANZSIC classifications, while others continue to use the 1993 edition of ANZSIC. Time series of data have generally not yet been classified using the new ANZSIC.

While not perfect for the job of measuring Australia's creative industries, the industry classification system does provide a basis for accounting and analysis of the creative industries. The task is to start with data using existing classifications and then reorganise them to separately account for the creative industries.

Which activities are creative?

The challenge is to establish which activities or categories of activities are viewed as being creative.

CIIC needs

Guidance about what to focus upon is drawn from the group of SMEs that the CIIC is targeting. These are SMEs that are engaged in: design, publishing, writing, architecture, visual arts, television, radio, advertising, film, performing arts, music, games, and interactive content.[4]

The CIIC's targeted business groups fit comfortably within the broad view of what the creative industries are that has been derived following the research conducted by the ARC Centre of Excellence for Creative Industries and Innovation (the CCI) in Australia. This is summarised as follows:

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4 CIIC website, http://www.enterpriseconnect.gov.au/Innovation/Pages/CreativeIndustriesInnovationCentre.aspx, accessed 27 May 2009.

> The specialist creative industries comprise a set of interlocking sectors of the economy focused on extending and exploiting symbolic cultural products to the public such as the arts, films, interactive games, or providing business to business symbolic or information services in areas such as architects, advertising and marking, design, as well as the web, multimedia and software development. Most often creative production delivers unique or customised products from incomplete or abstract specifications received either from a client or derived from a desire for personal, artistic exploration.[5].

Following the development of a mapping methodology the CCI has distilled its definition of the creative industries to six creative industry segments:

- music and performing arts;
- film, television and radio;
- advertising and marketing;
- software development and interactive content;
- writing, publishing and print media; and
- architecture, design and visual arts.

The CCI's mapping methodology also appears to have been applied by others examining the creative industries in various parts of Australia recently.[6]

The CCI's definition is closely related to studies that focus on the *cultural* industries. Internationally, the OECD has undertaken some work examining the feasibility of producing reliable international comparative measures of the culture sector.[7] The OECD's mapping of culture industry codes included broadly similar activities to the Australian studies. Where there are differences these appear to be related to the distinction between the *creative* industries and the *cultural* industries.

So the CIIC's needs are able to be broadly met by using the CCI's creative industry segments and it seems that these are broadly in line with efforts to establish international comparative measures.

The value chain

While there seems to be general agreement on the broad segments that make up the creative industries, there is no consensus on what specific activities are included. As with all final consumption goods and services, there is a value chain for creative

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5 Higgs, P., Cunningham, S., Pagan, J., 2007, Australia's Creative Economy: Definitions of the Segments and Sectors, ARC Centre of Excellence for Creative Industries & Innovation (CCI), Brisbane.

6 See for example the NSW Department of State and Regional Development, 2008, *NSW Creative Industry: Economic Fundamentals*, Sydney.

7 See Gordon, J.C. and Beilby-Orrin, H., 2007, International Measurement of the Economic and Social Importance of Culture, STD/NAFS(2007)1, Organisation for Economic Co-operation and Development, Paris.

products, with different business units adding value at each stage along the chain. Take for example, the value chain from the composition of a piece of music through to its consumption. Before someone can listen to the music at home, it must be composed, recorded and produced. It must then be reproduced, marketed, distributed to retailers and then sold to the consumer. Alternatively it could reach the consumer via the internet. All processes along the way add value to the product. The key issue is how much of the value chain for creative products should be included as part of the creative industries.

In its mapping methodology the CCI has identified five broad stages of the value chain for creative products:

- pre-creation – includes libraries and museums that are a critical resource for creative people;
- creation – primary creation activities, such as writing and music composition;
- realisation – includes replication and distribution of creative products;
- consumption – includes TV and stereo equipment used to consume creative content; and
- post-sale – includes repair, maintenance, support, alterations and second-hand sales.

The CCI views that the creative economy includes only activities at the pre-creation and creation stage. This contrasts with Howkins' definition of the creative industries, which includes creative goods or services as well as the value added by carriers of those goods and services. Under Howkins' definition, all of the different levels or links in the supply chain are important. Similarly, a recent research contribution from the United Nations Education, Scientific and Cultural Organisation (UNESCO) defines the cultural industries, which are closely related to the creative industries, as those that 'combine the creation, production and commercialisation of contents which are intangible and cultural in nature'. According to UNESCO:

> Cultural goods generally refer to those consumer goods which convey ideas, symbols, and ways of life. They inform or entertain, contribute to build collective identity and influence cultural practices. The result of individual or collective creativity — thus copyright-based — cultural goods are reproduced and boosted by industrial processes and worldwide distribution. Books, magazines, multimedia products, software, records, films, videos, audio-visual programs, crafts and fashion design constitute plural and diversified cultural offerings for citizens at large.
>
> Cultural services are those activities aimed at satisfying cultural interests or needs. Such activities do not represent material goods in themselves: they typically consist of the overall set of measures and supporting facilities for cultural practices that government, private and semi-public institutions or companies make available to the community. Examples of such services include the promotion of performances and cultural events as

well as cultural information and preservation (libraries, documentation centres and museums). Cultural services may be offered for free or on a commercial basis.[8]

In line with the UNESCO definition, a previous CIE report on the cultural and creative industries focused on both activities involved in the creation of cultural and creative goods and services as well as activities that subsequently add value to those products.

It is clear that there is no standard approach for defining the creative industries. How much of the value chain to include as part of the creative industries depends on the reasons for defining and measuring them. For some purposes, it may be necessary to look at the whole value chain. For others it may only be necessary to focus on a small section of it.

A workable list of creative industries

For this study, we focus on the creation section of the value chain because SMEs engaged on those creative activities are most likely to be the users of CIIC services. This broadly follows the CCI approach, although some pre-creation activities have been excluded. Appendix A provides details of the industry categories that are viewed as making up the creative industries used in this study.

Occupation classifications

As with industries, occupation classifications group individual occupations in an analytically meaningful way. Occupation classifications identify a set of occupations covering all jobs in the labour market and defines them according to their attributes and groups them on the basis of their similarity into successively broader categories for statistical and other types of analysis.

The individual units that are classified in occupation classifications are jobs. The ABS defines a 'job' as a set of tasks designed to be performed by one person for an employer (including self-employment) in return for payment or profit. Individual persons are classified by occupation through their relationship to a past, present or future job. Any particular job will typically involve an individual working for a particular employer and undertaking a particular set of tasks. People working for themselves are considered as having a job and belonging to the labour force.

The ABS defines an 'occupation' as a set of jobs that require the performance of similar or identical sets of tasks. As it is rare for two actual jobs to have identical sets of tasks, in practical terms, an 'occupation' is a set of jobs whose main tasks are

8 Refer to UNESCO website: http://portal.unesco.org/en/.

characterised by a high degree of similarity. Occupations are classified according to two criteria - skill level and skill specialisation.[9]

The occupations classification that applies in Australia is the Australia and New Zealand Standard Classification of Occupations (ANZSCO). The first edition of ANZSCO was released in 2006 and is gradually replacing the previous classification system the Australian Standard Classifications of Occupations (ASCO). ANZSCO provides a much better coverage of creative occupations.

ASCO and ANZSCO classifications that are viewed as comprising the creative occupations are provided in appendix B of this report. As with the industry classifications, this is broadly based on the CCI definition. Exclusions from the CCI definition are explained in Table B.2.

The creative trident

Many analysts propose that there is value in viewing the creative economy from both an industry and occupation perspective. An important recent contribution to mapping the creative economy is the creative trident approach developed by the ARC Centre of Excellence for Creative Industries and Innovation (CCI).[10]

The creative trident approach is the nexus between industry and occupation classifications. A cross-classification of employment by industry and occupation allows three broad classes of employees to be included in an estimate of the creative workforce:

- specialist creatives – those employed in creative occupations in creative industries;
- support workers – those employed in creative industries, but in non-creative occupations; and
- embedded creatives – those employed in creative occupations, but in industries that do not produce creative products.

[9] ABS, 2006, *Australian and New Zealand Standard Classification of Occupations*, Catalogue No. 1220.0, Canberra.

[10] Higgs, P., Cunningham, S., 2007, Australia's Creative Economy: Mapping Methodologies, ARC Centre of Excellence for Creative Industries and Innovation (CCI), Brisbane.

This is summarised in the matrix below.

	Employment with creative industries	*Employment within other industries*	*Total*
Employment in creative occupations	Specialist creatives	Embedded creatives	Total employment in creative occupations
Employment in other occupations	Support workers		
Total	Total employment in creative industries		Total creative workforce

While the creative trident approach provides a broader and more complete view of the creative economy, it does have some limitations. Firstly, it is really only relevant to employment because there are no reliable measures of output by occupation. It is therefore not possible to estimate the contribution embedded creatives make to the output of the industries in which they are employed. Secondly, because the creative trident mixes the concepts of industries and occupations, employment estimates are not really comparable to traditional industries. Estimating a creative trident across all industries would result in significant double counting.

Challenges presented in measuring creative activities

Various characteristics of the creative industries make measurement more challenging, compared with traditional industries. Key factors include:

- *People in the creative industries can be hidden.* The creative industries are composed of a variety of industries and the people in them can often be hidden in other industries. An example is dance teachers who could be classified as being in the education industry, while these creative workers should be viewed as forming part of the creative industries.
- *Some creative industries have a high number of volunteers and workers who are unpaid.* Previous studies have show that of the total population engaged in culture and leisure activities, 40 per cent were paid and 60 per cent were unpaid.[11] It is expected that this attribute would carry over to the larger creative industries.
- *Many people in the cultural industry have more than one occupation.* Reflecting the economics of work in creative activities, some creative workers often have a day job as well as their creative occupation. Earlier research has identified that 63 per cent of artists have more than one job (Throsby and Hollister 2003).
- *Self identification is uncertain.* Many people who could be viewed as being employed in the creative industry may not identify themselves as being part of

11 Australia council for the arts 2003, *Some Australian Arts Statistics*, Australia Council, Sydney.

that industry. Richard Florida states that *'members of the creative class do not see themselves as a class'*.[12]

- *The creative industries have a long time-line.* Those who have retired or no longer participate in the industry might still associate themselves with it.

Difficulties encountered in trying to define the creative industry include:

- *Rapid change.* Rapid change has probably always been a feature of creative activities, but it is possible that the pace of change has accelerated. Changes in technology shape what products are in demand and how they are made. It also shapes the way that industries are structured and skills that are needed. In the music industry, for example, according to a recent industry report: 'Perhaps most dramatic of all technology developments is the 'do it yourself' revolution which enables emerging artists to get established without having to enter into costly contracts with record companies.'[13]
- *Convergence is changing definitions of industries and occupations*. Technological change, particularly digitisation and the almost universal access to a low cost communications platform provided by the Internet is changing the way that people, organisations and industries work. Industries that were once distinct such as broadcasting, telecommunications and information technologies now overlap. The impact of convergence has been profound in the areas of communications and culture (Hartely 2002). As a result there is a wide range of the types of businesses (and skills) involved. Thus, the Australian Interactive Multimedia Industry Association (AIMIA) listed approximately 950 companies on its website in 2001. Their activities range widely over web design, activities related to script writing and games production, through to support services such as legal, marketing and education and training.' [14]
- *Hobbies and industry.* In some cases people with creative skills create or make creative goods simply for their own enjoyment. They do not sell their output, although the cost of inputs, such as instruments and training, may be very high. This study seeks to focus upon creative goods and services that are provided in an industry that is for sale.

The characteristics identified above suggest that estimates relating to the creative industries may be slightly less reliable than for more traditional industries, such as manufacturing or agriculture. While standard data collection methods may be less relevant to creative industries and occupations, it is important that the estimates

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12 Florida, R., 2003, *The Rise of The Creative Class: and How It Is Transforming Work, Leisure, Community And Everyday Life*, Pluto Press, North Melbourne.

13 Hoegh-Guldberg, H., 2005, Statistical light dawns on the music sector, Music Council of Australia, http://www.mca.org.au/index.php?id=38.

14 Australian Government, Department of Communications, Information technology and the arts 2004, Creative Industries Cluster Study Volume 1, Commonwealth of Australia.

presented in this report are based on robust and reliable data collection methods, so the estimates are comparable to other industries.

The next chapter uses the above framework to measure the economic aspects of the creative industries.

Key points

- Reflecting the needs of the CIIC and compelling models developed in Australia and overseas about mapping the creative industries, they are viewed in this study to be comprised of the following segments:
  - music and performing arts;
  - film, television and radio;
  - advertising and marketing;
  - software development and interactive content;
  - writing, publishing and print media; and
  - architecture, design and visual arts.
- This study focuses on business units involved in the creation section of the value chain for creative products. It does not include activities that subsequently add value, downstream from the creative process.
- It is possible to look at employment in the creative economy from the perspective of both industries and occupations. A broader estimate of employment in the creative economy includes specialist creatives, support workers in the creative industries and creatives embedded in other industries.
- The characteristics of the creative industries suggest that they are more difficult to identify and measure than traditional industries and a degree of caution is required.

3 Creative industries macro metrics

This chapter uses the framework developed in chapter 2 to provide a statistical overview of the creative industries at the aggregate or macro level. That is, comparing the creative industries to the economy at large. Some information is also provided at the broad segment level, comparing the creative industries with traditional industry sectors, as well as looking at information about the various component parts of the creative industries.

The creative industries macro performance

Creative industries

Reflecting the intent to compare the creative industries with other industries and the economy at large the information in this section relates to the specialist creative industries; that is, those business units producing creative goods and services. It therefore does not include the contribution made by creatives embedded in non-creative industries.

Production

The most common measure of production is gross domestic product (GDP). GDP is a measure of the value of all the goods and services produced in an economy in a particular time period. As part of its quarterly GDP release, the ABS publishes estimates of industry value added, which in broad terms is a measure of the value of output produced by a particular industry, less intermediate inputs, to avoid double-counting. However, industry value added estimates are not produced at a sufficiently fine level of detail to be useful in constructing estimates of the creative industries.

Another annual publication, *Australian industry* (Catalogue No. 8155.0) also publishes various industry statistics at a finer level of disaggregation. However, even the ANZSIC 2-digit level is not sufficiently disaggregated to construct a robust picture of the creative industries.

IBISWorld produces estimates of industry gross product for industries at the ANZSIC 4-digit level. While there are some differences industry gross product is closely related to industry value added. In broad terms, both measure the value of output of an industry, less intermediate inputs. Based on IBISWorld estimates, the industry gross product of the creative industries was around $31.1 billion in 2007-08 (table 3.1).

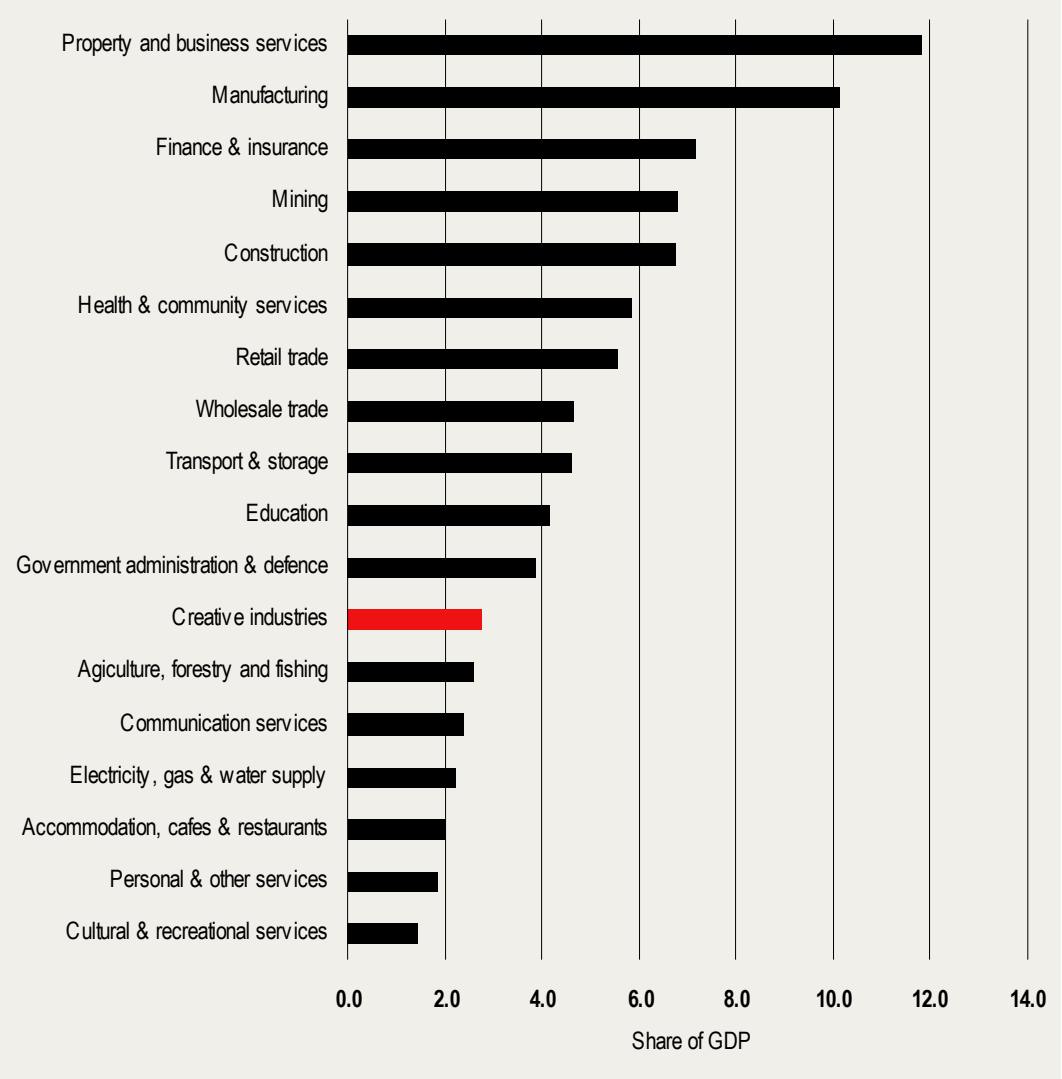
3.1 Nominal industry gross product of the creative industries

	2004-05	*2005-06*	*2006-07*	*2007-08*
	$m	$m	$m	$m
Music and performing arts	970	995	1 028	1 043
Film, television & radio	3 580	3 695	4 701	5 012
Advertising & marketing	807	848	911	962
Software development & interactive content	10 970	11 901	12 840	13 627
Writing, publishing & print media	5 713	6 176	6 523	6 743
Architecture, design & visual arts	2 915	3 189	3 493	3 735
Total creative industries	**24 954**	**26 803**	**29 494**	**31 122**

Source: IBISWorld Industry reports, The CIE.

