Creative Industries:

Topography and Dynamics

August 2006

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ARC Center for Excellence in Creative Industries and Innovation

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Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

Contents

Publication Notice

This report has been published as part of an Australian Research Council Partnership project between the Australian Government Department of Communications, Information Technology and the Arts, the Australian Film Commission and the Queensland University of Technology.

Executive Summary

This paper documents the initial findings in the search for the macro-scale patterns within the numbers and types of businesses operating within the various segments that make up the Creative industries in Australia.

The research, part of the three year Creative Digital Industries National Mapping Project represents the first statistical look at an unique datasource, the confidentialised listings of all business on the Australian Business Register that was established as part of the Australian Federal Government's New Tax System (Australian Business Number) Act in 1999. The data as of the 29th of September 2005 was obtained under contract to the Australian Government Department of Communications, Information Technology and the Arts (DCITA). Even though the register does not hold any data relating to the turnover or employment of firms it is very valuable when analysed for the density, establishment and closure patterns.

The dataset analysed by the QUT researchers contained fields for:

- The industry activity of activity expressed in Australian and New Zealand Standard Industry Code 1993 at the five digit level using the Australian Taxation Offices custom one digit extensions.
- The type of entity that was registered such as public company, private company, partnership and sole trade.
- The postcode of the businesses' place of operations
- The dates the business registered for an Australian Business Number, for GST, and the cancellation dates of either if applicable.

Confidentiality: The dataset did not contain any information that identified or that could be used to identify the firm or individual that was registered.

The definition of the Creative Industries

The *Creative Industries,* in the definition developed by the project, are made up of seven industry segments:

- Music and Performing Arts
- Film, TV, Radio
- Advertising and marketing
- Software, Web and Multimedia development
- Writing, Publishing and Print Media
- Architecture, Design and Visual Arts
- Other Creative Arts (mostly sole practitioners)

Significant findings from the first cycle of analysis[1]:

The Patterns in the Numbers of Creative Industry Businesses

1. As of September 2005 there were 115,000 Creative Industry organisations registered for GST on the Australian Business Register. In addition there were 155,000 entities, mostly individuals, registered that did not have GST registration. These would be active organizations but with annual revenue below $50,000.
2. Businesses within the Creative Industries represented 5.1% of all GST registered businesses.
3. Software, Web and Interactive Multimedia Development and Architecture, Design and Visual Arts are the largest segments in terms of the number of firms.
4. Private Companies and Sole Traders are the dominant types of business entity.
5. Firms are predominantly based in New South Wales and Victoria, with Film, TV and Radio segment firms in particular highly concentrated in New South Wales (49 per cent of all firms are based there).

Clustering and Density Patterns

1. Areas with a higher density of population also have more firms per person. Because of this, New South Wales and Victoria contain many of the densest clusters of Creative Industries.
2. More firms in Film, TV and Radio and in Advertising and Marketing chose to locate in the same areas than other segments, suggesting strong linkages between firms in those segments.

Patterns in Growth in the numbers of businesses

1. Over the past five years, Advertising and Marketing and Software, Web and Interactive Multimedia Development have been the two fastest growing segments
2. Queensland has been the fastest growing state.
3. Partnerships and sole traders have been the fastest growing entity types.

The Survival Rates of businesses

1. Advertising and Marketing was the industry segment with the lowest rate of business

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[1] The source of all analyses in this report unless otherwise stated is analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005.

survival over four years.

2. Firms in Tasmania and the ACT both had significantly lower survival rates than elsewhere in Australia.

3. Firm failures predominantly occur in the second and third years after startup in the Creative Industries, although in the Advertising and Marketing segment it is earlier. Indeed, that sector had a consistently high rate of both firm entry and exit from the industry.

4. Partnerships, aside from having a high growth rate, also had a high failure rate, consequently they were also the firm type with the greatest amount of churn each year (firms entering and exiting the industry as a percentage of the total number of firms). This is not surprising given the traditional role of partnerships as a corporate vehicle for project based, short term partnering.

The dynamics of new business formation in local areas

1. Local areas with low survival rates were found to have high growth rates and areas with low growth rates were found to have high survival rates. This suggests that in those highly competitive areas where underperforming firms are more quickly weeded out (hence the lower survival rate) it leaves the more successful firms with a stronger local environment that ultimately creates more successful startups and spin-offs (and higher growth).

2. A similar effect is also found in local areas with a high density of firms in the Creative Industries. High density areas experience both higher growth rates and lower survival rates for firms than other areas. This is probably caused by the greater competition brought about in the local market by the greater number of firms.

These findings are tantalizing as they demonstrate statistical validation of many researchers conjectures of the characteristics of the businesses within the Creative Industries. However more extensive research needs to be conducted to verify the findings by incorporating updated ABR datasets[2] and more extensive comparisons with other datasets such as population and localities economic performance

[2] The ABR updates in May 2006 and October 2006 use the 2006 update of the Australian and New Zealand Standard Industry Classification which has more detailed classifications in the areas of industrial activity that are relevant to the Creative Industries.

1 Introduction[3]

The *Creative Industries* are now regularly grouped together in academic, government and industry studies as a useful way of referring to those industries that depend primarily on the *creative* aspect of their work. A great deal of interest is generated in the cultural or aesthetic aspects of these industries but it is also important to emphasis the economic character of these industries. In doing so, this study examines the *topography* (distribution and density) and *dynamics* (growth, survival, churn and exit rates) of the Creative Industries in Australia.

The commercial aspects of these industries should be emphasised. Often, these aspects are apparent through the use of Intellectual Property Law (IP) to protect ownership, and are seen in the physical commercialisation or innovation of goods (e.g. Apple's iPod) and services (e.g. Cirque du Soleil). Indeed an early, useful, definition given by the UK Department of Culture, Media and Sport in its Creative Industries Mapping Document[4] defined the Creative Industries as "those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property."

The Centre for Creative Industries and Innovation (CCI) at Queensland University of Technology (QUT) refines the creative industries to be as follows:

The Creative Industries are a set of interlocking segments of the economy focused on extending and exploiting symbolic cultural products such as the arts, films, interactive games, or providing business-to-business symbolic or information services in areas such as architecture, advertising and marketing, design, as well as web, multimedia and software development. Most often Creative Industries involve the application of creativity and imagination to produce and deliver unique or customized products from incomplete or abstract specifications received either from a client or from a desire for personal, artistic exploration.