The average contribution of the creative industries to GDP over the four years from 2004-05 to 2007-08 was around 2.8 per cent (chart 3.2). This was higher than a number of traditional industry classifications, including agriculture, forestry & fishing, communication services and electricity, gas & water supply.

3.2 Industry share of GDP, average 2004-05 to 2007-08



[a] Total adds to more than 100 per cent because the creative industries are double counted being a part of the traditional ANZSIC divisions and the impact of taxes and subsidies and the statistical discrepancy are not shown on the chart.

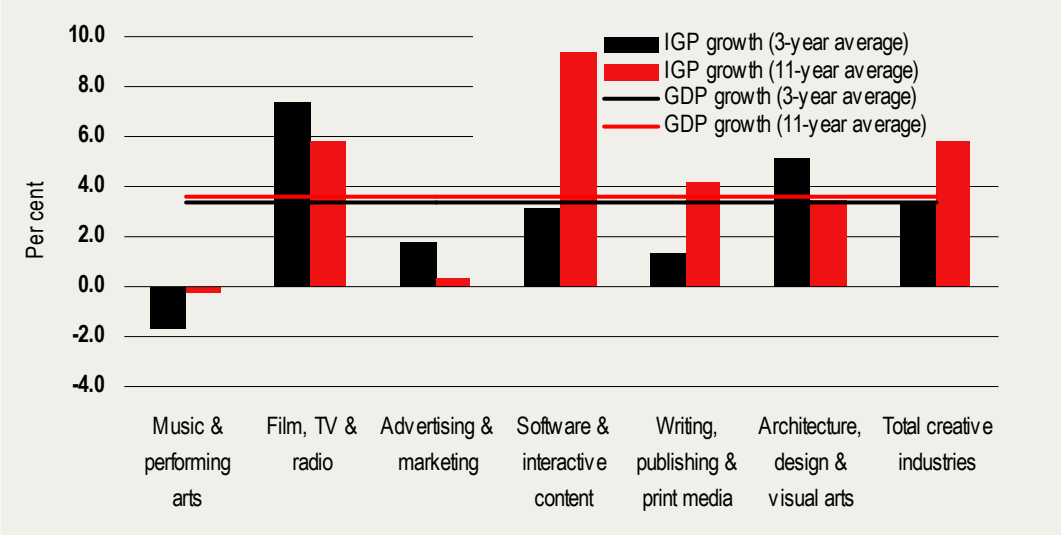
Data source: ABS Catalogue No. 5204.0, IBISWorld industry reports, The CIE.

Over the three years to 2007-08, the creative industries in aggregate grew at an annual average pace of 3.4 per cent in real terms, broadly in line with the wider economy (chart 3.3). However, growth across segments of the creative industries varied significantly. Film, television & radio industries grew by an annual average of 7.3 per cent over the period, while the music & performing arts industries contracted at an average rate of 1.7 per cent.

While the creative industries have grown at around the same pace as the wider economy over the past three years, when viewed over a longer period the creative industries have grown at a significantly faster pace. Over the past eleven years, the creative industries grew at an average annual pace of 5.8 per cent, compared with an

average annual pace of 3.6 per cent for the wider economy.[15] The above average growth rate of the creative industries over the eleven years to 2007-8 was largely due to the software & interactive content and film, television & radio segments. While the pace of growth for the film, television & radio segment has actually picked up over the past three years, growth in the software & interactive content segment has slowed to around the same pace as the aggregate economy. This may be due to the maturing of that segment. The writing, publishing & print media segment has also slowed significantly over the past three years, relative to its longer term average.

3.3 **Real annual average growth to 2007-08**



Data source: ABS Catalogue No. 5204.0, IBISWorld Industry reports, The CIE.

Employment in the creative industries

The most robust and detailed employment estimates are based on the ABS's Census of Population and Housing. According to the 2006 Census, there were 287 693 people employed in the creative industries (table 3.4). This was around 3.2 per cent of total employment (chart 3.5). The software & interactive media and architecture, design & visual arts industries were the largest employing segments.

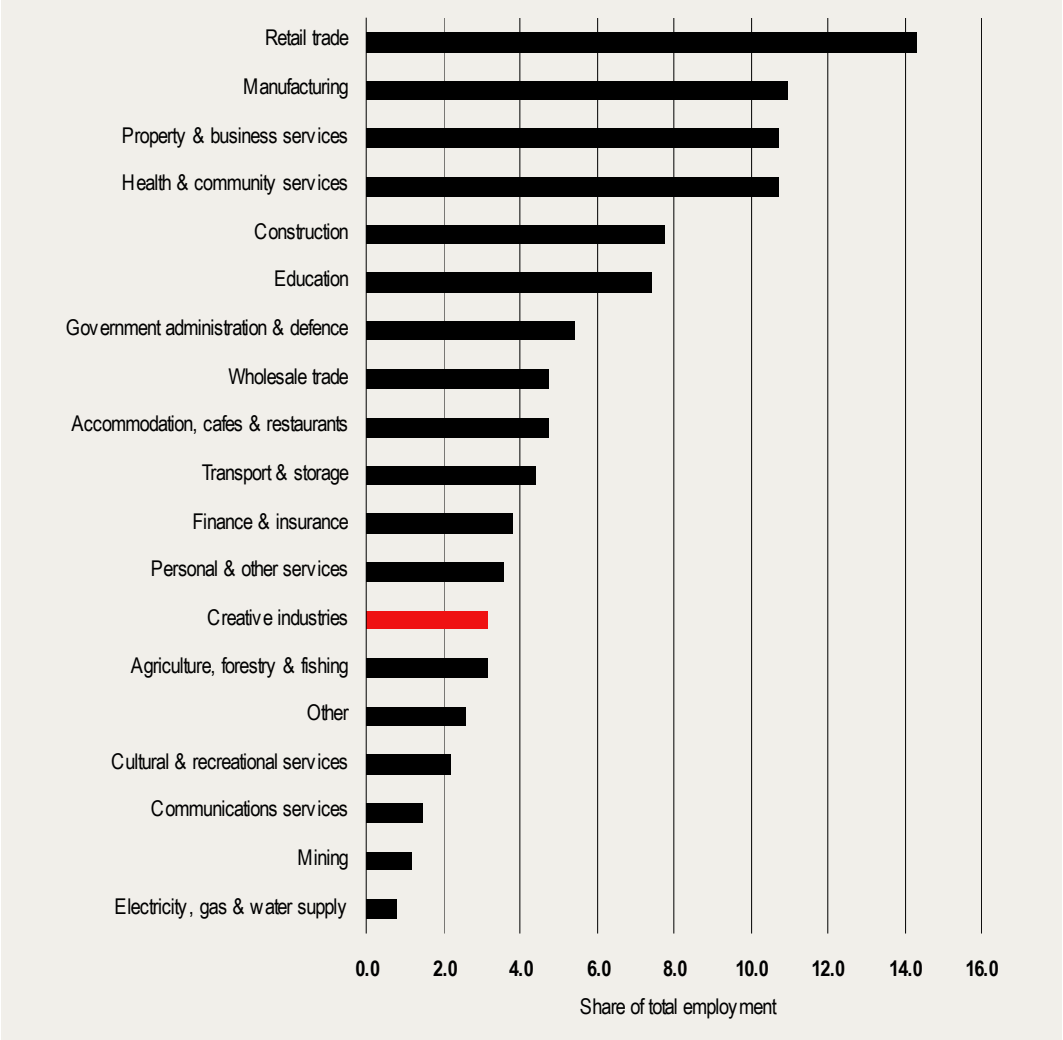
[15] IGP data is not available further back than 1996-97 for all industry classifications that make up the creative industries.

3.4 Employment in creative industries, 2006

	Employment	*Share of creative industries*	*Share of total employment*
	No.	%	%
Music and performing arts	17 116	5.9	0.2
Film, TV and radio	30 177	10.5	0.3
Advertising and marketing	26 893	9.3	0.3
Software and interactive media	101 870	35.4	1.1
Writing, publishing and print media	45 614	15.9	0.5
Architecture, design and visual arts	66 023	22.9	0.7
Total creative industries	287 693	100.0	3.2

Source: ABS Census of Population and Housing, The CIE.

3.5 Industry share of employment, 2006



a The creative industries data is included to illustrate its relative size. The total in the chart adds up to more than 100 per cent due to the overlay of the creative industries to data about all other industries.

Data source: ABS 2006 Census of Population and Housing.

However, the Census is only completed every five years. More timely estimates of employment by industry are produced by IBISWorld, which produces employment by industry estimates on an annual basis. Based on the IBISWorld estimates and using the framework for defining the industry established in the previous chapter, there were around 317 000 people employed in creative industries in 2007-08 (table 3.6). This includes the number of people in both full-time and part-time employment.

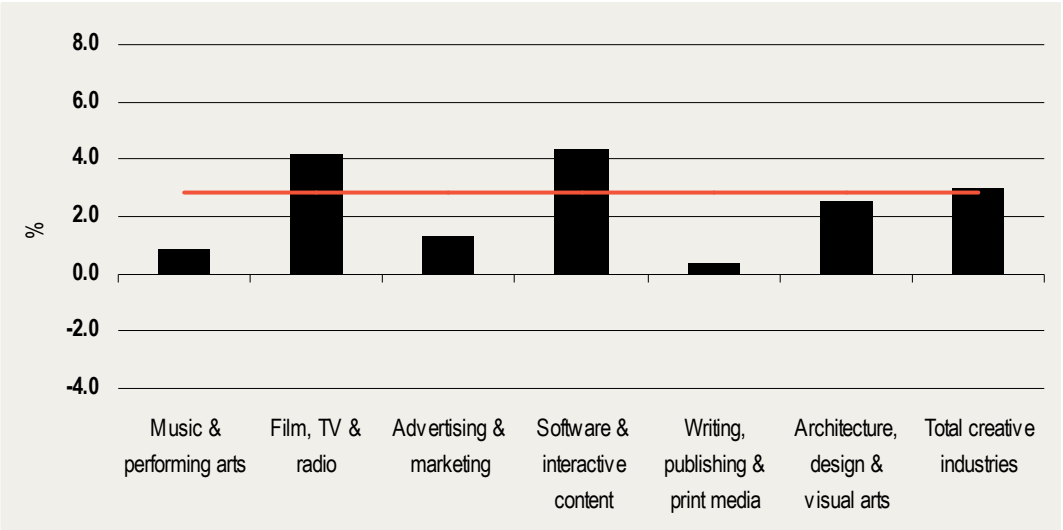
3.6 Employment in the creative industries

	2004-05	*2005-06*	*2006-07*	*2007-08*
	'000	'000	'000	'000
Music and performing arts	21.3	21.3	21.5	21.8
Film, television & radio	35.5	33.9	39.0	40.2
Advertising & marketing	10.5	10.6	10.7	10.9
Software development & interactive content	106.8	110.5	116.7	121.3
Writing, publishing & print media	43.8	44.8	44.8	44.3
Architecture, design & visual arts	72.3	74.9	76.2	78.0
Total creative industries	290.1	295.8	309.1	316.6

Source: IBISWorld Industry reports, The CIE.

Over the three years to 2007-08, employment in the creative industries grew at an average annual pace of 3.0 per cent, slightly faster than total employment growth of 2.8 per cent over the same period (chart 3.7). Employment grew relatively strongly in film, television & radio and software development & interactive content segments, but relatively weakly in the music & performing arts, advertising & marketing and writing, publishing & print media segments.

3.7 Employment growth, average 2004-05 to 2007-08

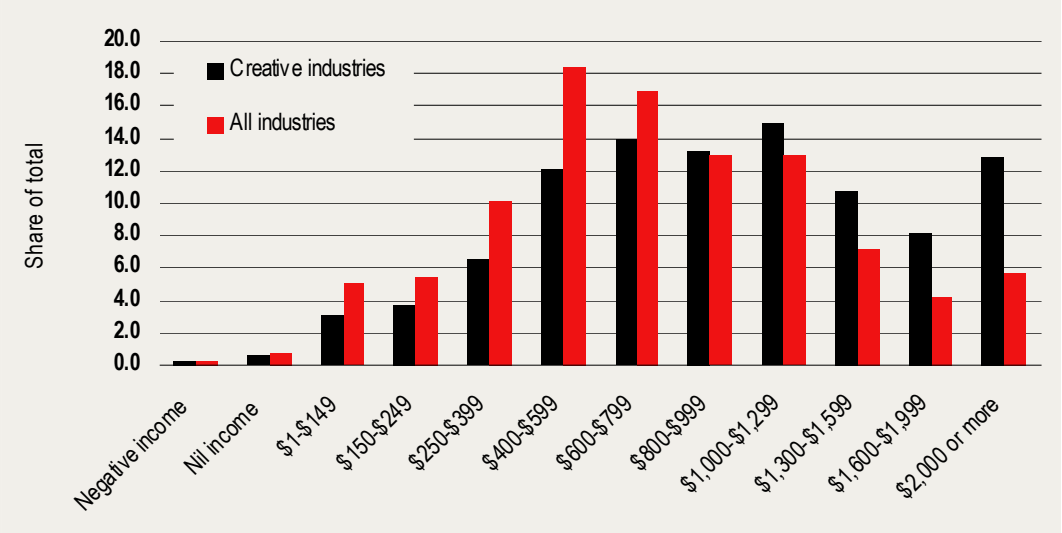


Data source: IBISWorld Industry reports, The CIE.

Incomes

The income of those employed in the creative industries tends to be higher than in the wider economy. According to the 2006 Census, around 46 per cent of those employed in the creative industries reported a weekly income of more than $1 000 per week, compared to only 30 per cent across all industries (table 3.8).

3.8 **Weekly income distribution, 2006**



Data source: ABS Census of Population and Housing, The CIE.

An alternative measure of income can be constructed from IBISWorld data. Dividing total nominal wages by employment produces an estimate of average wages per employee. Average wages across the creative industries were around $60 000 in 2007-08 (table 3.9). Average wages were significantly higher in the advertising & marketing and software development & interactive content segments and significantly lower in the music & performing arts and architecture, design & visual arts segments. These estimates may be distorted by the proportion of part-time workers in an industry. Those industries with a greater proportion of part-time workers would have a lower average annual wage, even if their hourly rates were the same.

3.9 **Average wages in the creative industries**

	2004-05	*2005-06*	*2006-07*	*2007-08*
	'000	'000	'000	'000
Music and performing arts	31 914	32 888	33 435	34 389
Film, television & radio	48 850	52 402	52 127	53 920
Advertising & marketing	70 578	74 304	78 117	81 481
Software development & interactive content	69 137	73 657	77 601	80 491
Writing, publishing & print media	56 014	58 705	61 542	63 824
Architecture, design & visual arts	29 125	31 011	32 836	33 554
Total creative industries	52 025	55 259	57 955	60 078

Source: IBISWorld Industry reports, The CIE.

Productivity

Productivity measures the quantity of output produced per unit of inputs. Productivity is a key driver of incomes and therefore economic wellbeing. A productivity improvement means that more output can be produced for a given quantity of inputs, or that fewer inputs are needed to produce a given quantity of output.

There are many different measure of productivity. The best measure of productivity is multi-factor productivity, which measures total output per unit of combined inputs. A change in multi-factor productivity measures a change in productivity that cannot be explained by a change in combined inputs, such as labour, capital, energy and materials. However, to estimate multifactor productivity for the creative industries would require estimates of labour inputs (preferably hours), the capital stock, the energy and materials used in the production process by industry at a very fine level of disaggregation. This information is not currently available.

A crude measure of labour productivity that can be constructed for the creative industries is industry gross product per employee. This is simply nominal industry gross product reported in table 3.1 divided by employment in the creative industries reported in table 3.6. This measure of labour productivity varies significantly across industries. One reason is the variation in industry structure. More labour intensive industries are likely to have a lower IGP per employer compared with more land or capital intensive industries. Also, the number of employees is not always an accurate measure of labour inputs. Industries characterised by a high degree of part time or casual employment are likely to have lower IGP per employee than industries where employees work longer hours. So comparing IGP per employee across industries may not be particularly meaningful. Nevertheless, this measure of labour productivity for each creative industry segments is reported in table 3.10.