In this study the Creative Industries are grouped into seven *Industry Segments*:

1. Advertising and Marketing
2. Architecture, Design and Visual Arts
3. Film, TV and Radio
4. Music and Performing Arts

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[3] This report is a preliminary investigation and its results may change as further reclassification and refinement of the underlying data takes place. The analysis will also be extended to any future data sets as appropriate.

[4] Department of Culture, Media and Sport, *Creative Industries Mapping Document,* 1998, London,<http://www.culture.gov.uk/global/publications/archive_1998/Creative_Industries_Mapping_Document_1998.htm>

5. Publishing
6. Software, Web and Interactive Multimedia (IMM) Development
7. Other Creative Industries (*Those creative businesses that could not be located in other segments).*

To ensure that the firms captured are those focused on the creative aspect of these sectors, the analysis has been constrained to firms within the *core* areas of pre-creation and creation in the value chain, while the later realisation, distribution and post sales stages have been excluded. The usual definitions of manufacturing, distribution and retailing stages in the value chain, while useful, have been superseded by these new categories in this study. Other firms in the indirect value chain, such as those that provide education, make instruments, or sell products are also excluded as outside the core of enterprises of interest in the creative industries. So for the purposes of this study, the distributive stages of the value chain, such as 'cinema' or newspaper and book retailing are excluded.

The Australian Business Register database at QUT (current as of 5 September 2005) has been used, excluding those firms which are not registered for GST to ensure the analysis captures active commercially focused enterprises.

The ABS Standard Classifications that fit the QUT definition of the core Creative Industry are given in Table 1.1.

Table 1.1 Segments and Industry codings

Core Industry Activity (Anzsic4 or when available Anzsic5)
Music And Performing Arts Segment
9251 Sound Recording Studios
2430 Recorded Media Manufacturing And Publishing
9241 Music And Theatre Productions
92411 Actor-Own Account-Live Theatrical Or Musical
Film, TV, Radio Segment
9121 Radio Services
9100 Motion Picture, Radio And Television Services, Undefined

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

9110 Film And Video Services, Undefined

9111 Film And Video Production

9120 Radio And Television Services, Undefined

9122 Television Services

Advertising And Marketing Segment

7851 Advertising Services

7850 Marketing And Business Management Services, Undefined

Software, Web And Multimedia Development Segment

7834 Computer Consultancy Services

78341 Internet Development Services

78345 Interactive Game Development

24301 Computer Software Mfg Or Publishing

78342 Software Development Services Nec

78349 Computer Consultancy Services Nec

2422 Other Periodical Publishing

Writing, Publishing And Print Media Segment

2421 Newspaper Printing Or Publishing

2400 Printing, Publishing And Recorded Media, Undefined

2423 Book And Other Publishing

9200 Libraries, Museums And The Arts, Undefined

9210 Libraries

Architecture, Design And Visual Arts Segment
7821 Architectural Services
7852 Commercial Art And Display Services
2941 Jewellery And Silverware Manufacturing
9220 Museums
9523 Photographic Studios
Other Creative Industries
9240 Arts, Undefined
9242 Creative Arts

These industries are made up of a diverse range of participants and it is useful to be able to analyse them based on the type of firms that operate within them. While the ABR contains coding for over twenty different types of entities, these have been grouped into the following 5 major types:

1. Public Companies
2. Private Companies
3. Partnerships
4. Sole Traders
5. Others (including government instrumentalities and trusts)

This study also utilises some very fine divisions for firm location, which can be taken from the State down to the postcode level. This data is taken from the Australian Business Register as the postcode recorded under 'place of business'. As such, the effects of locality on firm density, growth and survival is mapped. This effect is likely to be stronger on those firms that sell product into the local market. For these firms, the actions of neighbouring enterprises may impact on their growth and survival either positively (e.g. by growing the market for content) or negatively (e.g. by stealing audience share). Even firms that do not have to sell product locally, such as software developers, are influenced by local effects through the pool of creative talent they tap into and their ability to network with similar firms and broaden or innovate the nature of the content they provide.

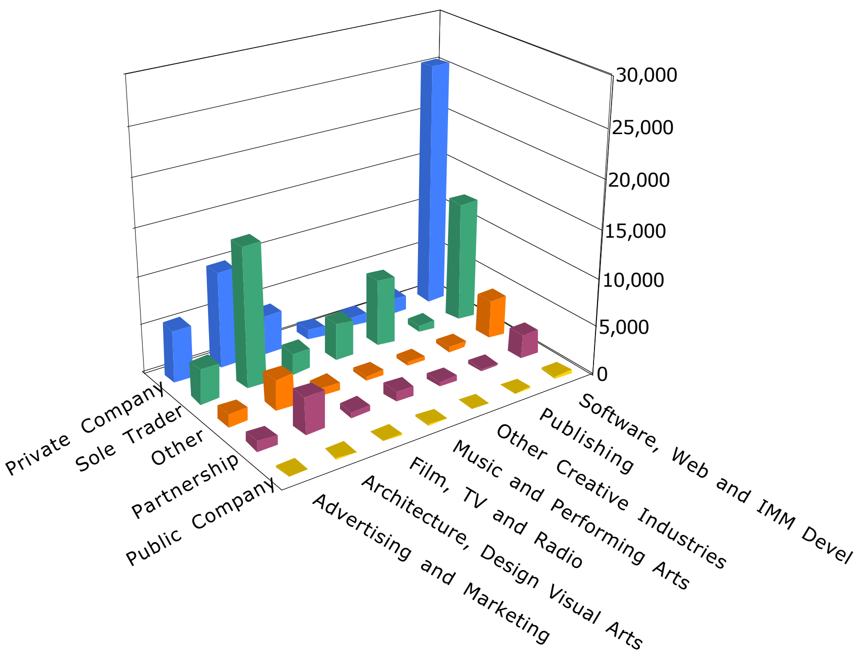
In this study, section 2 investigates the topography of the Creative Industries. This entails mapping the size and distribution of these industries as well as their density in Local Government Areas (LGAs). Section 3 studies changes over time in the growth, survival, exit rates and the churn of firms in the Creative Industries. Section 4 takes LGA level data and relates the growth, survival and density of firms to one another.

2 Topography

2.1 Distribution

Australia had 115,152 firms operating in the creative industries at September 2005, distributed as shown in Figure 2.1. This includes only those commercially active firms with current ABN and GST registrations.

Figure 2.1 Creative Industries by Segment and Entity



Source: Analysis by QUT of a custom, confidentialised extract of the Australian Business Register (accessed under section 30 of the A New Tax System (Australian Business Number) Act 1999 and under contract to the Australian Government Department of Communications, Information Technology and the Arts (DCITA) as at 29th September 2005.

As shown below in Figure 2.2, New South Wales and Victoria, boasting Australia's two largest cities, were the frontrunners in size with 45 621 and 31 024 firms respectively. The largest industry segment was Software, Web and IMM Development with 45 129 firms, largely made up of private companies (25 645) although also containing a significant number of sole traders (12 702). Architecture, Design and Visual Arts was the second largest sector with 31 972 firms. These were predominantly sole traders (14 735) closely followed by private companies (10 064). Private Companies dominated the sectors of: Software, Web and IMM Development; Film, TV and Radio; Publishing; and Advertising and Marketing with 57, 52, 48 and 47 per cent of firms in those sectors respectively. Sole traders dominated in: Architecture, Design and Visual Arts; Music and Performing Arts and Other Creative Industries making up 46, 59 and 79

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

per cent of firms in those sectors. Intuitively, these segments are likely to involve less team-based project work than the other four, hence the greater number of Sole Traders. In the Creative Industries overall, there were 48 827 Private Companies and 44 957 Sole Traders. The smallest industry sector, with 3 216 firms, was the Publishing sector, while the second smallest was the Music and Performing Arts sector with 6 504 firms.

Figure 2.2 Enterprises in the Creative Industries

Segments	Entity Type	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Total
Advertising and Marketing	Public Company	36	21	15	17	1	1	1	0	92
	Private Company	2,582	1,450	858	260	222	51	49	16	5,488
	Partnership	310	214	262	115	71	18	12	4	1,006
	Sole Trader	1,376	885	754	299	207	58	46	25	3,650
	Other	298	495	295	157	106	13	13	2	1,379
Advertising and Marketing Total		4,602	3,065	2,184	848	607	141	121	47	11,615
Architecture, Design Visual Arts	Public Company	29	20	15	4	0	2	1	1	72
	Private Company	4,434	2,792	1,505	603	420	105	155	50	10,064
	Partnership	1,231	814	724	552	327	82	61	16	3,807
	Sole Trader	5,397	3,966	2,464	1,385	902	254	251	116	14,735
	Other	562	1,227	658	536	213	41	38	18	3,294
Architecture, Design Visual Arts Total		11,653	8,819	5,366	3,080	1,862	484	506	201	31,972
Film,TV and Radio	Public Company	32	18	23	5	6	0	1	1	86
	Private Company	2,290	939	418	139	154	30	43	12	4,025
	Partnership	253	147	105	73	43	11	8	2	642
	Sole Trader	992	506	335	180	121	35	32	19	2,220
	Other	205	268	109	78	69	15	12	11	767
Film,TV and Radio Total		3,772	1,878	990	475	393	91	96	45	7,740
Music and Performing Arts	Public Company	11	8	7	1	2	3	1	0	33
	Private Company	558	262	154	48	26	4	8	6	1,066
	Partnership	459	234	238	100	58	19	13	9	1,130
	Sole Trader	1,558	815	818	278	226	40	39	31	3,805
	Other	129	157	82	45	39	2	11	5	470
Music and Performing Arts Total		2,715	1,476	1,299	472	351	68	72	51	6,504
Other Creative Industries	Public Company	6	1	1	0	0	0	1	0	9
	Private Company	514	274	99	35	35	12	17	3	989
	Partnership	189	152	101	42	38	19	10	4	555
	Sole Trader	2,720	1,944	1,074	556	429	123	171	65	7,082
	Other	75	113	59	27	23	7	8	29	341
Other Creative Industries Total		3,504	2,484	1,334	660	525	161	207	101	8,976
Publishing	Public Company	18	22	0	3	1	2	1	0	47
	Private Company	709	396	227	101	66	21	25	5	1,550
	Partnership	116	92	72	44	23	12	4	4	367
	Sole Trader	304	190	122	70	33	13	22	9	763
	Other	119	181	72	60	37	9	9	2	489
Publishing Total		1,266	881	493	278	160	57	61	20	3,216
Software, Web and IMM Devel	Public Company	91	53	47	32	9	0	7	0	239
	Private Company	11,502	7,088	3,306	1,529	981	207	952	79	25,645
	Partnership	817	560	458	322	189	49	62	14	2,471
	Sole Trader	4,890	3,133	2,198	1,197	779	177	259	68	12,702
	Other	809	1,587	768	513	287	33	68	7	4,072
Software, Web and IMM Devel Total		18,109	12,421	6,777	3,593	2,245	466	1,348	168	45,129
Total Creative Industries	Public Company	223	143	108	62	19	8	13	2	578
	Private Company	22,589	13,201	6,567	2,715	1,904	430	1,249	171	48,827
	Partnership	3,375	2,213	1,960	1,248	749	210	170	53	9,978
	Sole Trader	17,237	11,439	7,765	3,965	2,697	700	820	333	44,957
	Other	2,197	4,028	2,043	1,416	774	120	159	74	10,812
Total		45,621	31,024	18,443	9,406	6,143	1,468	2,411	633	115,152

Source: *Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005*

Figure 2.3 below gives the distribution of firms across industry segments in percentage terms. This is a useful way to see clustering among them. Indeed, the Music and Performing Arts segment is densely clustered in New South Wales with 42 per cent of all firms based there. The Film, TV and Radio sector was even more concentrated in New South Wales, with just under half (49 per cent) of the industry based there. Surprisingly, Victoria had a low number of Music and Performing Arts Enterprises (1 476 or 22½ per cent) and in fact had a lower number of Sole Traders than Queensland (815 against 818). Of course, firm counts do not take into account the size of partnerships, private companies and so on. Still, it seems surprising. In contrast, Queensland has strengths in Music and Performing Arts (1,299 or 20 per cent) and Advertising

Data Source: *Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005* and Marketing (2 184 or 19 per cent). Western Australia had a relatively high level of Architecture, Design and Visual Arts firms (3 080 or 9½ per cent) as did South Australia (1 862 or 6 per cent). The ACT had a relatively low level of Advertising and Marketing firms (121 or 1 per cent) but a relatively high level of Software, Web and IMM Development firms (1 348 or 3 per cent), possibly reflecting the Commonwealth Government's large purchasing power. Tasmania's number of Publishing firms was high (57 or 2 per cent) but its level of Software, Web and IMM Development firms was low (466 or 1 per cent).