3.10 **Labour productivity in the creative industries**

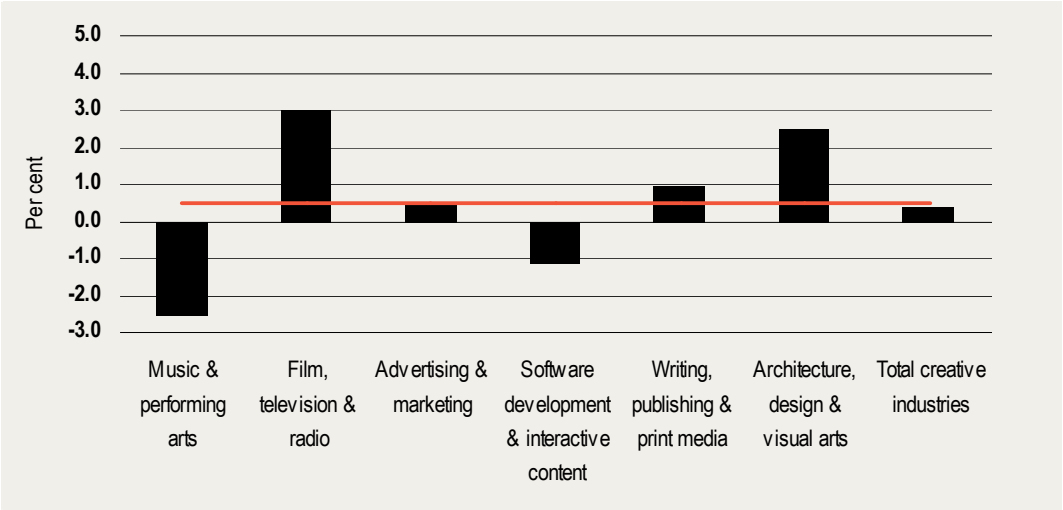
	2004-05	***2005-06***	***2006-07***	***2007-08***
	$ per employee	$ per employee	$ per employee	$ per employee
Music and performing arts	45 555	46 775	47 729	47 755
Film, television & radio	100 794	109 095	120 387	124 725
Advertising & marketing	76 999	80 220	84 895	88 300
Software development & interactive content	102 757	107 740	109 992	112 304
Writing, publishing & print media	130 468	137 907	145 594	152 076
Architecture, design & visual arts	40 331	42 594	45 823	47 911
Total creative industries	86 019	90 608	95 431	98 313
Total economy	91 336	95 672	100 487	106 019

Source: IBISWorld Industry reports, The CIE.

Perhaps of more interest than the level of productivity is its growth rate. When measuring productivity growth it is important to abstract from the impact of price

changes. We therefore estimate the average productivity growth over the three years from 2004-05 to 2007-08, based on the change in real industry gross product per employee (chart 3.11). While this measure is comparable across industries, it does not take into account changes in working hours. For example, if employees across an entire industry could produce the same quantity of output in fewer hours, this would be a productivity improvement. But it would not be picked up by this measure because the number of employees has not changed. Nevertheless, average productivity growth in the creative industries in aggregate over this period was a modest 0.4 per cent, broadly in line with productivity growth across the whole economy. Productivity growth across the creative industry segments varied considerably. Productivity grew relatively strongly in the film, television & radio and architecture, design & visual arts segments, but contracted in the music & performing arts and software development & interactive content segments.

3.11 **Average productivity growth, 2004-05 to 2007-08**



Data source: IBISWorld industry reports, ABS Catalogue No. 5204.0 and The CIE.

Trade performance

There are a number of conceptual difficulties in measuring the trade performance of the creative industries as we have defined it. Unlike industry gross product, trade is usually measured in terms of the total value of goods and services that are traded across borders. Exports are not therefore measured on a value-added basis. Trade classifications are typically based on the characteristics of the good or service being traded. However, often a number of industries have added value to a good before it is exported. Since exports are based on the total value of the good, mapping trade classifications to the specific industries that have added value to the final good can be difficult. Often the good exported would be recorded as an export of the industry at the end of the value chain. Therefore, some industries higher up the value chain would have no exports, while others at the end of the value chain could have exports many times the value added by that industry. In chapter 2, we defined the creative

industries based on only the creative section of the value chain, which is at the beginning of the value chain. We specifically excluded downstream value-adding, where the exports of many creative goods would be recorded.

Alternatively with imports, the imports of a firm within the creative industries, might not be a creative good. It might be an intermediate or capital good used in the production process. For example, an artist might use imported paint to create a painting.

Nevertheless, IBISWorld industry reports estimate the exports and imports of each industry. A measure for the creative industries in aggregate is shown in table 3.12. These estimates suggest the creative industries are net importers.

3.12 **International trade by the creative industries**

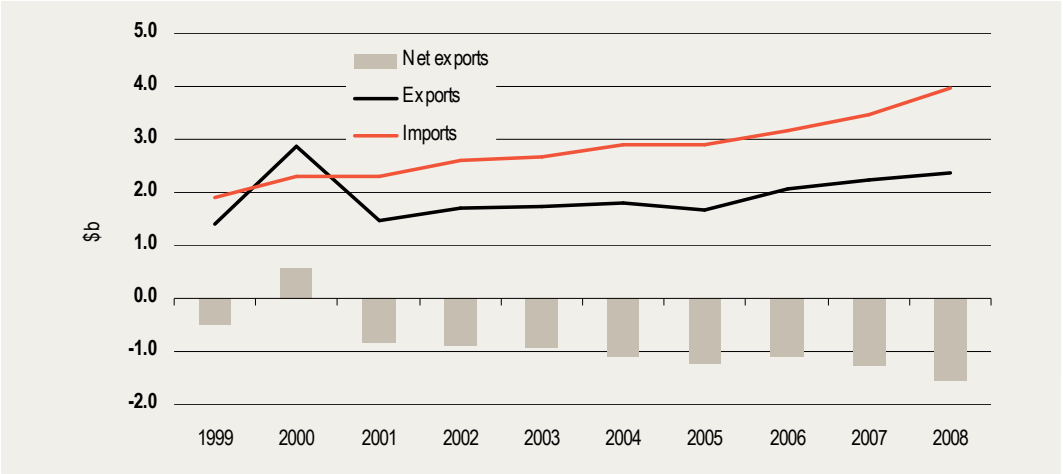
	2004-05	*2005-06*	*2006-07*	*2007-08*
	$m	$m	$m	$m
Exports	1 423	1 519	1 708	1 728
Imports	3 158	3 301	3 586	3 806
Net exports	-1 735	-1 783	-1 878	-2 078

Source: IBISWorld Industry reports, The CIE.

An alternative measure of trade by the creative industries is based on ABS estimates of trade in services. The creative industries are largely service based industries. Australian exporters of creative services often receive royalties for international sales. For example, rather than exporting a printed book, an Australian author or publisher might provide the rights to an overseas publisher to service overseas markets, in return for royalty payments. Likewise, Australian consumers of overseas content pay royalties to the creator. The ABS's trade in services data includes royalty payments. This measure is therefore effectively capturing exports of creative content (plus any subsequent value-adding) and imports of services that compete with the Australian creative industries. This measure is likely to more closely reflect trade by the creative industries as we have defined them.

The ABS's trade in services data tells a broadly similar story to the IBISWorld data. Australia is consistently a net importer of creative content (chart 3.13). The exception was 2000 when there was a spike in royalties on film, television programs, video & multimedia, possibly associated with the Sydney Olympics.

3.13 **Trade in creative industry services, 1999 to 2008**



Data source: ABS Catalogue No. 5368.0, The CIE.

Creative occupations

According to the 2006 Census, nearly 278 000 people were employed in creative occupations (table 3.14). This was around 3.1 per cent of total employment. Around two-thirds of employment in creative occupations was related to architecture, design & visual arts and software development and interactive content.

3.14 **Employment in creative occupations, 2006**

	Employment	*Share of creative industries*	*Share of total employment*
	No	%	%
Music and performing arts	19 310	6.9	0.2
Film, TV and radio	23 057	8.3	0.3
Advertising and marketing	35 722	12.9	0.4
Software and interactive media	78 218	28.1	0.9
Writing, publishing and print media	20 124	7.2	0.2
Architecture, design and visual arts	101 548	36.5	1.1
Total creative occupations	277 979	100.0	3.1

Source: ABS Census of Population and Housing, The CIE.

The creative trident statistics

As discussed previously, the CCI's creative trident is the nexus between industries and occupations and gives a broader picture of the creative workforce. It includes:

- specialist creatives – those employed in creative occupations in creative industries;
- support workers – those employed in creative industries in non-creative occupations; and

- embedded creatives – those employed in creative occupations in non-creative industries.

Based on the 2006 Census, the total creative workforce is estimated at 438 359, or around 4.8 per cent of total employment (table 3.15). Key insights from the creative trident approach include the following:

- including creatives embedded in non-creative industries, increases the estimate of the creative workforce significantly; and
- less than half of people in creative occupations are employed in creative industries.

3.15 **Total creative workforce, 2006**

	Creative industries	*Non-creative industries*	*Total industries*
Creative occupations	127 313	150 666	277 979
	(1.4)	(1.7)	(3.1)
Non-creative occupations	160 380		160 380
	(1.8)	—	(1.8)
Total occupations	287 693	150 666	438 359
	(3.2)	(1.7)	(4.8)

Note: Numbers is brackets represent the share of total employment.
Source: ABS Census of Population and Housing, The CIE.

Key points

- Based on IBISWorld estimates, the industry gross product of the creative industries was around $31.1 billion in 2007-08. This is equivalent to a 2.8 per cent share of GDP, which is more than many traditional industries such as agriculture, communications and electricity, gas & water supply.
- Over the three years to 2007-08, the creative industries have grown at an average rate of 3.4 per cent, which is in line with the growth of the broader economy over that period.
- When viewed over a longer time period, growth in the creative industries has been significantly faster than the broader economy. Over the eleven years to 2007-08, the creative industries at an average annual pace of 5.8 per cent. This compares to average annual GDP growth of 3.6 per cent over the same period.
- According to the 2006 Census, there were around 288 000 people employed in the creative industries. Based on more recent IBISWorld estimates, there were around 317 000 people employed in the creative industries in 2007-08. Over the three years to 2007-08, employment in the creative industries grew at around 3.0 per cent, slightly faster than total employment.
- According to the 2006 Census, there were around 278 000 people employed in creative occupations, which is equivalent to around 3.1 per cent of total employment.

- Using the creative trident approach, increases the estimates of the creative workforce significantly to around 438 000, which is equivalent to 4.8 per cent of total employment.
- Those employed in the creative industries tend to have higher incomes than average.
- Productivity growth in the creative industries was around the same as the broader economy over the three years to 2007-08.
- Australia is net importer of creative content.

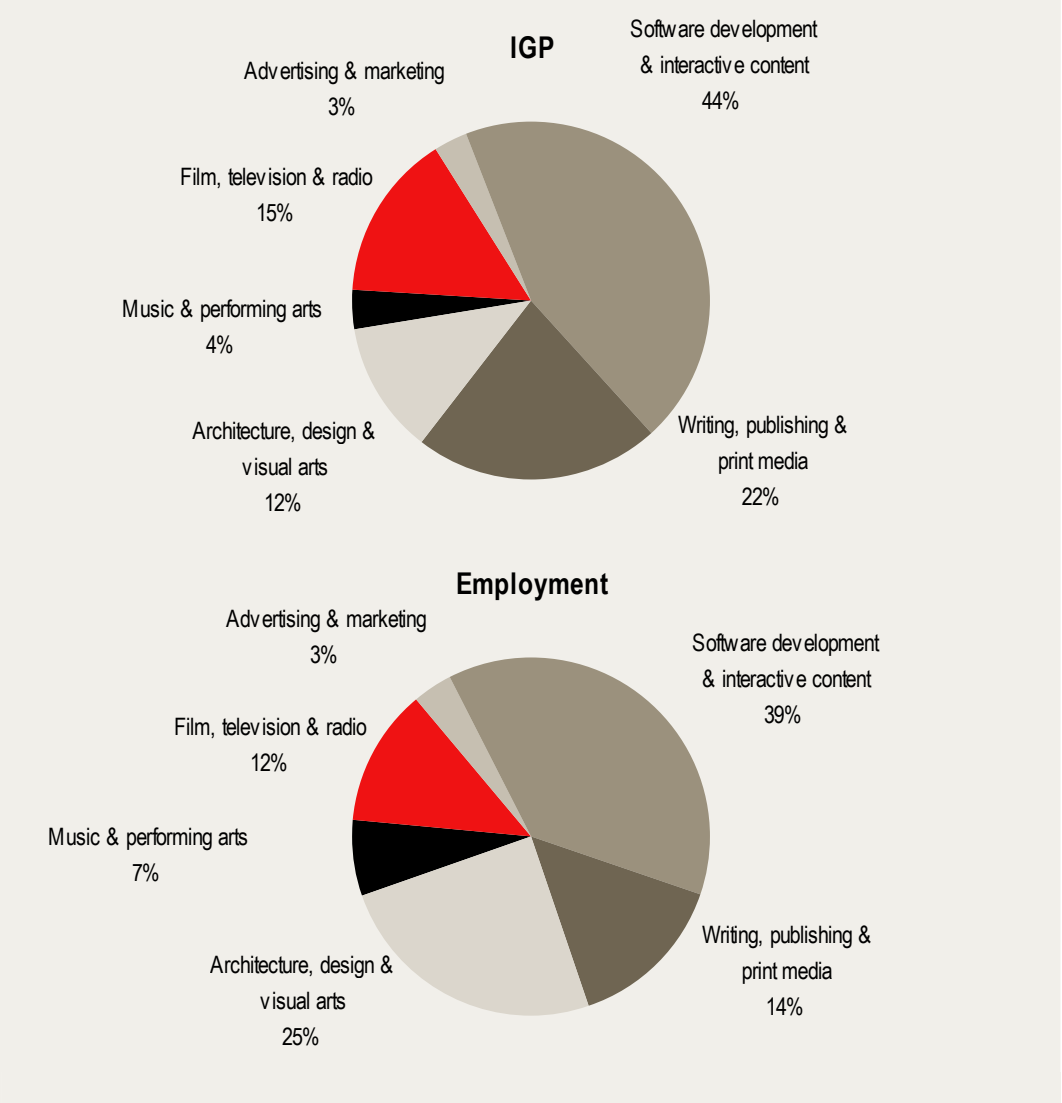
4 Creative industries by segment

While chapter 3 provided a macro overview of the creative industries, this chapter provides further details on each of the creative industry segments:

- music & performing arts;
- film, television & radio;
- advertising & marketing;
- software & interactive media;
- writing, publishing & print media; and
- architecture, design & visual arts.

The relative size of each creative industry segment in terms of IGP and employment is shown in charts 4.1.

4.1 **Creative industries by segment, 2004-05 to 2007-08**



Data source: IBISWorld industry reports, The CIE.

Some industry classifications cut across more than one creative industry segments. In particular, the creative arts includes units mainly engaged in musical composition, the literary arts, and visual arts such as painting, drawing, sculpture, pottery etc.[16] We have followed the CCI by including this in the architecture, design & visual arts segment, though clearly this industry classification cuts across music & performing arts and writing, publishing & print media as well.

While it is not possible to further disaggregate industry production, for employment we report the creative industry trident for each segment. This will ensure that those musicians working in other industries (such as creative arts) will be included in total

[16] ABS Website, http://www.abs.gov.au/AUSSTATS/abs@.nsf/66f306f503e529a5ca25697e0017661f/33355992B198BE47CA25697E0018FCEB?opendocument, accessed 9 June 2009.

employment in the music & performing arts segment. It should be noted, however, that total employment across each segment cannot be added together when the creative trident approach is used as this results in some double counting. For example, an individual in a music & performing arts occupation working in the film, television & radio industry would be counted as an embedded worker in the music & performing arts segment and also a support worker in the film, television & radio segment.

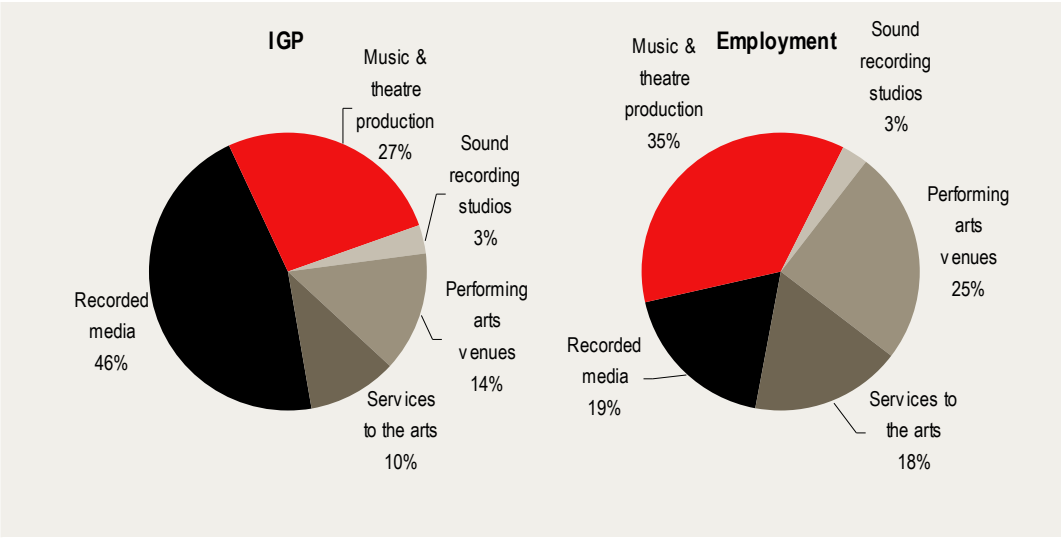
Music and performing arts

Over the period from 2004-05 to 2007-08, the music & performing arts segment has contributed around 3.5 per cent of the total IGP of the creative industries and around 7.0 per cent of total employment. Based on the 1993 edition of ANZSIC, the music and performing arts segment includes the following industry classifications:

- recorded media manufacturing & publishing;
- music & theatre productions;
- sound recording studios;
- performing arts venues; and
- services to the arts not elsewhere classified.

In terms of IGP, recorded media manufacturing & publishing businesses make up nearly half the IGP of the segment, with music & theatre productions contributing a further 27 per cent. By contrast, recorded media manufacturing & publishing employs only around 19 per cent the workers in the segment. Music & theatre productions employ around 35 per cent and performing arts venues around 25 per cent.