Figure 2.3 Distribution of Enterprises

Segments	Entity Type	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Total
Advertising and Marketing	Public Company	39.1%	22.8%	16.3%	18.5%	1.1%	1.1%	1.1%	0.0%	92
	Private Company	47.0%	26.4%	15.6%	4.7%	4.0%	0.9%	0.9%	0.3%	5,488
	Partnership	30.8%	21.3%	26.0%	11.4%	7.1%	1.8%	1.2%	0.4%	1,006
	Sole Trader	37.7%	24.2%	20.7%	8.2%	5.7%	1.6%	1.3%	0.7%	3,650
	Other	21.6%	35.9%	21.4%	11.4%	7.7%	0.9%	0.9%	0.1%	1,379
Advertising and Marketing Total		39.6%	26.4%	18.8%	7.3%	5.2%	1.2%	1.0%	0.4%	11,615
Architecture, Design Visual Arts	Public Company	40.3%	27.8%	20.8%	5.6%	0.0%	2.8%	1.4%	1.4%	72
	Private Company	44.1%	27.7%	15.0%	6.0%	4.2%	1.0%	1.5%	0.5%	10,064
	Partnership	32.3%	21.4%	19.0%	14.5%	8.6%	2.2%	1.6%	0.4%	3,807
	Sole Trader	36.6%	26.9%	16.7%	9.4%	6.1%	1.7%	1.7%	0.8%	14,735
	Other	17.1%	37.2%	20.0%	16.3%	6.5%	1.2%	1.2%	0.5%	3,294
Architecture, Design Visual Arts Total		36.4%	27.6%	16.8%	9.6%	5.8%	1.5%	1.6%	0.6%	31,972
Film,TV and Radio	Public Company	37.2%	20.9%	26.7%	5.8%	7.0%	0.0%	1.2%	1.2%	86
	Private Company	56.9%	23.3%	10.4%	3.5%	3.8%	0.7%	1.1%	0.3%	4,025
	Partnership	39.4%	22.9%	16.4%	11.4%	6.7%	1.7%	1.2%	0.3%	642
	Sole Trader	44.7%	22.8%	15.1%	8.1%	5.5%	1.6%	1.4%	0.9%	2,220
	Other	26.7%	34.9%	14.2%	10.2%	9.0%	2.0%	1.6%	1.4%	767
Film,TV and Radio Total		48.7%	24.3%	12.8%	6.1%	5.1%	1.2%	1.2%	0.6%	7,740
Music and Performing Arts	Public Company	33.3%	24.2%	21.2%	3.0%	6.1%	9.1%	3.0%	0.0%	33
	Private Company	52.3%	24.6%	14.4%	4.5%	2.4%	0.4%	0.8%	0.6%	1,066
	Partnership	40.6%	20.7%	21.1%	8.8%	5.1%	1.7%	1.2%	0.8%	1,130
	Sole Trader	40.9%	21.4%	21.5%	7.3%	5.9%	1.1%	1.0%	0.8%	3,805
	Other	27.4%	33.4%	17.4%	9.6%	8.3%	0.4%	2.3%	1.1%	470
Music and Performing Arts Total		41.7%	22.7%	20.0%	7.3%	5.4%	1.0%	1.1%	0.8%	6,504
Other Creative Industries	Public Company	66.7%	11.1%	11.1%	0.0%	0.0%	0.0%	11.1%	0.0%	9
	Private Company	52.0%	27.7%	10.0%	3.5%	3.5%	1.2%	1.7%	0.3%	989
	Partnership	34.1%	27.4%	18.2%	7.6%	6.8%	3.4%	1.8%	0.7%	555
	Sole Trader	38.4%	27.4%	15.2%	7.9%	6.1%	1.7%	2.4%	0.9%	7,082
	Other	22.0%	33.1%	17.3%	7.9%	6.7%	2.1%	2.3%	8.5%	341
Other Creative Industries Total		39.0%	27.7%	14.9%	7.4%	5.8%	1.8%	2.3%	1.1%	8,976
Publishing	Public Company	38.3%	46.8%	0.0%	6.4%	2.1%	4.3%	2.1%	0.0%	47
	Private Company	45.7%	25.5%	14.6%	6.5%	4.3%	1.4%	1.6%	0.3%	1,550
	Partnership	31.6%	25.1%	19.6%	12.0%	6.3%	3.3%	1.1%	1.1%	367
	Sole Trader	39.8%	24.9%	16.0%	9.2%	4.3%	1.7%	2.9%	1.2%	763
	Other	24.3%	37.0%	14.7%	12.3%	7.6%	1.8%	1.8%	0.4%	489
Publishing Total		39.4%	27.4%	15.3%	8.6%	5.0%	1.8%	1.9%	0.6%	3,216
Software, Web and IMM Devel	Public Company	38.1%	22.2%	19.7%	13.4%	3.8%	0.0%	2.9%	0.0%	239
	Private Company	44.9%	27.6%	12.9%	6.0%	3.8%	0.8%	3.7%	0.3%	25,645
	Partnership	33.1%	22.7%	18.5%	13.0%	7.6%	2.0%	2.5%	0.6%	2,471
	Sole Trader	38.5%	24.7%	17.3%	9.4%	6.1%	1.4%	2.0%	0.5%	12,702
	Other	19.9%	39.0%	18.9%	12.6%	7.0%	0.8%	1.7%	0.2%	4,072
Software, Web and IMM Devel Total		40.1%	27.5%	15.0%	8.0%	5.0%	1.0%	3.0%	0.4%	45,129
Total Creative Industries	Public Company	38.6%	24.7%	18.7%	10.7%	3.3%	1.4%	2.2%	0.3%	578
	Private Company	46.3%	27.0%	13.4%	5.6%	3.9%	0.9%	2.6%	0.4%	48,827
	Partnership	33.8%	22.2%	19.6%	12.5%	7.5%	2.1%	1.7%	0.5%	9,978
	Sole Trader	38.3%	25.4%	17.3%	8.8%	6.0%	1.6%	1.8%	0.7%	44,957
	Other	20.3%	37.3%	18.9%	13.1%	7.2%	1.1%	1.5%	0.7%	10,812
Total		39.6%	26.9%	16.0%	8.2%	5.3%	1.3%	2.1%	0.5%	115,152

Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

2.2 Density: Firms to resident population

To assess the *density* of the Creative Industries with respect to the population of the surrounding area, local government area (LGA) data has been taken from the QUT database, alongside the June 2004 preliminary resident population data from ABS catalogue number 3218.0. Details of the population and density of the 75 LGAs most densely populated by creative industries are given in Figure 2.4, with rankings by segment given in Figure 2.5 and Figure 2.6. These rankings state the number of firms in the creative industries overall and in the seven segments in terms of firms per 1,000 residents.