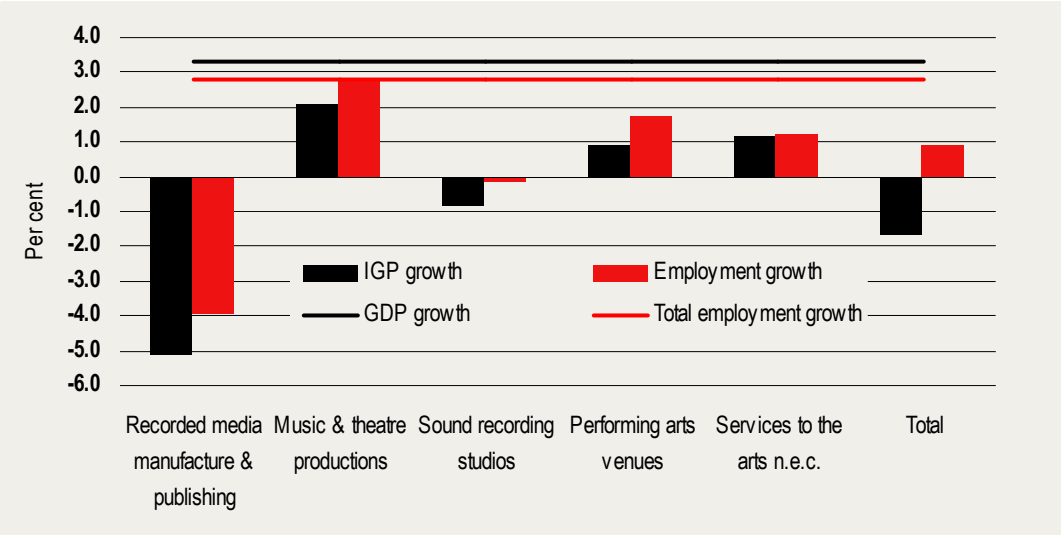
4.2 **Composition of the music & performing arts segment, 2004-05 to 2007-08**



Data source: IBISWorld industry reports, The CIE.

Growth in the music & performing arts segment has been relatively weak over recent years, compared with the broader economy (chart 4.3). Indeed in real terms, the output of the segment contracted over the past three years, while employment growth has been subdued. The performance of all industry classifications within the segment was relatively weak over the period. Both output and employment of the recorded media manufacturing & publishing declined relatively sharply over the period and also fell in sound recording studios.

4.3 Average real IGP and employment growth, 2004-05 to 2007-08



Data source: IBISWorld industry reports, ABS Catalogue No. 5204.0 and The CIE.

When music & performing arts occupations embedded in other industries are taken into account, there were estimated to be around 30 500 people employed in this segment in 2006 (table 4.4). Around 44 per cent of those workers are embedded in other industries.

4.4 Total music and performing arts workforce, 2006

	Music & performing arts industries	*Other industries*	*Total*
Music & performing arts occupations	5 941 (19.5)	13 369 (43.9)	19 310 (63.3)
Other occupations	11 175 (36.7)	- 	11 175 (36.7)
Total	17 116 (56.1)	13 369 (43.9)	30 485 (100.0)

Note: Numbers is brackets represent the share of total employment in the segment.

Source: ABS Census of Population and Housing, The CIE.

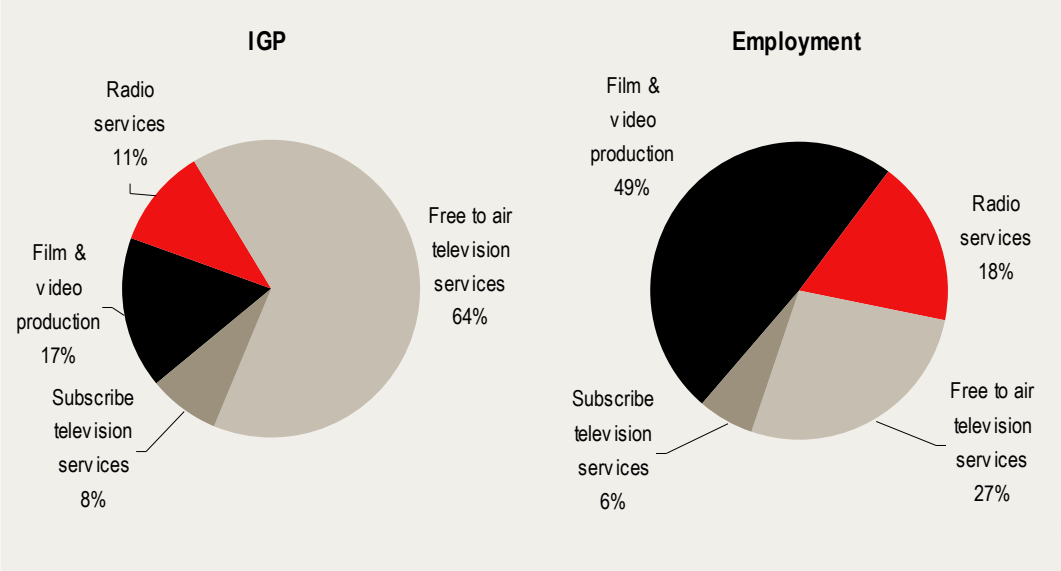
Film, television and radio

The film, television & radio segment contributes around 15 per cent of the total IGP of the creative industries and employees around 12 per cent of the workers. Based on the 1993 edition of ANZSIC, this segment of the creative industries includes:

- film & video production;
- radio services; and
- television services, which includes:
  - free-to-air television services; and
  - subscription television services.

In terms of IGP, the segment is dominated by free-to-air television, which makes up almost two-thirds of the segment. However, free-to-air television employees only around 27 per cent of all employees. Businesses in the film & video production industry classification employ around 50 per cent of employees in this segment.

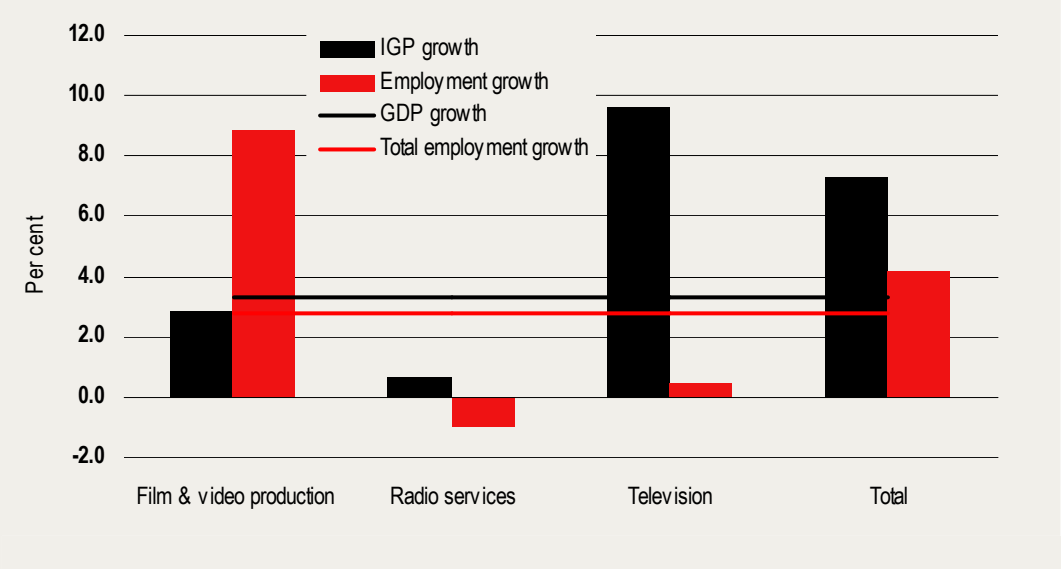
4.5 Composition of the film, television & radio segment, 2004-05 to 2007-08



Data source: IBISWorld industry reports, The CIE.

The film, television & radio segment has performed relatively well over recent years, with both IGP and employment growing significantly faster than the aggregate economy over the three years to 2007-08 (chart 4.6). The IGP of the television industry grew by almost 10 per cent, largely due to very strong growth of subscription television services, albeit from a low base. Average growth in free-to-air television services over the period was more modest at 1.3 per cent. While employment in television was broadly flat over the period, employment in film & video production grew relatively strongly.

4.6 **Real IGP and employment growth, average 2004-05 to 2007-08**



Data source: IBISWorld industry reports, ABS Catalogue No. 5204.0 and The CIE.

Including employees in film, television & radio occupations embedded in other industries, around 40 600 people are employed in the film, television & radio segment, according to the 2006 Census (table 4.7). Compared to other segments a relatively large share are specialists and a relatively low share are embedded employees in other industries. This could be because this segment is closer to the traditional concept of an industry than some other segments.

4.7 **Total film, television and radio workforce, 2006**

	Film, television & radio industries	*Other industries*	*Total*
Film, television & radio occupations	12 637 (31.1)	10 420 (25.7)	23 057 (56.8)
Other occupations	17 540 (43.2)	-	17 540 (43.2)
Total	30 177 (74.3)	10 420 (25.7)	40 597 (100.0)

Note: Numbers is brackets represent the share of total employment in the segment.
Source: ABS Census of Population and Housing, The CIE.

Advertising and marketing

The advertising & marketing segment makes up around 3 per cent of the creative industries in terms of both IGP and employment. Based on the 1993 edition of ANZSIC, the advertising & marketing segment of the creative industries includes only the advertising services industry classification. This segment cannot therefore be disaggregated further than the details provided in chapter 3. Both IGP and employment growth has been relatively subdued in the segment, compared to the wider economy.

Using the creative trident approach, there were just under 59 000 people employed in the advertising & marketing segment, according to the 2006 Census (table 4.8). Compared to the other creative industry segments, there are a relatively low proportion of advertising & marketing specialists. To a much larger extent, advertising & marketing professionals are embedded in other industries.

4.8 Total advertising and marketing workforce, 2006

	Advertising & marketing industries	*Other industries*	*Total*
Advertising & marketing occupations	3 792	31 930	35 722
	(6.4)	(54.3)	(60.7)
Other occupations	23 101		23 101
	(39.3)	-	(39.3)
Total	26 893	31 930	58 823
	(45.7)	(54.3)	(100.0)

Note: Numbers is brackets represent the share of total employment in the segment.
Source: ABS Census of Population and Housing, The CIE.

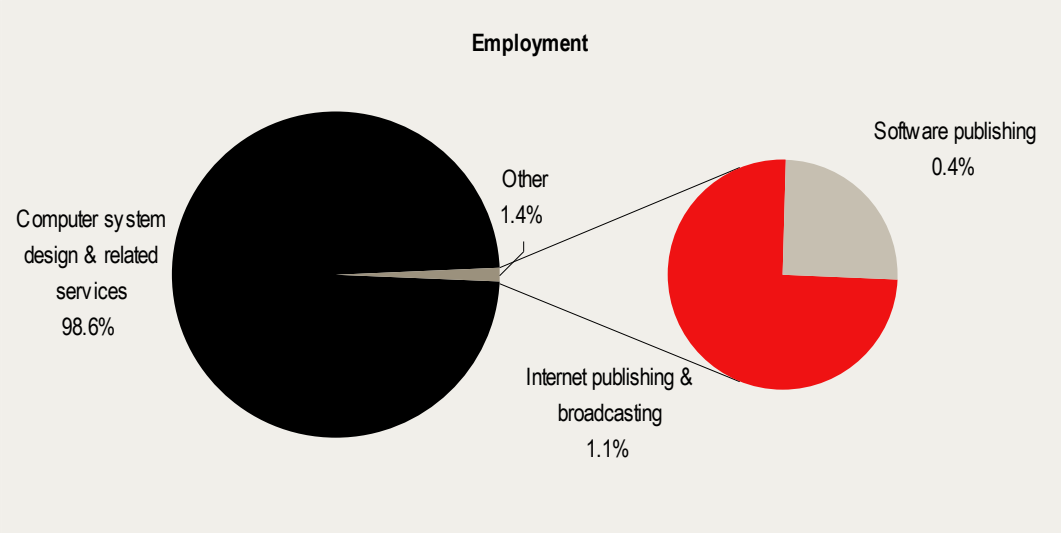
Software development and interactive media

Software development & interactive media is the largest creative industry segment, contributing around 44 per cent of creative industry IGP and employing 39 per cent of total creative industry workforce. However, the 1993 edition of ANZSIC does not have a good coverage of 'new economy' industries such as software & interactive media. As with advertising & marketing, the software development & interactive media comprises a single ANZSIC (1993) industry classification - computer consultancy services. A further disaggregation cannot therefore be provided based on ANZSIC 1993 classifications that have been used to disaggregate the other segments. However, the 2006 edition of ANZSIC provides better coverage of 'new economy' industries. Based on the new edition of ANZSIC the segment includes:

- computer system design & related services;
- internet publishing & broadcasting; and
- software publishing.

According to the 2006 Census, employment in the segment is dominated by businesses providing computer system design & related services. Around 99 per cent of employment in the segment are employed by businesses within that industry classification (chart 4.9).

4.9 **Composition of the software development and interactive content segment, 2006**



Data source: ABS Census of Population and Housing, The CIE.

Digital game development services

A relatively new and fast growing component of the software development & interactive content segment is digital game development services. This industry does not have a specific ANZSIC code. However, the ABS has conducted a separate survey and has reported various statistics related to this industry (catalogue No. 8515.0). According to the ABS, the industry value-added of the digital game development services industry was $98 million in 2006-07, which was equivalent to around 0.8 per cent of the total industry gross product of the software development & interactive media segment (table 4.10). The industry employed more than 1 400 people, or 1.2 per cent of total employment in the segment.

While the digital game development services industry is still small, it appears to be growing quickly. As the 2006-07 survey was the first of the digital game development services industry, there is no point of comparison. However, the ABS reports employment in the industry increased by almost 40 per cent from the end of the September quarter 2006 to the end of the June quarter 2007.

4.10 **Digital game development services, 2006-07**

	Industry value added	*Employment*
	$m	No.
Digital game development services	98	1 431
Software development & interactive media	12 839	116 731
Share of segment (%)	0.8	1.2

Source: ABS Catalogue 8515.0, The CIE.

The software and interactive content creative trident

Using the creative trident framework, there were around 151 000 people employed in the software development & interactive media segment in 2006 (table 4.11).

4.11 **Total software and interactive media workforce, 2006**

	Software & interactive media industries	*Other industries*	*Total*
Software & interactive media occupations	28 947 (19.2)	49 271 (32.6)	78 218 (51.8)
Other occupations	72 923 (48.2)	- 	72 923 (48.2)
Total	101 870 (67.4)	49 271 (32.6)	151 141 (100.0)

Note: Numbers is brackets represent the share of total employment in the segment.

Source: ABS Census of Population and Housing, The CIE.

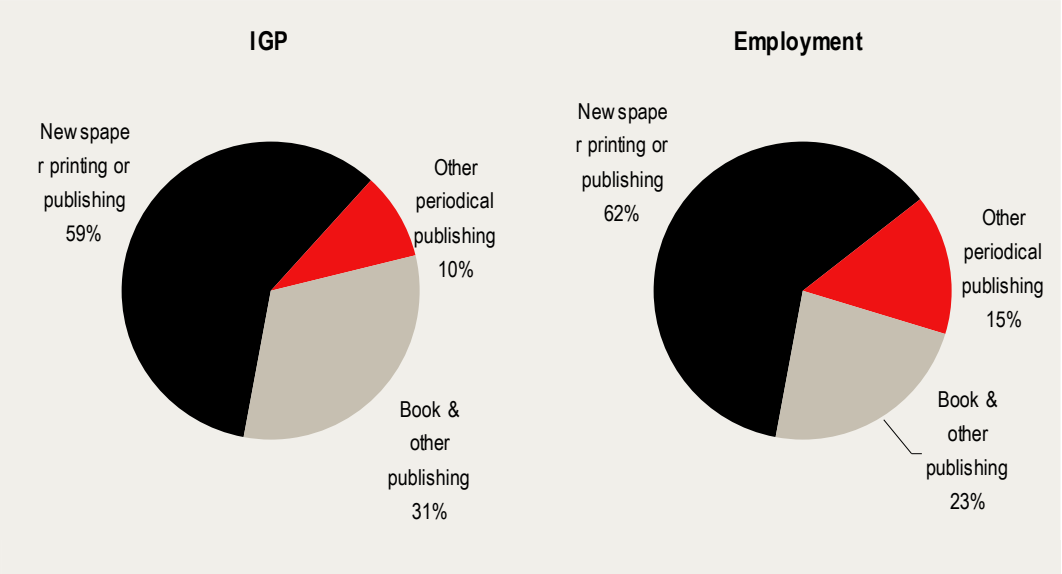
Writing, publishing and print media

Businesses in the writing, publishing & print media segment contribute around 22 per cent of the aggregate IGP of the creative industries and employs around 14 per cent of the total workforce. This segment consists of:

- newspaper printing or publishing;
- other periodical publishing; and
- book & other publishing.

The segment is dominated by newspaper printing or publishing, which produced around 60 per cent of the total output of the segment and employed around 62 per cent of the total workers.

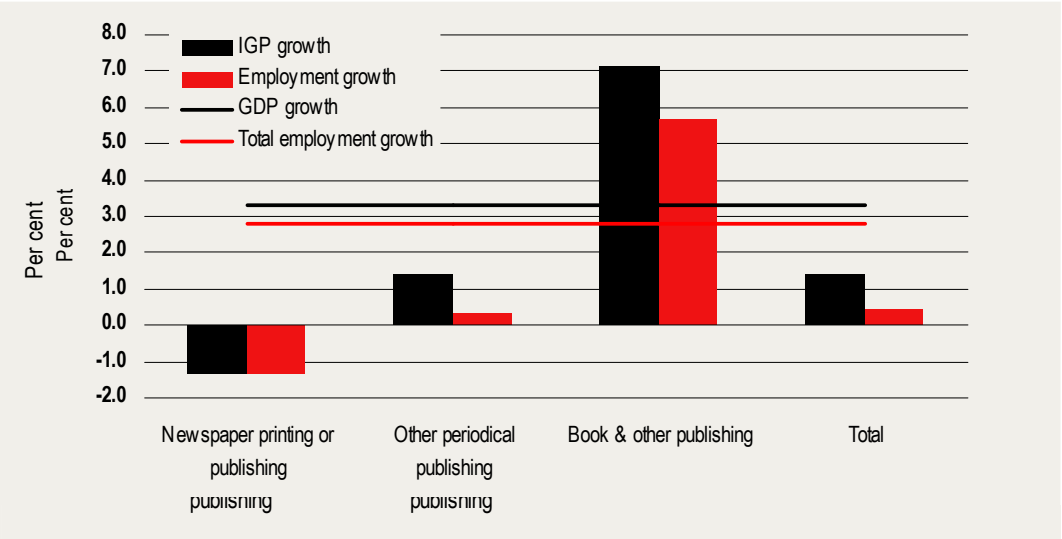
4.12 **Composition of the writing, publishing & print media segment, 2004-05 to 2007-08**



Data source: IBISWorld industry reports, The CIE.

Over recent years, growth in the writing, publishing & print media segment has lagged behind the aggregate economy. Real IGP grew at an average annual rate of 1.4 per cent over the three years to 2007-08, while employment grew by an average of 0.4 per cent over the period. This relatively poor performance was driven by a contraction in the newspaper printing or publishing industry classification. This is possibly driven by structural change in the industry as consumers increasingly shift towards online content and classified advertising. By contrast, both output and employment in the book & other publishing industry classification grew strongly over the period. Growth in other periodical publishing was muted.

4.13 **Real IGP and employment growth, average 2004-05 to 2007-08**



Data source: IBISWorld industry reports, ABS Catalogue No. 5204.0 and The CIE.

In total, there were estimated to be around 56 000 people employed in the writing, publishing & print media segment in 2006. This includes writing, publishing & print media workers embedded in other industries. This segment is characterised by a high number of support workers.

4.14 **Total writing, publishing and print media workforce, 2006**

	Writing, publishing & print media industries	*Other industries*	*Total*
Writing, publishing & print media occupations	9 670 (17.2)	10 454 (18.6)	20 124 (35.9)
Other occupations	35 944 (64.1)		35 944 (64.1)
Total	45 614 (81.4)	10 454 (18.6)	56 068 (100.0)

Note: Numbers is brackets represent the share of total employment in the segment.
Source: ABS Census of Population and Housing, The CIE.

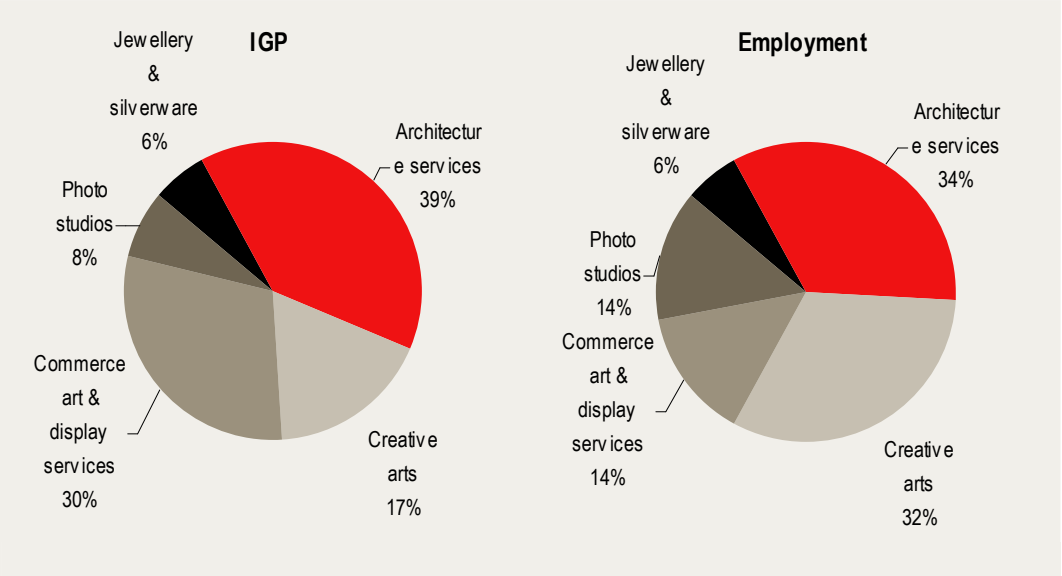
Architecture, design and visual arts

The architecture, design & visual arts segment employs around 25 per cent of total employment in the creative industries. This segment also contributes around 12 per cent to total IGP. Based on the 1993 edition of ANZSIC, the architecture, design & visual arts segment comprises:

- jewellery & silverware manufacturing;
- architecture services;
- creative arts;
- commercial art & display services; and
- photographic studios.

The largest industry classification within the segment is architectural services, which produces around 39 per cent of the segment's IGP and employs around 34 per cent of its workforce. The commercial art & display services classification produces around 30 per cent of the segment's IGP and employs around 14 per cent of the workers. The creative arts classification is also a major employer within the segment.

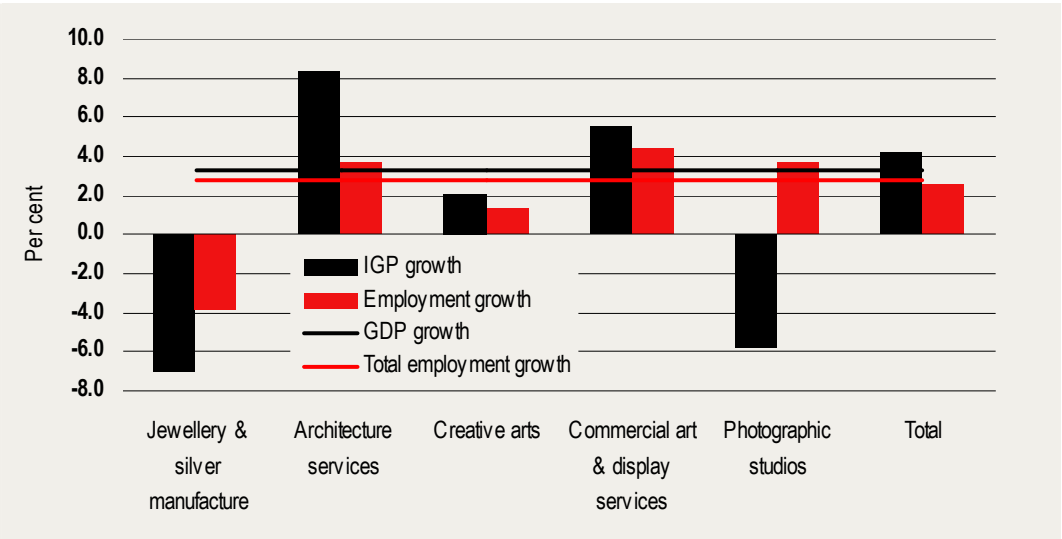
4.15 **Composition of the architecture, design & visual arts segment, 2004-05 to 2007-08**



Data source: IBISWorld industry reports, The CIE.

Over recent years, the architecture, design & visual arts segment in aggregate has grown at a pace broadly in line with the wider economy (chart 4.16). Relatively strong IGP growth in the larger industry classifications – architectural services and commercial art & display services – over the 2004-05 to 2007-08 period more than offset contractions in jewellery & silverware manufacturing and photographic studios and sluggish growth in the creative arts. In terms of employment, growth was solid in the architectural services, commercial art & display services and photographic studios, but weak in creative arts. Employment in jewellery & silverware manufacturing declined over the period.

4.16 **Real IGP and employment growth, average 2004-05 to 2007-08**



Data source: IBISWorld industry reports, ABS Catalogue No. 5204.0, The CIE.

Including architecture, design & visual arts occupations embedded in other industries, there were around 128 000 people employed in the architecture, design & visual arts segment (table 4.17). The architecture, design & visual arts industry is characterised by a high proportion of specialists and a correspondingly low proportion of support workers, relative to other segments.

4.17 **Total architecture, design and visual arts workforce, 2006**

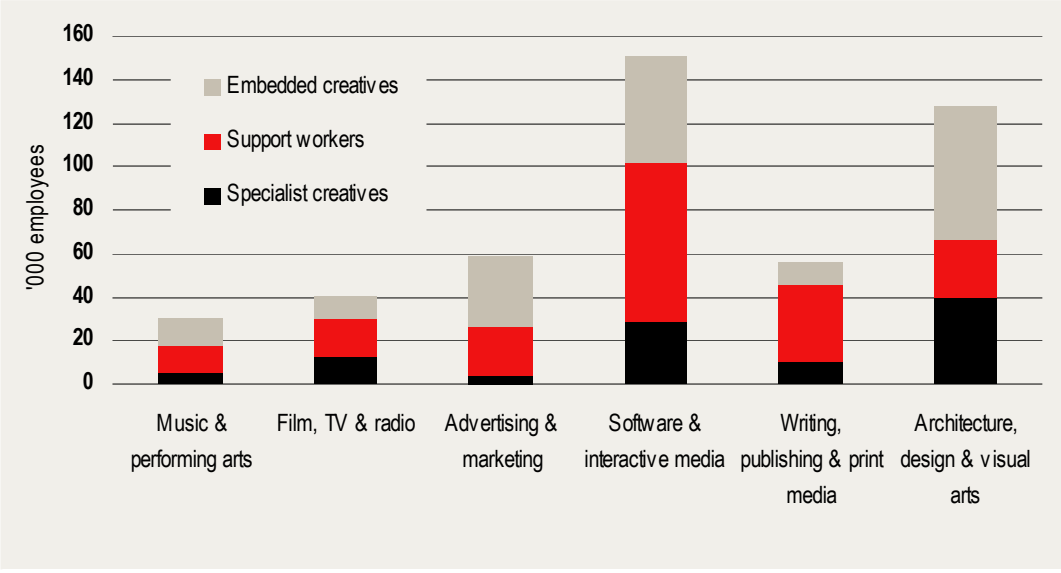
	Architecture, design & visual arts industries	***Other industries***	***Total***
Architecture, design & visual arts occupations	39 472 (30.8)	62 076 (48.5)	101 548 (79.3)
Other occupations	26 551 (20.7)	-	26 551 (20.7)
Total	66 023 (51.5)	62 076 (48.5)	128 099 (100.0)

Note: Numbers is brackets represent the share of total employment in the segment.
Source: ABS Census of Population and Housing, The CIE.

Embedded creatives

Employment by creative industry segment, based on the creative trident approach is summarised in chart 4.18.

4.18 **Employment by creative industry segment, 2006**



Note: The segments cannot be added together to obtain a creative industries total as this would involve double counting.
*Data source:*ABS Census of Population and Housing, The CIE.

According to the 2006 Census, there were more than 150 000 creatives embedded in non-creative industries. This was more than one-third of the total creative workforce. Table 4.19 shows what traditional industry categories these embedded creatives are employed in. The table shows that creatives are employed throughout the entire

economy, though overall, the property & business services, manufacturing and government administration & defence industries employ the most creatives.

4.19 **Embedded creatives, 2006**

	Occupations						
Industries	***Music & perform arts***	***Film, TV& radio***	***Advert & marketing***	***Software & inter media***	***Writing, publish & print media***	***Arch, design & visual arts***	***Total creative***
	No.	No.	No.	No.	No.	No.	No.
Ag, forestry & fishing	18	34	234	96	32	94	508
Mining	3	28	135	414	43	87	710
Manufacturing	207	515	4 239	4 940	914	12 129	22 944
Electricity, gas & water	-	69	234	1 001	54	195	1 553
Construction	240	82	588	707	87	5 388	7 092
Wholesale	245	188	4 513	3 615	222	3 089	11 872
Retail	795	319	2 372	2 637	213	5 833	12 169
Accommodation, cafes & rests	1 631	336	673	169	50	354	3 213
Transport & storage	100	113	978	1 578	129	538	3 436
Communications	72	392	1 171	3 089	351	607	5 682
Finance& insurance	35	355	2 325	9 314	297	518	12 844
Property & bus. Services	811	966	5 430	7 116	1 303	7 705	23 331
Govt admin & defence	562	620	1 178	6 033	794	6 572	15 759
Education	1 560	783	1 332	2 541	699	1 429	8 344
Health & omm..	268	271	905	1 166	296	707	3 613
Cultural & rec.	2 228	695	663	589	250	1 885	6 310
Personal & other	836	370	552	730	283	1 304	4 075
Other	775	455	1 382	1 876	479	2 244	7 211
Total	**10 386**	**6 591**	**28 904**	**47 611**	**6 496**	**50 678**	**150 666**

Source: ABS Census of Population and Housing, The CIE.

While creatives from all segments are employed throughout all sectors of the economy, the employment pattern varies. Table 4.20 highlights the three main traditional industries of employment for embedded creatives from each segment.

4.20 **Main industry of employment for embedded creatives, 2006**

Music & performing arts	***Film, TV & radio***	***Advertising & marketing***	***Software & interactive content***	***Writing, publishing & print media***	***Architecture, design & visual arts***
▪ Cultural & recreational services	▪ Property & business services	▪ Property & business services	▪ Finance & insurance	▪ Property & business services	▪ Manufacturing
▪ Accommodation, cafes & restaurants	▪ Education	▪ Wholesale trade	▪ Property & business services	▪ Manufacturing	▪ Property & business services
▪ Education	▪ Cultural & recreational services	▪ Manufacturing	▪ Government administration & defence	▪ Government administration & defence	▪ Government administration & defence

Source: ABS Census of Population and Housing, The CIE.

These creatives embedded in non-creative industries contribute to the output of those industries. However, it is not possible to measure the contribution of those creatives to the industry in which they are employed, based on currently available datasets. Higgs and Cunningham (2008) construct a financial creative trident using Census data to estimate the total income of embedded creatives. However, they suggest that the earnings of the people within the segment would approximate the gross value added within a margin of plus or minus 10 per cent. In view of this error margin and the inability to compare creative trident statistics with traditional industries, the financial creative trident does little to enhance our understanding of the creative economy beyond the insights obtained from measuring employment – which can be measured relatively accurately – on that basis.

A more interesting question would be whether non-creative industries or businesses that employ a higher proportion of creatives perform better than those that employ a lower share of creatives. Appropriate measures of performance could include profitability, output growth or productivity growth. It would be possible to compare across industries based on existing data sets; however, differences in the proportion of creatives employed may simply reflect the nature and structure of different industries. A better comparison is likely to be to compare businesses within the same industry. This is likely to require a survey and could be the subject of future research.

5 Creative industry enterprises

This chapter reports on the dimensions of enterprises that make up the creative industries. That is how many there are, whether they are typically large, small or medium in terms of employment and turnover. It also looks at firm entry and exit rates in the creative industries.

Creative industry business numbers

The ABS estimates that there were around 107 000 businesses operating in the creative industries as at 30 June 2007, broadly the same number as were operating on the same date in 2003 (table 5.1). While the number of businesses operating in the advertising & marketing segment grew strongly over the period, the number of businesses in the other segments of the creative industries grew only slightly or declined. By contrast, the number of businesses in the aggregate economy grew by an average annual rate of 1.8 per cent over the same period.

5.1 **Number of businesses at 30 June**

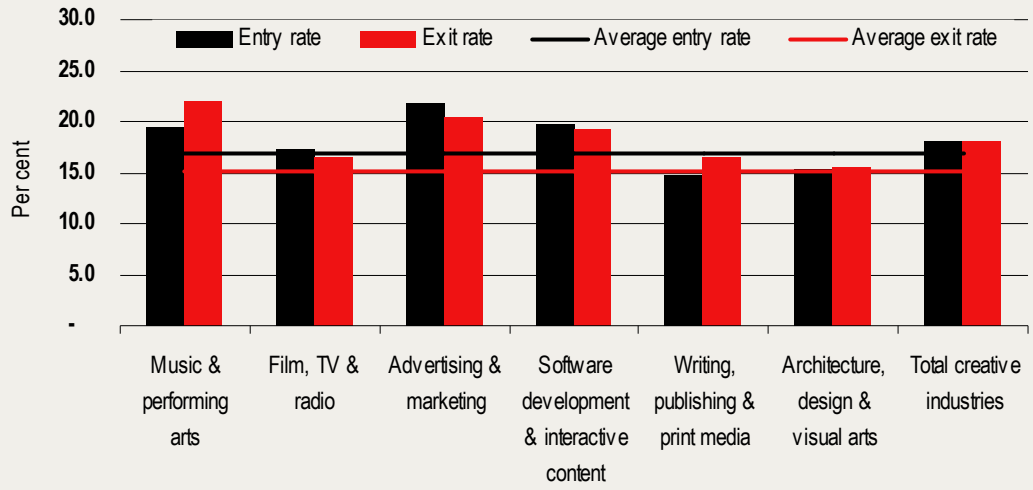
	2003	*2004*	*2005*	*2006*	*2007*	*Average annual growth*
	'000	'000	'000	'000	'000	%
Music and performing arts	10.9	10.2	9.9	9.8	10.1	-1.8
Film, television & radio	6.5	6.3	6.3	6.4	6.5	-0.0
Advertising & marketing	9.4	9.7	9.9	10.0	10.3	2.3
Software development & interactive content	37.2	36.0	35.5	35.6	37.7	0.4
Writing, publishing & print media	3.6	3.7	3.6	3.5	3.7	0.5
Architecture, design & visual arts	38.3	37.5	37.0	36.7	38.2	-0.1
Total creative industries	106.0	103.4	102.2	102.1	106.6	0.1
Total all industries	1 870.1	1 911.5	1 940.0	1 964.9	2 011.9	1.8

Source: ABS Catalogue No. 8165.0, The CIE.

While the total number of businesses operating in the creative industries has been broadly steady over recent years, this hides the dynamic nature of the creative industries. Business entry and exit rates are higher in the creative industries than in the wider economy (chart 5.2). Both entry and exit rates in the creative industries were around 17.9 per cent. This compares to the wider economy, where there was an entry rate of 16.9 per cent and an exit rate of around 15.1 per cent. Research has shown that new entries and exits are an important driver of productivity growth, generally accounting for between 20 per cent and 50 per cent of total productivity

growth (Bartelsman, Haltiwanger and Scarpetta 2004). Exit of firms was found to always have a positive effect on productivity growth, since the least efficient firms exit, raising the average productivity of those firms remaining. In most countries, the entry of new firms was found to have a positive effect upon productivity growth, particularly when the new entrants harness new technology that contributes to greater efficiency.