Figure 2.4 Creative Industry Firms per Person

Area	Population	State	Rank	Overall	Advertising and Marketing	Architecture, Design and Visual Arts	Film, TV and Radio	Music and Performing Arts	Other Creative Industries	Publishing	Software, Web and IMM Dev.
Perth	10,469	WA	1	69.73	7.93	22.16	2.29	2.10	2.39	1.91	30.95
North Sydney	60,789	NSW	2	48.36	7.16	9.64	5.79	1.78	2.20	1.51	20.28
Adelaide	14,361	SA	3	47.42	6.48	15.25	4.39	1.39	2.92	1.39	15.60
Port Phillip	82,857	VIC	4	32.78	4.68	8.03	4.07	1.79	2.70	0.83	10.68
Melbourne	61,670	VIC	5	32.61	3.44	9.92	2.50	0.79	1.62	1.25	13.09
Leichhardt	51,430	NSW	6	32.34	2.45	9.41	4.86	2.00	3.60	0.99	9.02
Woollahra	53,095	NSW	7	28.46	3.58	7.42	4.54	1.36	3.56	0.68	7.33
Yarra	69,749	VIC	8	25.75	2.28	8.89	2.31	1.30	3.37	0.86	6.74
Waverley	62,096	NSW	9	19.74	1.76	4.96	3.33	1.38	2.54	0.53	5.23
Mosman	28,420	NSW	10	19.21	3.17	4.71	1.72	0.74	1.69	0.46	6.72
Subiaco	16,399	WA	11	19.15	1.89	9.27	1.16	0.55	0.85	0.30	5.12
Pittwater	56,954	NSW	12	19.02	2.19	5.64	2.56	0.72	1.76	0.56	5.58
Manly	38,987	NSW	13	18.88	2.05	4.98	1.85	0.92	1.15	0.62	7.31
Stonnington	90,903	VIC	14	17.98	2.39	5.27	1.51	0.84	1.64	0.48	5.85
Willoughby	63,905	NSW	15	17.75	1.75	4.23	2.30	0.41	0.85	0.30	7.92
Marrickville	75,870	NSW	16	17.00	0.94	5.03	1.88	1.45	2.52	0.40	4.78
Sydney	146,297	NSW	17	16.89	2.61	3.74	1.35	0.51	0.44	0.71	7.53
Ku-ring-gai	108,830	NSW	18	14.31	1.12	2.66	0.97	0.43	0.83	0.42	7.87
Cambridge	24,656	WA	19	13.99	1.38	4.75	0.85	0.45	1.22	0.53	4.83
Norwood Payneham St Peters	34,054	SA	20	13.95	1.73	4.26	1.47	0.56	1.06	0.29	4.58
Lane Cove	32,341	NSW	21	13.85	1.61	2.88	1.17	0.56	0.65	0.28	6.71
Boroondara	158,290	VIC	22	13.54	1.40	3.10	0.66	0.55	1.10	0.43	6.29
Bega Valley	31,955	NSW	23	12.99	1.38	4.16	0.53	0.81	1.00	0.47	4.63
Unley	36,442	SA	24	12.95	1.67	4.14	1.04	0.60	0.88	0.36	4.25
Claremont	9,142	WA	25	12.80	1.53	5.25	0.77	0.22	1.53	0.22	3.28
Cottesloe	7,617	WA	26	12.21	1.05	6.43	0.92	0.13	1.05	0.13	2.49
Bayside	89,232	VIC	27	12.08	1.49	3.00	0.71	0.45	0.82	0.37	5.24
Glen Eira	122,901	VIC	28	11.33	1.01	2.71	0.70	0.52	0.81	0.29	5.29
Baulkham Hills	157,854	NSW	29	11.22	1.01	2.32	0.57	0.63	0.46	0.14	6.09
Fremantle	26,266	WA	30	10.77	0.80	4.19	0.76	0.76	1.98	0.34	1.94
Ryde	99,662	NSW	31	10.74	0.76	2.03	0.71	0.56	0.51	0.33	5.83
Warringah	138,646	NSW	32	10.54	1.19	2.33	0.97	0.46	0.59	0.24	4.77
Cook	4,081	QLD	33	10.54	0.49	4.66	1.47	1.47	1.23	0.25	0.98
Torres	3,810	QLD	34	10.50	1.05	2.62	1.84	1.31	2.10	0.52	1.05
Hornsby	156,929	NSW	35	9.73	0.57	1.88	0.57	0.39	0.47	0.17	5.68
Burwood	31,085	NSW	36	9.68	0.80	1.87	0.55	0.51	0.74	0.26	4.95
Randwick	126,431	NSW	37	9.61	0.81	2.16	0.89	0.59	0.99	0.24	3.93
Hobart	48,533	TAS	38	9.54	0.89	3.34	0.47	0.35	1.07	0.35	3.07
Vincent	26,632	WA	39	9.46	1.13	3.68	0.64	0.23	0.68	0.19	2.93
Whitehorse	144,935	VIC	40	9.41	0.65	2.28	0.43	0.36	0.49	0.24	4.97
South Perth	38,413	WA	41	8.77	0.55	2.40	0.42	0.39	0.31	0.21	4.50
Hunter's Hill	13,911	NSW	42	8.77	1.22	2.66	1.08	0.43	0.65	0.22	2.52
Queenscliffe	3,212	VIC	43	8.72	0.62	4.05	0.31	0.00	1.87	0.62	1.25
Byron	30,724	NSW	44	8.66	0.55	2.67	1.24	0.88	1.11	0.39	1.82
Westonia	238	WA	45	8.40	4.20	4.20	0.00	0.00	0.00	0.00	0.00
Manningham	113,920	VIC	46	8.23	0.74	1.83	0.35	0.29	0.46	0.23	4.34
Brisbane	957,010	QLD	47	8.21	0.89	2.19	0.43	0.49	0.56	0.18	3.47
Ilfracombe	367	QLD	48	8.17	0.00	5.45	0.00	0.00	2.72	0.00	0.00
Hurstville	75,640	NSW	49	8.17	0.63	2.08	0.17	0.46	0.38	0.28	4.16
Campbelltown	47,167	SA	50	8.10	0.85	2.37	0.36	0.81	0.45	0.13	3.14
Ashfield	40,258	NSW	51	8.05	0.45	2.01	0.65	0.60	0.89	0.10	3.35
Mosman Park	8,594	WA	52	7.91	0.93	2.09	0.58	0.00	0.93	0.23	3.14
East Fremantle	6,885	WA	53	7.70	0.29	2.32	0.73	0.29	1.60	0.29	2.18
Nedlands	21,964	WA	54	7.69	0.36	2.14	0.18	0.27	0.64	0.23	3.87
Strathfield	31,129	NSW	55	7.68	0.77	1.22	0.32	0.35	0.29	0.35	4.37
Walkerville	7,093	SA	56	7.47	0.70	1.41	0.56	0.28	1.27	0.00	3.24
Moonee Valley	109,165	VIC	57	7.45	0.63	2.18	0.30	0.45	0.57	0.11	3.21
Unincorporated ACT	324,021	ACT	58	7.44	0.37	1.56	0.30	0.22	0.64	0.19	4.16
Monash	161,544	VIC	59	7.43	0.60	1.55	0.24	0.23	0.37	0.17	4.28
Blue Mountains	77,011	NSW	60	7.43	0.44	2.14	0.44	0.52	1.22	0.18	2.48
Stirling	181,079	WA	61	7.09	0.65	2.19	0.33	0.38	0.44	0.23	2.86
Burnside	42,925	SA	62	6.92	0.72	1.86	0.37	0.30	0.75	0.19	2.73
Nillumbik	60,623	VIC	63	6.75	0.51	2.03	0.28	0.46	0.63	0.13	2.71
Herberton	5,508	QLD	64	6.72	0.36	2.18	0.36	0.73	0.73	0.54	1.82
Gold Coast	469,214	QLD	65	6.67	1.13	1.86	0.46	0.52	0.39	0.17	2.14
Macedon Ranges	40,004	VIC	66	6.62	0.35	1.92	0.42	0.20	0.97	0.27	2.47
Victoria Park	28,632	WA	67	6.60	0.28	2.13	0.38	0.52	0.24	0.38	2.65
Mitcham	62,460	SA	68	6.50	0.54	1.89	0.35	0.50	0.51	0.21	2.50
Darebin	127,521	VIC	69	6.27	0.43	1.98	0.34	0.52	0.83	0.14	2.03
Wingecarribee	44,311	NSW	70	6.18	0.52	2.10	0.36	0.45	0.68	0.25	1.83
Banyule	117,323	VIC	71	6.17	0.45	1.79	0.20	0.34	0.52	0.12	2.75
Prospect	19,265	SA	72	6.13	0.73	2.08	0.26	0.36	0.67	0.10	1.92
Rockdale	95,036	NSW	73	6.07	0.61	1.62	0.27	0.53	0.34	0.13	2.58
Sutherland Shire	214,784	NSW	74	5.98	0.62	1.71	0.25	0.42	0.38	0.09	2.50
Canning	79,600	WA	75	5.97	0.67	1.68	0.23	0.21	0.36	0.08	2.74

Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

Notably, the CBD's of Perth, Adelaide, Melbourne, Sydney and North Sydney are all in the top

20 LGAs with the most creative industry firms per person. Of the top 100 LGAs, New South Wales, Victoria and Western Australia were the most heavily represented States with 32 entries for NSW, 23 for VIC and 21 for WA.

It should be noted that these figures may be partly driven by the size of the LGAs, which can vary considerably. For example, the Perth LGA (ranked 1) has around 10,000 residents while the Brisbane LGA (ranked 47) has around 957,000, clearly capturing a larger region. The physical density of firms per square kilometre is looked at in section 2.3. An alternate analysis against the number of people working within an LGA could also reveal stronger patterns and should be undertaken in the second cycle of the analysis

Figure 2.5 Density by Segment

	Advertising and Marketing			Firms per
Rank	Area	Population	State	1000 residents
1	Perth	10,469	WA	7.93
2	North Sydney	60,789	NSW	7.16
3	Adelaide	14,361	SA	6.48
4	Port Phillip	82,857	VIC	4.68
5	Westonia	238	WA	4.20
6	Woollahra	53,095	NSW	3.58
7	Melbourne	61,670	VIC	3.44
8	Mosman	28,420	NSW	3.17
9	Sydney	146,297	NSW	2.61
10	Woodanilling	389	WA	2.57
11	Leichhardt	51,430	NSW	2.45
12	Stonnington	90,903	VIC	2.39
13	Yarra	69,749	VIC	2.28
14	Pittwater	56,954	NSW	2.19
15	Manly	38,987	NSW	2.05
16	Subiaco	16,399	WA	1.89
17	Mingenew	558	WA	1.79
18	Waverley	62,096	NSW	1.76
19	Willoughby	63,905	NSW	1.75
20	Norwood Payneham	34,054	SA	1.73
21	Unley	36,442	SA	1.67
22	Lane Cove	32,341	NSW	1.61
23	Claremont	9,142	WA	1.53
24	Bayside	89,232	VIC	1.49
25	Carnamah	710	WA	1.41
26	Boroondara	158,290	VIC	1.40
27	Cambridge	24,656	WA	1.38
28	Bega Valley	31,955	NSW	1.38
29	Mount Magnet	759	WA	1.32
30	Hunter's Hill	13,911	NSW	1.22
31	Warringah	138,646	NSW	1.19
32	Gold Coast	469,214	QLD	1.13
33	Vincent	26,632	WA	1.13
34	Ku-ring-gai	108,830	NSW	1.12
35	Cottesloe	7,617	WA	1.05
36	Torres	3,810	QLD	1.05
37	Glen Eira	122,901	VIC	1.01
38	Baulkham Hills	157,854	NSW	1.01
39	Bruce Rock	1,061	WA	0.94
40	Marrickville	75,870	NSW	0.94
41	Mosman Park	8,594	WA	0.93
42	Brisbane	957,010	QLD	0.89
43	Hobart	48,533	TAS	0.89
44	Campbelltown	47,167	SA	0.85
45	Corrigin	1,184	WA	0.84
46	Randwick	126,431	NSW	0.81
47	Burwood	31,085	NSW	0.80
48	Fremantle	26,266	WA	0.80
49	Strathfield	31,129	NSW	0.77
50	Ryde	99,662	NSW	0.76
51	Manningham	113,920	VIC	0.74
52	Balranald	2,737	NSW	0.73
53	Prospect	19,265	SA	0.73
54	Burnside	42,925	SA	0.72
55	Walkerville	7,093	SA	0.70
56	Maroochy	141,069	QLD	0.70
57	Botany Bay	37,192	NSW	0.67
58	Canning	79,600	WA	0.67
59	Stirling	181,079	WA	0.65
60	Whitehorse	144,935	VIC	0.65
61	Bassendean	14,078	WA	0.64
62	Hurstville	75,640	NSW	0.63
63	Peak Downs	3,154	QLD	0.63
64	Moonee Valley	109,165	VIC	0.63
65	Kingston	136,684	VIC	0.63
66	Mount Barker	25,591	SA	0.63
67	Sutherland Shire	214,784	NSW	0.62
68	Queenscliffe	3,212	VIC	0.62
69	King Island	1,632	TAS	0.61
70	Rockdale	95,036	NSW	0.61
71	Maroondah	100,943	VIC	0.60
72	Monash	161,544	VIC	0.60
73	Gosford	162,841	NSW	0.60
74	Hornsby	156,929	NSW	0.57
75	Mirani	5,299	QLD	0.57
76	Byron	30,724	NSW	0.55
77	South Perth	38,413	WA	0.55
78	Knox	150,044	VIC	0.55
79	Kiama	20,176	NSW	0.55
80	Mitcham	62,460	SA	0.54
81	Logan	173,331	QLD	0.54
82	Parramatta	151,076	NSW	0.54
83	Wingecarribee	44,311	NSW	0.52
84	Cairns	125,132	QLD	0.51
85	Nillumbik	60,623	VIC	0.51
86	Redland	127,777	QLD	0.51
87	Glen Innes	5,945	NSW	0.50
88	Yankalilla	4,004	SA	0.50
89	Bayswater	56,565	WA	0.50
90	Cook	4,081	QLD	0.49
91	Tweed	79,910	NSW	0.49
92	Fitzroy	10,280	QLD	0.49
93	Joondalup	158,216	WA	0.48
94	Frankston	118,951	VIC	0.48
95	Auburn	62,797	NSW	0.48
96	Whitsunday	16,874	QLD	0.47
97	Pine Rivers	139,228	QLD	0.47
98	Holdfast Bay	34,073	SA	0.47
99	Wagga Wagga	57,557	NSW	0.47
100	Yarra Ranges	143,228	VIC	0.47