5.2 Entry and exit rates in the creative industries



Data source : ABS Catalogue No. 8165.0.

Scale of creative industry businesses

Most businesses operating in the creative industries are small, with more than 97 per cent employing less than 20 people (table 5.3).

5.3 Business count by number of employees, 30 June 2006

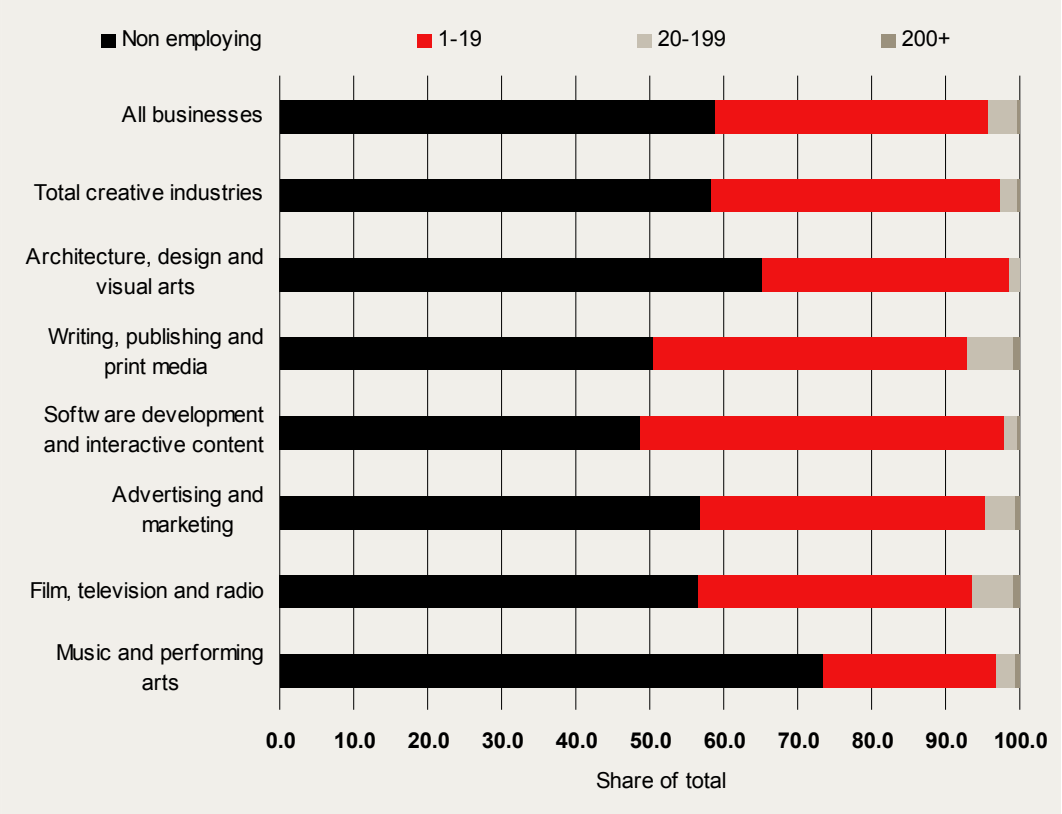
	Non employing	*1-19*	*20-199*	*200+*	*Total*
	'000	'000	'000	'000	'000
Music and performing arts	7.2	2.3	0.3	0.0	9.8
Film, television & radio	3.6	2.4	0.4	0.1	6.4
Advertising & marketing	5.7	3.9	0.4	0.1	10.0
Software development & interactive content	17.3	17.6	0.7	0.1	35.6
Writing, publishing & print media	1.8	1.5	0.2	0.0	3.5
Architecture, design & visual arts	23.9	12.3	0.5	0.0	36.7
Total creative industries	59.5	39.9	2.4	0.3	102.1
Total all industries	1 156.5	722.6	80.1	5.8	1 964.9

Note: The ABS does not report a breakdown by number of employees as at 30 June 2007.
Source: ABS Catalogue No. 8165.0, The CIE.

In terms of employment, the size of businesses in the creative industries are broadly similar to those in the wider economy. Just under 60 per cent of all businesses

operating in both the creative industries and the wider economy are non-employing. The majority of employing businesses employ less than 20 people. The share of businesses employing more than 20 people is slightly higher across the wider economy, compared with the creative industries. There is, however, significant variation between the segments that make up the creative industries. For example, software development & interactive content businesses tend to be larger, while music & performing arts businesses tend to be smaller.

5.4 **Business size by number of employees – share of total, 30 June 2006**



Note: The ABS does not report a breakdown by number of employees as at 30 June 2007.
Data source : ABS Catalogue No. 8165.0, The CIE.

Turnover in creative industry businesses

When size is measured by turnover, businesses in the creative industries tend to be smaller than the average over the wider economy. The creative industries have a higher share of businesses that turnover less than $200 000 and correspondingly fewer larger businesses.

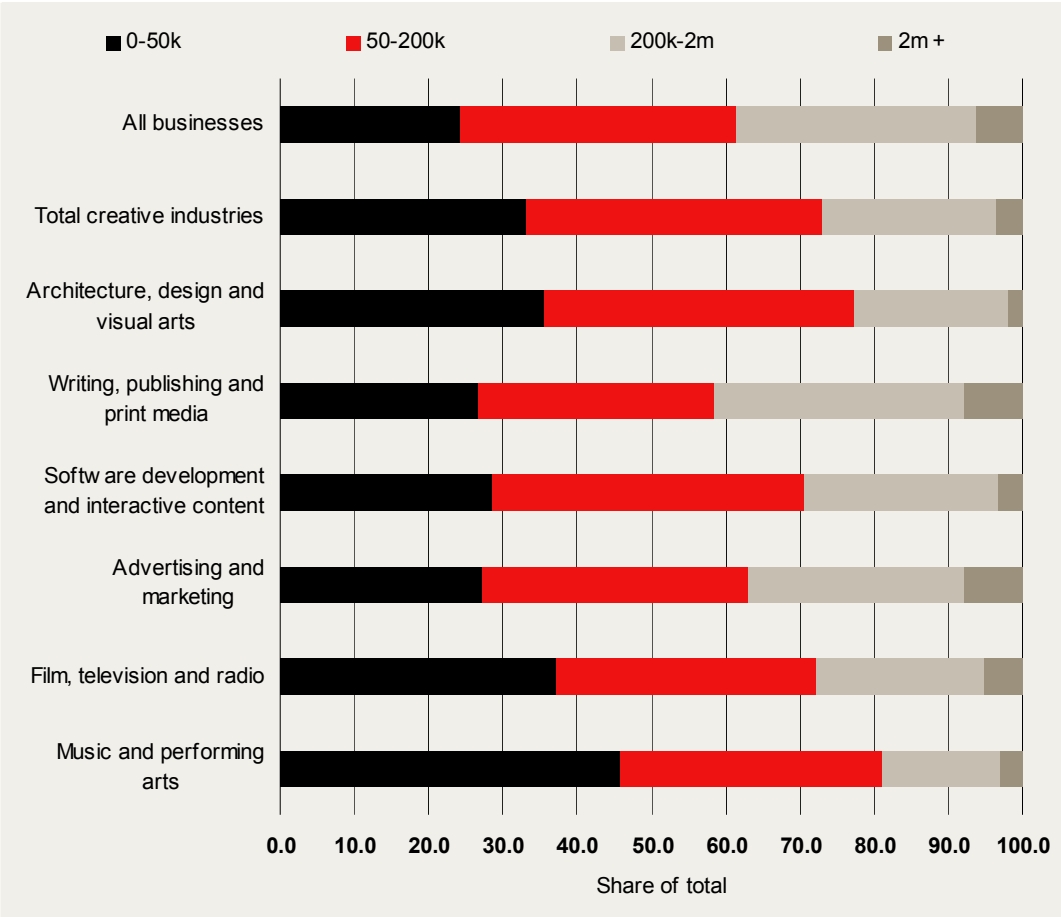
5.5 Business count by turnover, 30 June 2006

	$0-50k	*$50-200k*	*$200k-2m*	*$2m+*	*Total*
	'000	'000	'000	'000	'000
Music and performing arts	4.5	3.4	1.6	0.3	9.8
Film, television & radio	2.4	2.2	1.4	0.3	6.4
Advertising & marketing	2.7	3.6	2.9	0.8	10.0
Software development & interactive content	10.2	14.9	9.4	1.1	35.6
Writing, publishing & print media	0.9	1.1	1.2	0.3	3.5
Architecture, design & visual arts	13.1	15.3	7.6	0.7	36.7
Total creative industries	33.8	40.7	24.1	3.5	102.1
Total all industries	478.7	729.9	631.8	124.5	1 964.9

Note: The ABS does not report a breakdown by turnover as at 30 June 2007.

Source: ABS Catalogue No. 8165.0, The CIE.

5.6 Business size by turnover – share of total, 30 June 2006



Note: The ABS does not report a breakdown by number of employees as at 30 June 2007.

Data source: ABS Catalogue No. 8165.0, The CIE.

Key points

- As at 30 June 2007, there were around 107 000 businesses operating in the creative industries. While this has been broadly steady over recent years, the creative

industries have slightly higher entry and exit rates than the average over the wider economy.

- Like businesses in the economy at large, most businesses in the creative industries are relatively small. There is slightly higher proportion of smaller businesses in the creative industries than in the economy at large.

6 Location of the creative industries

This chapter presents the available information on the location of the creative industries by state.

Creative workforce by state

Using the creative trident approach – which includes creatives embedded in other industries, as well as employment of specialist creatives and support workers in the creative industries – the creative workforce is most highly concentrated in the larger states, particularly in New South Wales (table 6.1). The creative workforce makes up 5.9 per cent of total employment in that state. Victoria has the second highest concentration of creative workers. Due to confidentiality restrictions, separate data are not available for the smaller jurisdictions: Tasmania, the Northern Territory and the Australian Capital Territory. Concentration of creative workers in these jurisdictions in aggregate is broadly in line with the national average. Creative workers make up a relatively low share of employment in Queensland, South Australia and Western Australia.

6.1 **The creative workforce by state, 2006**

	Employment[a]	*Share of creative workforce*	*Share of state's total employment*
	No	%	%
New South Wales	170 476	38.9	5.9
Victoria	120 281	27.4	5.3
Queensland	67 237	15.3	3.7
South Australia	24 547	5.6	3.6
Western Australia	33 775	7.7	3.6
Other[b]	22 043	5.0	4.6
Australia	438 359	100.0	4.8

[a] Includes employment in the creative industries, as well as creatives embedded in other industries.

[b] Due to confidentiality restrictions, separate estimates for Tasmania, the Northern Territory and the Australian Capital Territory are not available separately.

Source: ABS Census of Population and Housing, The CIE.

Location of creative industry businesses

Information is also available on the main location of creative industry businesses (table 6.2). Since businesses often operate across multiple states, the ABS records the main state of operation of each business. The film, television & radio and music &

performing arts segments appear to be disproportionately based in New South Wales, while there are relatively few architecture, design & visual arts businesses located in that state.

6.2 Creative industry businesses by state

	NSW	*Vic*	*Qld*	*SA*	*WA*	*Tas*	*NT*	*ACT*	*Total*
Number of businesses									
Music & performing arts	4 341	2 481	1 803	468	735	111	72	96	10 107
Film, television & radio	3 168	1 698	801	291	381	87	33	84	6 543
Advertising & marketing	4 083	2 739	1 878	558	738	147	54	117	10 314
Software development & interactive content	14 796	10 551	5 757	1 806	3 084	393	111	1 233	37 731
Writing, publishing & print media	1 527	963	627	180	267	51	24	75	3 714
Architecture, design & visual arts	13 890	10 452	6 456	2 202	3 621	663	231	675	38 190
Total creative industries	41 805	28 884	17 322	5 505	8 826	1 452	525	2 280	106 599
Share of segment (%)									
Music & performing arts	43.0	24.5	17.8	4.6	7.3	1.1	0.7	0.9	100.0
Film, television & radio	48.4	26.0	12.2	4.4	5.8	1.3	0.5	1.3	100.0
Advertising & marketing	39.6	26.6	18.2	5.4	7.2	1.4	0.5	1.1	100.0
Software development & interactive content	39.2	28.0	15.3	4.8	8.2	1.0	0.3	3.3	100.0
Writing, publishing & print media	41.1	25.9	16.9	4.8	7.2	1.4	0.6	2.0	100.0
Architecture, design & visual arts	36.4	27.4	16.9	5.8	9.5	1.7	0.6	1.8	100.0
Total creative industries	39.2	27.1	16.2	5.2	8.3	1.4	0.5	2.1	100.0

Source: ABS Catalogue 8165.0.

7 Comparison with other studies

This chapter compares the results presented in this study with other efforts to measure the creative industries, or similar constructs. Relevant previous studies include the following:

- *Australia's Creative Economy Information Sheet* produced by the CCI.
- A recent report on the economic contribution of Australia's Copyright Industries Prepared for the Australian Copyright Council.[17] Since the copyright industries essentially commercialise creative content, the copyright industries might be expected to be broadly comparable to the creative industries.
- An economic study of professional artists in Australia completed in 2003 (Throsby and Hollister 2003).

Another recent study on the creative industries was completed by the NSW Department of State and Regional Development. However, this study covers only the creative industries in NSW and is therefore not directly comparable.

Comparing recent studies

Studies of this type typically report many statistics. Rather than comparing and reconciling every statistic reported in these reports, we compare the 'headline' statistics reported – that is, the statistics that are most commonly used to describe the size and contribution of the creative industries, value added and employment and their share of the total (table 7.1).

Of the selected studies, only the Australian Copyright Council study reports industry gross product. According to that study, the industry gross product of the copyright industries is more than three times higher than what we reported in chapter 3.

The employment estimate reported in the table attributed to this study is based on the creative trident approach. This is broadly in line with the CCI's estimate. It is however, significantly lower than the Copyright Council study, but significantly higher than Throsby and Hollister (2003).

[17] PricewaterhouseCoopers, 2008, *Making The Intangible Tangible: The Economic Contribution of Australia's Copyright Industries*, Prepared for the Australian Copyright Council.

7.1 **Comparison of recent reports on the creative industries (or similar)**

	Output	*Output*	*Employment*	*Employment*
	$b	% of total	'000	% of total
This report	30.9	2.8	437.6[a]	4.8
CCI	-	-	436.9	5.4
Copyright Council	97.8	10.3	834.5	8.0
Throsby & Hollister	-	-	45.0	-

[a] This is based on the creative trident approach.

Source: PricewaterhouseCoopers (2008), CCI (2008), Throsby & Hollister (2003).

Reconciling the estimates

There are a range of reasons why estimates of the size of the creative industries may vary between studies. Discrepancies could arise because:

- they are based on different raw data sources;
- they relate to different time periods; or
- they use different definitions of the creative industries.

Table 7.2 compares these elements across studies. In absolute terms, our employment estimate is broadly similar to the CCI's, though we estimate that the share of total employment is lower. Both estimates are based on the creative trident framework; however, they relate to different time periods – our estimate is based on the 2006 Census, while the CCI's is based on the 2001 Census. Other differences arise because we omitted some pre-creation activities such as libraries and museums and a range of occupations we felt were not creative that were included in the CCI estimate (refer to appendix A).

A key reason why the Copyright Industry study reports significantly higher estimates for both production and employment is because that study appears to include significantly more of the value chain. While it does not explicitly specify which ANZSIC codes are included, it includes a range of downstream value adding activities such as manufacturing and distribution industries. This different definition reflects the different purposes of the reports.

7.2 **Study comparison**

Study	*Coverage*	*Raw data source*	*Classification system*	*Year*
This report	Based on the creative trident framework and covers the creative industries, but only the 'creation' part of the value chain.	ABS Census for employment and IBISWorld for value added.	ANZSIC (1993) and ASCO (1997)	2007-08 for output and 2006 for employment

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7.2 **Study comparison** (continued)

Study	*Coverage*	*Raw data source*	*Classification system*	*Year*
CCI	Based on the creative trident framework and covers the creative industries, including the creation and pre-creation activities	ABS Census	ANZSIC (1993) and ASCO (1997)	2001
Copyright Council	The copyright industries based on the World Intellectual Property Organisation framework. Included some downstream value-adding.	IBISWorld	ANZSIC (1993).	2007
Throsby & Hollister	Includes only artistic occupations.	Survey of artists	Developed their own.	2001

Throsby and Hollister focus specifically on artists. This is a much narrower focus than the other studies and is based on occupations, rather than industries. Throsby and Hollister also undertook their own survey, rather than constructing the estimate from existing raw data sources. Reconciling their central estimate of the number of 'All Artists' with the Census suggests that their estimate was almost double those who declared the relevant occupations were their main job in the 2001 Census.[18] This could suggest that the Census significantly understates the number of artists for the reasons discussed in chapter 2. However, Throsby and Hollister's reconciliation did not include the 'not elsewhere classified' or 'not further defined' categories for visual artists and craft practitioners or for actors and dancers, because of difficulties in allocating them to specific occupations. Over 11 000 people were classified to these categories in the Census and they are included in the estimates produced in this study. This narrows the discrepancy to around 9 000 people. This suggests that the Census may slightly underestimate the number of artists for the reasons outlined in chapter 2. However, overall the Census can be considered a reliable source of data on the creative industries.

7.3 **Reconciliation of census data with survey population estimates**

	2001 Census data	*Throsby & Hollister*	*Difference*
	'000	'000	'000
Writers	4.0	7.3	3.3
Visual artists	5.0	9.3	4.3
Craft practitioners	1.5	4.3	2.8
Actors	3.6	6.5	2.9
Dancers	1.4	1.3	-0.1
Musicians	8.4	12.5	4.1

(Continued on next page)

[18] While 2006 Census data is now available, it is more relevant to reconcile Throsby and Hollister's estimates to 2001 Census, since their survey was undertaken in early 2002, only around six months after the 2001 Census was completed.