	Architecture, Design Visual Arts			Firms per
Rank	Area	Population	State	1000 residents
1	Perth	10,469	WA	22.16
2	Adelaide	14,361	SA	15.25
3	Melbourne	61,670	VIC	9.92
4	North Sydney	60,789	NSW	9.64
5	Leichhardt	51,430	NSW	9.41
6	Subiaco	16,399	WA	9.27
7	Yarra	69,749	VIC	8.89
8	Port Phillip	82,857	VIC	8.03
9	Woollahra	53,095	NSW	7.42
10	Cottesloe	7,617	WA	6.43
11	Pittwater	56,954	NSW	5.64
12	Ilfracombe	367	QLD	5.45
13	Stonnington	90,903	VIC	5.27
14	Claremont	9,142	WA	5.25
15	Marrickville	75,870	NSW	5.03
16	Manly	38,987	NSW	4.98
17	Waverley	62,096	NSW	4.96
18	Cambridge	24,656	WA	4.75
19	Mosman	28,420	NSW	4.71
20	Cook	4,081	QLD	4.66
21	Norwood Payneham	34,054	SA	4.26
22	Willoughby	63,905	NSW	4.23
23	Westonia	238	WA	4.20
24	Fremantle	26,266	WA	4.19
25	Bega Valley	31,955	NSW	4.16
26	Unley	36,442	SA	4.14
27	Queenscliffe	3,212	VIC	4.05
28	Sydney	146,297	NSW	3.74
29	Vincent	26,632	WA	3.68
30	Hobart	48,533	TAS	3.34
31	Boroondara	158,290	VIC	3.10
32	Bayside	89,232	VIC	3.00
33	Lane Cove	32,341	NSW	2.88
34	Glen Eira	122,901	VIC	2.71
35	Byron	30,724	NSW	2.67
36	Ku-ring-gai	108,830	NSW	2.66
37	Hunter's Hill	13,911	NSW	2.66
38	Torres	3,810	QLD	2.62
39	Unincorporated NSW	1,172	NSW	2.56
40	Augusta-Margaret	11,380	WA	2.55
41	South Perth	38,413	WA	2.40
42	Broome	14,273	WA	2.38
43	Campbelltown	47,167	SA	2.37
44	Warringah	138,646	NSW	2.33
45	Baulkham Hills	157,854	NSW	2.32
46	East Fremantle	6,885	WA	2.32
47	Whitehorse	144,935	VIC	2.28
48	Stirling	181,079	WA	2.19
49	Brisbane	957,010	QLD	2.19
50	Moonee Valley	109,165	VIC	2.18
51	Herberton	5,508	QLD	2.18
52	Randwick	126,431	NSW	2.16
53	Blue Mountains	77,011	NSW	2.14
54	Nedlands	21,964	WA	2.14
55	Victoria Park	28,632	WA	2.13
56	Wingecarribee	44,311	NSW	2.10
57	Mosman Park	8,594	WA	2.09
58	Prospect	19,265	SA	2.08
59	Hurstville	75,640	NSW	2.08
60	Whitsunday	16,874	QLD	2.07
61	Adelaide Hills	38,987	SA	2.05
62	Noosa	47,606	QLD	2.04
63	Nillumbik	60,623	VIC	2.03
64	Ryde	99,662	NSW	2.03
65	Ashfield	40,258	NSW	2.01
66	Darebin	127,521	VIC	1.98
67	Winton	1,543	QLD	1.94
68	Macedon Ranges	40,004	VIC	1.92
69	Mitcham	62,460	SA	1.89
70	Bellingen	12,720	NSW	1.89
71	Hornsby	156,929	NSW	1.88
72	Burwood	31,085	NSW	1.87
73	Burnside	42,925	SA	1.86
74	Gold Coast	469,214	QLD	1.86
75	Manningham	113,920	VIC	1.83
76	Maroochy	141,069	QLD	1.80
77	Banyule	117,323	VIC	1.79
78	Kingston	136,684	VIC	1.79
79	Cairns	125,132	QLD	1.76
80	Bunbury	31,314	WA	1.76
81	Darwin	69,354	NT	1.74
82	Bayswater	56,565	WA	1.73
83	Sutherland Shire	214,784	NSW	1.71
84	Canning	79,600	WA	1.68
85	Gosford	162,841	NSW	1.66
86	Hobsons Bay	83,199	VIC	1.66
87	Surf Coast	22,471	VIC	1.65
88	Snowy River	7,322	NSW	1.64
89	Cooma-Monaro	9,773	NSW	1.64
90	Moreland	135,843	VIC	1.63
91	Mount Alexander	17,242	VIC	1.62
92	Rockdale	95,036	NSW	1.62
93	Maroondah	100,943	VIC	1.61
94	Mount Barker	25,591	SA	1.56
95	Unincorporated ACT	324,021	ACT	1.56
96	Monash	161,544	VIC	1.55
97	Kingborough	30,961	TAS	1.55
98	Joondalup	158,216	WA	1.54
99	Alice Springs	26,058	NT	1.54
100	Yarra Ranges	143,228	VIC	1.53