7.3 **Reconciliation of census data with survey population estimates** (continued)

	2001 Census data	*Throsby & Hollister*	*Difference*
Composers	0.3	1.5	1.2
All artists	**24.1**	**45.0**	**20.9**
Artists & related professionals nfd	4.0		
Visual arts & craft professionals nfd	0.4		
Visual arts & craft professionals nec	4.5		
Actors, dancers & related professionals nfd	0.1		
Actors, dancer & related professionals nec	2.7		
Total	**35.7**	**45.0**	**9.3**

Sources: Throsby and Hollister (2003), The CIE.

Key points

- Estimates of the dimensions of the creative industries (or similar constructs) published in previous studies can vary significantly.
- The main reason for the variation are:
  - they use different raw data sources;
  - they relate to different time periods; or
  - they use different definitions of the creative industries.

8 Framework for performance monitoring

In this report we have endeavoured to present the most recent data available. However, as more data are released the report will quickly become out of date. It is important for the CIIC Board to be able to monitor the performance of the creative industries over time and to have the most up to date picture of the creative industries available. This is particularly important given the dynamic nature of the creative industries and the rapidly changing economic environment.

This chapter assesses the data sets used in chapters 3 to 6 against a set of criteria to determine their suitability for use as regular indicators for monitoring purposes. We also recommend measures that can be updated regularly that can be used to monitor the relative performance of the creative industries.

Data used in this report

The data underlying the charts and tables presented in chapters 3 to 6 come from a range of sources. Table 8.1 summarises the data sources for each table or chart.

8.1 Summary of data sources

Table/chart	*Data source*
3.1 Industry gross product of the creative industries	IBISWorld industry reports
3.2 Industry share of GDP	IBISWorld industry reports, ABS Catalogue 5204.0
3.3 Real annual average growth	IBISWorld industry reports, ABS Catalogue 5204.0
3.4 Employment in the creative industries	ABS Census
3.5 Industry share of employment	IBISWorld industry reports, ABS Catalogue No. 6202.0
3.6 Employment in creative industries	IBISWorld industry reports
3.7 Employment growth	IBISWorld industry reports
3.8 Weekly income distribution	ABS Census
3.9 Average wages in the creative industries	IBISWorld industry reports
3.10 Labour productivity in the creative industries	IBISWorld industry reports
3.11 Average productivity growth	IBISWorld industry reports
3.12 International trade by creative industries	IBISWorld industry reports

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8.1 **Summary of data sources** (continued)

Table/chart	*Data source*
3.13 Trade in creative services	ABS Catalogue No.5368.0
3.14 Employment in creative occupations	ABS Census
3.15 Total creative workforce	ABS Census
4.1 Creative industries by segment	IBISWorld industry reports
4.2 Composition of the music & performing arts segment	IBISWorld industry reports
4.3 Average real output and employment growth	IBISWorld industry reports
4.4 Total music and performing arts workforce	ABS Census
4.5 Composition of the film, television & radio segment	IBISWorld industry reports
4.6 Real output and employment growth	IBISWorld industry reports
4.7 Total film, television and radio workforce	ABS Census
4.8 Total advertising and marketing workforce	ABS Census
4.9 Composition of the software development and interactive content segment	IBISWorld industry reports
4.10 Digital game development services	ABS Catalogue 8515.0
4.11 Total software and interactive media workforce	ABS Census
4.12 Composition of the music & performing arts segment	IBISWorld industry reports
4.13 Real output and employment growth	IBISWorld industry reports
4.14 Total writing, publishing and print media workforce	ABS Census
4.15 Composition of the music & performing arts segment	IBISWorld industry reports
4.16 Real output and employment growth	IBISWorld industry reports
4.17 Total architecture, design and visual arts workforce	ABS Census
4.18 Employment by creative industry segment	ABS Census
4.19 Embedded creatives	ABS Census
5.1 Number of businesses at 30 June	ABS Catalogue No. 8165.0
5.2 Entry and exit rates in the creative industries	ABS Catalogue No. 8165.0.
5.3 Business count by number of employees	ABS Catalogue No. 8165.0.
5.4 Share of businesses by size	ABS Catalogue No. 8165.0.
5.5 Business count by turnover, 2006-07	ABS Catalogue No. 8165.0.
5.6 Business size by turnover – share of total	ABS Catalogue No. 8165.0.
6.1 The creative workforce by state	ABS Census
6.2 Creative industry businesses by state	ABS Catalogue No. 8165.0.

Source: The CIE.

Criteria for regular indicators

For indicators to be useful, they must have certain characteristics. The data will be assessed against the following criteria:

- credibility – whether it is recognised as a credible source of statistics for the creative industries;
- timeliness – whether the data will be able to be replicated annually or biannually;
- international comparability – whether it is able to assist international comparison;
- industry comparability – whether it is able to assist comparison with other Australian industry sectors; and
- divisibility – whether it is able to be disaggregated by State/Territory, specific creative industry sectors, occupation or business.

Assessment

An assessment of each of the data sources against the criteria outlined above is provided in table 8.2. To be useful in monitoring the creative industries, it is essential that the data are sufficiently divisible to by industry (or occupation) to allow a measure of the creative industries to be constructed. Unfortunately, only the ABS's *Census of Population and Housing*, the IBISWorld industry reports and *Counts of Australian Businesses, including entries and exits* (Catalogue No. 8165.0) have the required level of disaggregation. Of these publications, the Census is available only every five years and cannot therefore be used for regular updates. Consequently, annual reporting must be based the information contained within IBISWorld industry reports and Australian Counts of Businesses. While IBISWorld is not an official data source, it is considered credible.

8.2 **Assessment of data sources**

	Credible	***Timeliness***	***International comparable***	***Industry comparable***	***Divisible***
ABS					
Census	Yes, comprehensive census of all households.	Available only every five years.	Yes.	Yes. Comparable across industries.	Highly divisible by industry, occupation and state.
System of National Accounts (Catalogue No. 5204.0)	Yes. The national accounts are a widely recognised and trusted source.	Available annually. Published around two months after the end of the relevant period. Also 5206.0 is a quarterly version of the National Accounts.	Yes. Compiled in accordance with international standards.	Traditional industries are useful as a comparator to the creative industries.	No – not sufficiently disaggregated to construct a measure of the creative industries.

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8.2 **Assessment of data sources** (continued)

	Credible	*Timeliness*	*International comparable*	*Industry comparable*	*Divisible*
Counts of Australian Businesses, including entries and exits (Catalogue No. 8165.0)	Yes. Based on ATO's Australian Business Register. Some measurement problems.	Annually		Yes – comparable across industries.	Highly divisible by industry and state.
Australia's Digital Gaming Industry 8515.0	Yes. Conducted by ABS.	One-off publication. May be repeated at irregular intervals.	Yes.	Not based on ANZSIC codes.	Finer level of details than ANZSIC codes.
Other					
IBISWorld	Not official data, but credible.	Annually.	While not official data, would be broadly comparable with international data.	Comparable across industries.	Highly divisible by industry, but not occupation or state.

Recommendations for ongoing reporting

Based on the above assessment of the data sources used in this report, ongoing reporting of creative industry reporting must be based on:

- IBISWorld industry reports; and
- The ABS's Counts of Australian Businesses (Catalogue No. 8165.0).

IBISWorld industry reports contain estimates of a number of variables for each industry classification. Of most interest for performance monitoring are industry gross product (a measure of output) and employment. From these measures, output per employee - a crude measure of productivity - could also be constructed.

The Count of Australian Businesses publication reports the number of active businesses operating in each industry, including entries and exits, which would also be of interest to the CIIC Board.

Suggested reporting

It is important that the information contained in an annual report is presented in a meaningful way. Economic statistics can be reported in a number of ways, including:

- levels – the value of the output produced, how many people are employed, how many businesses are currently active etc;

- shares or ratios – how big an industry is as a share of GDP, how many people are employed as a share of total employment, the proportion of businesses that entered or exited an industry; or
- growth rate; how output or employment has increased or decreased over time.

It can be useful to report economic statistics in level terms to understand the dimensions of the variable being measured. However, very often reporting levels is not particularly meaningful because it lacks context. For that reason, when the context is static or at a particular point in time, economic statistics are often reported as a share of GDP or some other variable. More often, economists are interested in how a variable changes over a longer period. In those cases, statistics are typically reported as growth rates. This study has reported a mix of levels, shares and growth rates.

The purpose of an annual report would be to monitor changes over time. This report has provided a comprehensive overview of the dimensions of the creative industries and typically, the level of IGP or employment or their share of the aggregate economy do not change significantly from one year to the next. Rather, significant changes in the structure of the economy occur gradually over time. Therefore, the annual report should focus on the growth rate of real IGP, employment and real productivity. Growth rates in the year in question could be compared to average growth in that industry over time, and to other industries and the broader economy. Nevertheless, it could be useful to highlight the changing structure of the economy at longer intervals, such as every five years. The release of Census data, when highly detailed data becomes available would be an ideal time to revisit how the structure and size of the creative industries have changed.

It is recommended that annual reporting of growth rates should be done at both the aggregate of the creative industries and segment level. The more highly disaggregated, the more volatile data series will be. There is little value in reporting growth rates in more detail, although the information could be provided as an appendix and the main drivers of the overall segment performance could be discussed in the commentary.

The most meaningful way to present the business count information is the growth in business numbers. Exit and entry and survival rates should be presented as a percentage of businesses that exit/enter/survive in the period, compared to previous years.

Classification system

Both IBISWorld industry reports and the ABS's Counts of Australian Businesses publication are based on the 1993 editions of ANZSIC. However, the 2006 edition of ANZSIC provides better coverage of the creative industries and reporting should

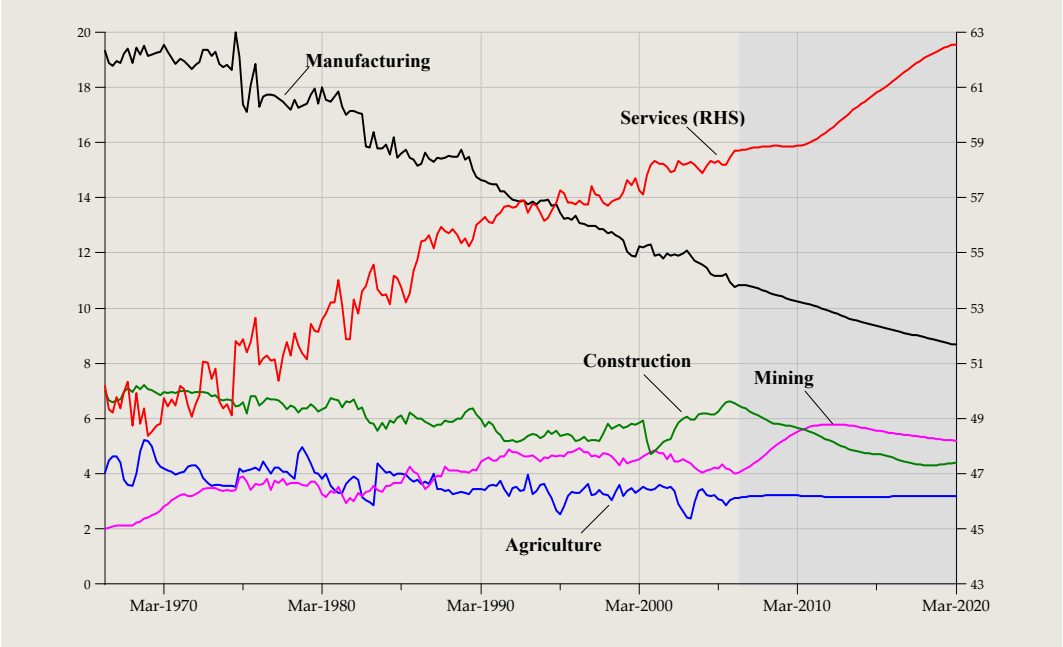
switch to the new ANZSIC framework outlined in appendix A if and when the relevant publications change.

Comparators

It is also useful to compare the performance of the creative industries over time to the broader economy and other industries. The most relevant comparator is the growth rate of the aggregate economy; that is GDP or total employment. However, a comparison against the performance of traditional industries would also be useful.

When comparing the performance of the creative industries against traditional industries, it is important to bear in mind ongoing structural change. Over recent decades the structure of the economy has changed significantly (chart 8.3). While manufacturing's share of the economy has declined, the share of services has increased significantly. The share of agriculture, mining and construction has been broadly steady. These trends are expected to continue in the longer term. This means that service industries could be expected to grow faster than manufacturing, agriculture, mining and construction and indeed faster than the aggregate economy over time.

8.3 **Structural change – Australian economy**



Data source: ABS, CIE projections.

Creative industries are, to a large extent, service industries. They could therefore be expected to grow at a faster pace than the aggregate economy over time. The service industries in aggregate may therefore be a useful comparator when assessing the performance the creative industries.

Estimates for 2008-09

The IBISWorld industry reports contain estimates for 2008-09 (table 8.4), as well as forecasts for subsequent years. Since at the time of writing, the 2008-09 financial year was not yet complete, these estimates may not be reliable. IBISWorld estimate that the IGP of the creative industries will decline in 2008-09, while employment is expected to be broadly flat. IGP per employee is also expected to decline in 2008-09, although this measure may been even less reliable than usual, due to the shift from full-time to part-time employment over the past year.

8.4 **Estimated 2008-09 performance indicators**

	IGP		*Employment*		*IGP per employee*	
	Avg 2004-05 to 2007-08	***2008-09***	***Avg 2004-05 to 2007-08***	***2008-09***	***Avg 2004-05 to 2007-08***	***2008-09***
	% change	% change	% change	% change	% change	% change
Creative industries	3.4	-1.0	3.0	0.1	0.4	-1.2
Music & performing arts	-1.7	-2.0	0.9	-0.5	-2.5	-1.5
Film, TV & radio	7.3	1.5	4.2	2.7	3.0	-1.1
Advertising & marketing	1.7	-3.0	1.3	-1.1	0.4	-1.9
Software & interactive media	3.1	0.0	4.4	1.9	-1.2	-1.9
Writing publishing & print media	1.4	-3.9	0.4	-4.6	1.0	0.8
Architecture, design & visual arts	5.1	-2.3	2.6	-0.9	2.5	-1.5

Source: IBISWorld industry reports, The CIE.

Key points

- Few data sources are sufficiently disaggregated to be able to construct measures relevant to the creative industries and are available on an annual basis. Two exceptions are IBISWorld industry reports and the ABS's Counts of Australian Businesses (Catalogue No. 8165.0).
- Annual performance monitoring should focus on growth rates of key variables such as:
  - Industry gross product;
  - Employment
  - Real productivity
  - Number of businesses
  - Business exit and entry rates

A ANZSIC codes included in creative industries

Table A.1 shows the ANZSIC codes included in the definition of the creative industries for the purpose of this report.

A.1 Industry classifications included in the creative industries

Segment name	*ANZSIC 1993*	*ANZSIC 2006*
Music and performing arts	▪ 2430: Recorded media manufacturing & publishing ▪ 9241: Music & theatre productions ▪ 9251: Sound recording studios ▪ 9252: Performing arts venues ▪ 9259: Services to the arts nec	▪ 5521: Music publishing ▪ 5522: Music and other sound recording activities ▪ 9001. Performing arts operation ▪ 9003. Performing arts venue operation
Film, television and radio	▪ 9111: Film & video production ▪ 9121: Radio services ▪ 9122: Television services	▪ 5511: Motion picture and video production ▪ 5514: Post-production services other than motion picture and video activities. ▪ 5610: Radio broadcasting ▪ 5621: Free-to-air television broadcasting ▪ 5622: Cable and other subscription television broadcasting
Advertising and marketing	▪ 7851: Advertising services	▪ 6940: Advertising services
Software development and interactive content	▪ 7834 Computer consultancy services	▪ 7000: Computer system design and & related services ▪ 5420: Software publishing ▪ 5700: Internet publishing and broadcasting
Writing, publishing and print media	▪ 2421: Newspaper printing or publishing ▪ 2422: Other periodical publishing ▪ 2423: Book & other publishing	▪ 5411. Newspaper publishing ▪ 5412. Magazine and other periodical publishing ▪ 5413. Book publishing ▪ 5419. Other publishing (except software, music, internet)

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A.1 **Industry classifications included in the creative industries** (continued)

Architecture, design and visual arts	▪ 2941: Jewellery and silverware manufacturing ▪ 7821: Architectural services ▪ 9242: Creative arts ▪ 7852: Commercial art & display services ▪ 9523: Photographic studios	▪ 2591: Jewellery and silverware manufacturing ▪ 6921. Architectural services ▪ 9002: Creative artists, musicians, writers and performers ▪ 6924: Other specialised design services ▪ 6991: Professional photographic services

Table A.2 highlights the differences between the definition of the creative industries used in this report and the CCI definition and explains the differences.

A.2 **ANZSIC codes excluded from the CCI definition**

Code	*Description*	*Comment*
ANZSIC 1993		
9210: Libraries	This class consists of units mainly engaged in acquiring, collecting, organising, conserving and loaning library materials such as books, magazines, manuscripts, musical scores, maps or prints.	CCI includes libraries as a pre-creation activity. But does not include video hire outlets etc. There seems little difference between a library or museum and video hire outlet, or book shop as a source of artistic inspiration. May be considered more of a consumption activity.
9220 Museums	This class consists of units mainly engaged in operating museums of all kinds. This class also includes units mainly engaged in historic house operation.	CCI includes libraries as a pre-creation activity. But does not include video hire outlets etc. May be considered more of a consumption activity.
ANZSIC 2006		
1620: Reproduction of recorded media	This class consists of units mainly engaged in the reproduction of pre-recorded audio, video, software and other data on electronic, optical and magnetic media.	This is a manufacturing activity that is not directly part of the creative process.
5414: Directory and mailing list publishing	This class consists of units mainly engaged in publishing (creating and disseminating) directories, mailing lists and collections or compilations of fact such as mailing addresses and telephone directories.	This activity does not involve producing a creative work and therefore may not be considered a creative activity.
5910: Internet service providers & web search portals	This class consists of units mainly engaged in providing internet access services. Also included are units which provide web search portals used to search the internet.	May be considered an activity that facilitates consumption, rather than a creative activity.

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A.2 ANZSIC codes excluded from the CCI definition (continued)

Code	*Description*	*Comment*
ANZSIC 1993		
5921: Data processing & web hosting services	This class consists of units mainly engaged in providing electronic data processing or hosting services. These units provide specialised hosting activities such as web hosting, streaming services or application hosting, provide application service provisioning, or provide general timesharing mainframe facilities to customers. These units provide complete processing and specialised reports from data supplied by customers or provide automated data processing and data entry services.	This activity does not involve producing a creative work and therefore may not be considered a creative activity..
6010: Libraries and archives	This class consists of units mainly engaged in providing library or archive services. The units maintain collections of documents (e.g. books, journals, newspaper and music) and facilitate the use of such documents (recorded information regardless of its physical form and characteristics). All or parts of these collections may be accessible electronically.	CCI includes libraries as a pre-creation activity. But does not include video hire outlets etc. May be considered more of a consumption activity.
8910: Museum operations	This class consists of units mainly engaged in the preservation and exhibition of heritage objects and artefacts and/or visual arts and crafts with aesthetic, historical, cultural, and/or educational value. This class also includes units operating historical places, sites or houses.	CCI includes libraries as a pre-creation activity. But does not include video hire outlets etc. May be considered more of a consumption activity.

B Occupations included in the creative industries

Table B.1 shows the ASCO/ANZSCO classifications included in creative occupations.

B.1 The occupation classifications included as creative occupations

Segment Name	*ASCO*	*ANZSCO*
Music and performing arts	▪ 253619 Stage manager	▪ 211111 Actor
	▪ 253700 Musicians and related professionals	▪ 211112 Dancer or choreographer
	▪ 253713 Singer	▪ 211113 Entertainer or variety artist
	▪ 253715 Instrumental musician	▪ 211199 Actors, dancers and other entertainers Nec
	▪ 253717 Composer	▪ 211211 Composer
	▪ 253779 Musicians and related professionals Nec	▪ 211212 Music director
	▪ 253800 Actors, dancers and related professionals	▪ 211213 Musician (instrumental)
	▪ 253811 Actor	211214 Singer
	▪ 253813 Dancer or choreographer	▪ 211299 Music professionals Nec
	▪ 253879 Actors, dancers and related professionals Nec	▪ 212316 Stage manager
	▪ 499200 Performing arts support workers	▪ 399513 Light technician
	▪ 499211 Sound technician	▪ 399514 Mark up artist
	▪ 499211 Light technician	▪ 399516 Sound technician
	▪ 499225 Production assistant (theatre)	▪ 399599 Performing arts technicians nec
	▪ 499277 Make up artist	
	▪ 499279 Performing arts support workers nec	
Film, TV and radio	▪ 129600 Media producers and artistic directors	▪ 212111 Artistic director
	▪ 129611 Media producer	▪ 212112 Media producer (excluding video)
	▪ 129613 Artistic director	▪ 212113 Radio presenter
	▪ 253415 Television journalist	▪ 212114 Television presenter
	▪ 253417 Radio journalist	▪ 212311 Art director (film, television or stage)
	▪ 253515 Script editor	▪ 212312 Director (film, television, radio or stage)

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B.1 **The occupation classifications included as creative occupations** (continued)

Segment Name	*ASCO*	*ANZSCO*
	▪ 253600 Film, television, radio and stage director	▪ 212313 Director or photography
	▪ 253611 Art director (film, television or stage)	▪ 212314 Film and video editor
	▪ 253613 Director (film, television, radio or stage)	▪ 212315 Program director (television or radio)
	▪ 253615 Director of photography	▪ 212317 Technical director
	▪ 253617 Film and video editor	▪ 212318 Video producer
	▪ 253621 Program director (radio or television)	▪ 212399 Film, television, radio and stage directors Nec
	▪ 253623 Technical director	▪ 212414 Radio journalist
	▪ 253679 Film, television, radio and stage directors	▪ 212416 Television journalist
	▪ 253711 Music director	▪ 399512 Camera operator (film, television or video)
	▪ 253900 Media presenters	▪ 399517 Television equipment operator
	▪ 253911 Radio presenter	▪ 599912 Production assistant (film, television, radio or stage)
	▪ 253913 Television presenter	
	▪ 499213 Camera operator (film, television or video)	
	▪ 499215 Television equipment operator	
	▪ 499223 Production assistant (film, television or radio)	
Advertising and marketing	▪ 222100 Marketing and advertising professionals	▪ 131111 Advertising and public relations manager
	▪ 222113 Marketing specialist	▪ 212411 Copywriter
	▪ 222117 Advertising specialist	▪ 225111 Advertising specialist
	▪ 253419 Copywriter	▪ 225113 Marketing specialist
	▪ 599511 Desktop publishing operator	
Software and interactive media	▪ 223113 Systems Designer	▪ 232413 Multimedia designer
	▪ 223115 Software designer	▪ 232414 Web designer
	▪ 223117 Applications and analyst programmer	▪ 261211 Multimedia specialist
	▪ 223119 Systems programmer	▪ 261212 Web developer
		▪ 261313 Software engineer
		▪ 261399 Software and applications programmers nec
		▪ 313113 Web administrator
Writing, publishing and print media	▪ 253400 Journalists and related professional nfd	▪ 212211 Author
	▪ 253411Editor	▪ 212212 Book or script editor
	▪ 253413 Print journalist	▪ 212412 Newspaper or periodical editor
	▪ 253421 Technical writer	▪ 212413 Print journalist

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B.1 **The occupation classifications included as creative occupations** (continued)

Segment Name	*ASCO*	*ANZSCO*
	▪ 253479 Journalists and related professionals nec	▪ 212415 Technical writer
	▪ 253500 Authors and related professionals	▪ 212499 Journalists and other writers nec
	▪ 253511 Author	▪ 599913 Proof reader
	▪ 253513 Book editor	
	▪ 619911 Proof reader	
Architecture, design and visual arts	▪ 212100 Architects and landscape architects	▪ 139911 Arts administrator or manager
	▪ 212111 Architect	▪ 211311 Photographer
	▪ 212113 Landscape architect	▪ 211411 Painter (visual arts)
	▪ 212921 Naval architect	▪ 211412 Potter or ceramic artist
	▪ 252311 Urban and regional planner	▪ 211413 Sculptor
	▪ 253000 Artists and related professionals Nfd	▪ 211499 Visual arts and crafts
	▪ 253100 Visual arts and crafts professionals	▪ professionals n.e.c
	▪ 253111 Painter (visual arts)	▪ 224212 Gallery or museum curator
	▪ 253113 Sculptor	▪ 232111 Architect
	▪ 253115 Potter or ceramic artist	▪ 232112 Landscape architect
	▪ 253179 Visual arts and crafts	▪ 232311 Fashion designer
	▪ professionals Nec	▪ 232312 Industrial designer
	▪ 253211 Photographer	▪ 232313 Jewellery designer
	▪ 253300 Designers and illustrators	▪ 232411 Graphic designer
	▪ 253311 Fashion designer	▪ 232412 Illustrator
	▪ 253313 Graphic designer	▪ 232511 Interior designer
	▪ 253315 Industrial designer	▪ 232611 Urban and regional planner
	▪ 253317 Interior designer	▪ 233916 Naval architect
	▪ 253319 Illustrator	▪ 312111 Architectural draftsperson
	▪ 254921 Museum or gallery curator	▪ 399411 Jeweller
	▪ 312113 Architectural associate	▪ 399915 Photographer's assistant
	▪ 498300 Jewellers and related tradespersons	
	▪ 498311 Jeweller	
	▪ 498381 Apprentice jeweller	
	▪ 599917 Photographer's assistant	

Table B.2 shows how the definition of creative occupations used in this report differs from the CCI definition and explains why some occupations included in the CCI's definition have been omitted.

B.2 ASCO/ANZSCO codes excluded from CCI definition

ASCO/ANZSCO Code	*Description*	*Comment*
ASCO 1993		
▪ 499217 Broadcast transmitter operator	Operates consoles to control radio or television broadcast transmitters.	Television and radio broadcasting companies fall within the definition of a creative industry. However, not all employees within the industry will have creative occupations. These are technical, rather than creative occupations. They could be considered as being involved in distributing, rather than creating content. People in many of these occupations will work for television and radio broadcasters. Using the CCI's creative trident approach, many of these occupations will be included in an estimate of employment in the creative economy, but as support workers rather than specialist creatives.
▪ 229211 Librarian	Develops, organises and maintains library services including collections of information, recreational resources and reader information services.	CCI justified inclusion as a pre-creation. But video hire outlets etc are not included. May be considered more of a consumption activity.
▪ 229915 Archivist	Plans and organises systems and procedures for the safekeeping of records and historically valuable documents.	Not involved in creating content and therefore is not considered a creative occupation.
399711 Library technician	Assists librarians to organise and operate systems for handling recorded material and files.	Not involved in creating content and therefore is not considered a creative occupation.
619211 Library assistant	Issues, receives and shelves library items such as books, tapes and films, and maintains associated records.	Not involved in creating content and therefore is not considered a creative occupation..
254911 Conservator	Plans and organises the conservation of materials and objects in libraries, archives, museums, art galleries and other institutions.	Not involved in creating content and therefore is not considered a creative occupation..

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B.2 ASCO/ANZSCO codes excluded from CCI definition (continued)

ASCO/ANZSCO Code	*Description*	*Comment*
ANZSCO (2006)		
399511 Broadcast transmitter operator	Operates consoles to control radio or television broadcast transmitters.	Television and radio broadcasting companies fall within the definition of a creative industry. However, not all employees within the industry will have creative occupations. These are technical, rather than creative occupations. They could be considered as being involved in distributing, rather than creating content. People in many of these occupations will work for television and radio broadcasters. Using the CCI's creative trident approach, many of these occupations will be included in an estimate of employment in the creative economy, but as support workers rather than specialist creatives.
225211 ICT account manager	Manages sale of computer hardware, software and services to existing account clients and identifies further sales opportunities within these accounts, builds new account clients, manages customer satisfaction and retention, and coordinates the preparation and presentation of ICT sales proposals and tenders.	May not be considered a creative occupation. Will be captured as a support worker in creative trident approach.
225212 ICT business development manager	Identifies and generates new ICT business opportunities to further improve market share and awareness by gaining an understanding of customers' ICT needs and promoting goods and services to these customers. May manage some key customer accounts.	May not be considered a creative occupation. Will be captured as a support worker in creative trident approach.
261111 ICT business analyst	Identifies and communicates with users to formulate and produce a requirements specification to create system and software solutions.	May not be considered a creative occupation. Will be captured as a support worker in creative trident approach.
261112 Systems analyst	Evaluates processes and methods used in existing ICT systems, proposes modifications, additional system components or new systems to meet user needs as expressed in specifications and other documentation.	May not be considered a creative occupation. Will be captured as a support worker in creative trident approach.

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B.2 ASCO/ANZSCO codes excluded from CCI definition (continued)

ASCO/ANZSCO Code	Description	Comment
261311 Analyst programmer	Analyses user needs, produces requirements documentation and system plans, and encodes, tests, debugs, maintains and documents programs and applications.	May not be considered a creative occupation. Will be captured as a support worker in creative trident approach.
261312 Developer programmer	Interprets specifications, technical designs and flow charts, builds, maintains and modifies the code for software applications, constructs technical specifications from a business functional model, and tests and writes technical documentation.	May not be considered a creative occupation. Will be captured as a support worker in creative trident approach.
263211 ICT quality assurance engineer	Creates, maintains and manages technical quality assurance processes and procedures to assess efficiency, validity, value and functional performance of computer systems and environments, and audits systems to ensure compliance with, and adherence to, accredited internal and external industry quality standards and regulations. May supervise the work of ICT quality assurance teams.	May not be considered a creative occupation. Will be captured as a support worker in creative trident approach.
263213 ICT systems test engineer	Specifies, develops and writes test plans and test scripts, produces test cases, carries out regression testing, and uses automated test software applications to test the behaviour, functionality and integrity of systems, and documents the results of tests in defect reports and related documentation.	May not be considered a creative occupation. Will be captured as a support worker in creative trident approach.
263299 ICT support and test engineer nec	This occupation group covers ICT Support and Test Engineers not elsewhere classified.	May not be considered a creative occupation. Will be captured as a support worker in creative trident approach.
224611 Librarian	Develops, organises and manages library services such as collections of information, recreational resources and reader information services. Registration or licensing may be required.	May not be considered a creative occupation.
399312 Library technician	Assists Librarians and other information managers in organising and operating systems for handling recorded material and files.	May not be considered a creative occupation.
599711 Library assistant	Issues, receives and shelves library items and maintains associated records.	May not be considered a creative occupation.

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B.2 ASCO/ANZSCO codes excluded from CCI definition (continued)

ASCO/ANZSCO Code	Description	Comment
224211 Archivist	Analyses and documents records, and plans and organises systems and procedures for the safekeeping of records and historically valuable documents.	May not be considered a creative occupation.
234911 Conservator	Plans and organises the conservation of materials and objects in libraries, archives, museums, art galleries and other institutions.	May not be considered a creative occupation.

References

Australian Bureau of Statistics (ABS) 2006a, *Australian and New Zealand Standard Classification of Occupations*, Catalogue No. 1220.0, Canberra.

—— 2006b, *Australia and New Zealand Standard Industrial Classifications*, Catalogue No. 1292.0, Canberra.

—— 2001a, *Census of Population and Housing*, unpublished data.

—— 1997, *Australian Standard Classification of Occupations*, second edition, cat. no. 1220.0, Canberra.

—— 1993, *Australian and New Zealand Standard Industrial Classification 1993 Edition*, Catalogue No. 1292.0, Canberra.

—— *Australian Industry*, Catalogue No. 8155.0, Canberra.

—— *Counts of Australian Businesses, including Entries and Exits*, Catalogue No. 8165.0, Canberra.

Australia council for the arts 2003, *Some Australian Arts Statistics*, Australia Council, Sydney.

—— 2000, *The arts economy, 1968-98 three decades of growth in Australia,* Australia Council, Sydney.

Australian Government, Department of Communications, Information technology and the arts 2004, Creative Industries Cluster Study Volume 1, Commonwealth of Australia.

ARC Centre of Excellence for Creative Industries & Innovation, 2008, *Australia's Creative Economy Information Sheet*.

Bartelsman, E., Haltiwanger, J. and Scarpetta, S., 2004, *Microeconomic evidence of creative destruction in industrial and developing countries*, Policy Research Working Paper Series 6434, World Bank.

CIIC website, http://www.enterpriseconnect.gov.au/Innovation/Pages/CreativeIndustriesInnovationCentre.aspx, accessed 27 May 2009.

Cunningham, S., 2008, 'What is the creative economy?', downloaded from http://www.creative.org.au/webboard/results.chtml?filename_num=99329 on 24 May 2009.

Florida, R., 2003, *The Rise of The Creative Class: and How It Is Transforming Work, Leisure, Community And Everyday Life*, Pluto Press, North Melbourne.

Gordon, J.C. and Beilby-Orrin, H., 2007, International Measurement of the Economic and Social Importance of Culture, STD/NAFS(2007)1, Organisation for Economic Co-operation and Development, Paris.

Higgs, P. and Cunningham, S., 2008, "Creative Industries Mapping: Where have we come from and where are we going?", *Creative Industries Journal* Vol.1, No.1.

Higgs, P., Cunningham, S., Pagan, J., 2007, Australia's Creative Economy: Definitions of the Segments and Sectors, ARC Centre of Excellence for Creative Industries & Innovation (CCI), Brisbane.

IBISWorld, C2421 Newspaper Printing or Publishing in Australia

—— *C2422 Magazine Publishing in Australia.*

—— *C2423 Book and Telephone Directory Publishing in Australia.*

—— *C2430 Recorded Media Manufacturing and Publishing in Australia.*

—— *C2941 Jewellery Manufacturing in Australia.*

—— *L7821 Architectural Services in Australia.*

—— *L7834 Computer Consultancy Services in Australia.*

—— *L7851 Advertising Services in Australia.*

—— *L7852 Graphic Design Services in Australia.*

—— *P9111 Film and Video Production in Australia.*

—— *P9121 Radio Services in Australia.*

—— *P9123 Free to Air Television Services in Australia.*

—— *P9124 Pay Television in Australia.*

—— *P9241 Music and Theatre Productions in Australia.*

—— *P9242 Creative Arts in Australia.*

—— *P9251 Sound Recording Studios in Australia.*

—— *P9252 Performing Arts Venues in Australia.*

—— *P9259 Ticket Selling and Theatrical Support Services in Australia.*

—— *Q9523 Professional Photography in Australia.*

Hoegh-Guldberg, H. 2005, *Statistical light dawns on the music sector,* Music Council of Australia, http://www.mca.org.au/index.php?id=38.

Howkins, J. 2002, *The Creative Economy: How People Make Money From Ideas*, Penguin books, London.

NSW Department of State and Regional Development, 2008, *NSW Creative Industry: Economic Fundamentals*, Sydney.

PricewaterhouseCoopers, 2008, *Making The Intangible Tangible: The Economic Contribution of Australia's Copyright Industries*, Prepared for the Australian Copyright Council.

Prime Minister's Science, Engineering and Innovation Council (PMSEIC), 2005, *The role of creativity in the innovation economy*, Independent Working Group.

Throsby, D., and Hollister, V. 2003, *Don't give up your day job,* Australia Council, Sydney.

UNESCO, *25 questions on culture, trade and globalisation;* http://portal.unesco.org/en/ev.php-URL_ID=18668&URL_DO=DO_TOPIC&URL_SECTION=201.html; Accessed 27 September 2006.