	Film,TV and Radio			Firms per
Rank	Area	Population	State	1000 residents
1	North Sydney	60,789	NSW	5.79
2	Leichhardt	51,430	NSW	4.86
3	Woollahra	53,095	NSW	4.54
4	Adelaide	14,361	SA	4.39
5	Port Phillip	82,857	VIC	4.07
6	Waverley	62,096	NSW	3.33
7	Pittwater	56,954	NSW	2.56
8	Melbourne	61,670	VIC	2.50
9	Yarra	69,749	VIC	2.31
10	Willoughby	63,905	NSW	2.30
11	Perth	10,469	WA	2.29
12	Marrickville	75,870	NSW	1.88
13	Manly	38,987	NSW	1.85
14	Torres	3,810	QLD	1.84
15	Mosman	28,420	NSW	1.72
16	Stonnington	90,903	VIC	1.51
17	Wyalkatchem	665	WA	1.50
18	Cook	4,081	QLD	1.47
19	Norwood Payneham	34,054	SA	1.47
20	Sydney	146,297	NSW	1.35
21	Byron	30,724	NSW	1.24
22	Lane Cove	32,341	NSW	1.17
23	Subiaco	16,399	WA	1.16
24	Wagin	1,816	WA	1.10
25	Hunter's Hill	13,911	NSW	1.08
26	Unley	36,442	SA	1.04
27	Ku-ring-gai	108,830	NSW	0.97
28	Warringah	138,646	NSW	0.97
29	Bruce Rock	1,061	WA	0.94
30	Cottesloe	7,617	WA	0.92
31	Coober Pedy	2,216	SA	0.90
32	Tasman	2,222	TAS	0.90
33	Randwick	126,431	NSW	0.89
34	Cambridge	24,656	WA	0.85
35	Claremont	9,142	WA	0.77
36	Fremantle	26,266	WA	0.76
37	East Fremantle	6,885	WA	0.73
38	Ryde	99,662	NSW	0.71
39	Bayside	89,232	VIC	0.71
40	Glen Eira	122,901	VIC	0.70
41	Boroondara	158,290	VIC	0.66
42	Break O'Day	6,036	TAS	0.66
43	Meekatharra	1,532	WA	0.65
44	Ashfield	40,258	NSW	0.65
45	Vincent	26,632	WA	0.64
46	Mosman Park	8,594	WA	0.58
47	Baulkham Hills	157,854	NSW	0.57
48	Bassendean	14,078	WA	0.57
49	Hornsby	156,929	NSW	0.57
50	Walkerville	7,093	SA	0.56
51	Broome	14,273	WA	0.56
52	Burwood	31,085	NSW	0.55
53	Bega Valley	31,955	NSW	0.53
54	Cooma-Monaro	9,773	NSW	0.51
55	Bourke	3,924	NSW	0.51
56	Hobart	48,533	TAS	0.47
57	Bellingen	12,720	NSW	0.47
58	Moreland	135,843	VIC	0.47
59	Maribyrnong	62,054	VIC	0.47
60	Alice Springs	26,058	NT	0.46
61	Gold Coast	469,214	QLD	0.46
62	Blayney	6,688	NSW	0.45
63	Kangaroo Island	4,476	SA	0.45
64	Bauhinia	2,240	QLD	0.45
65	Blue Mountains	77,011	NSW	0.44
66	Exmouth	2,271	WA	0.44
67	Plantagenet	4,621	WA	0.43
68	Brisbane	957,010	QLD	0.43
69	Whitehorse	144,935	VIC	0.43
70	Macedon Ranges	40,004	VIC	0.42
71	Donnybrook-Balingup	4,723	WA	0.42
72	Mount Gambier	23,640	SA	0.42
73	South Perth	38,413	WA	0.42
74	Victor Harbor	12,082	SA	0.41
75	Bayswater	56,565	WA	0.39
76	Hobsons Bay	83,199	VIC	0.38
77	Victoria Park	28,632	WA	0.38
78	Alpine	13,168	VIC	0.38
79	Burnside	42,925	SA	0.37
80	Herberton	5,508	QLD	0.36
81	Wingecarribee	44,311	NSW	0.36
82	Campbelltown	47,167	SA	0.36
83	Mitcham	62,460	SA	0.35
84	Augusta-Margaret	11,380	WA	0.35
85	Manningham	113,920	VIC	0.35
86	Mount Remarkable	2,853	SA	0.35
87	Bathurst	31,564	NSW	0.35
88	Gayndah	2,939	QLD	0.34
89	Gosford	162,841	NSW	0.34
90	Hepburn	14,828	VIC	0.34
91	Darebin	127,521	VIC	0.34
92	Cairns	125,132	QLD	0.34
93	Adelaide Hills	38,987	SA	0.33
94	Darwin	69,354	NT	0.33
95	Stirling	181,079	WA	0.33
96	Ballina	39,546	NSW	0.33
97	Chinchilla	6,133	QLD	0.33
98	Nambucca	18,525	NSW	0.32
99	Botany Bay	37,192	NSW	0.32
100	Strathfield	31,129	NSW	0.32

	Music and Performing Arts			Firms per
Rank	Area	Population	State	1000 residents
1	Perth	10,469	WA	2.10
2	Leichhardt	51,430	NSW	2.00
3	Port Phillip	82,857	VIC	1.79
4	North Sydney	60,789	NSW	1.78
5	Bingara	2,029	NSW	1.48
6	Cook	4,081	QLD	1.47
7	Marrickville	75,870	NSW	1.45
8	Adelaide	14,361	SA	1.39
9	Waverley	62,096	NSW	1.38
10	Tennant Creek	2,946	NT	1.36
11	Woollahra	53,095	NSW	1.36
12	Torres	3,810	QLD	1.31
13	Yarra	69,749	VIC	1.30
14	Manly	38,987	NSW	0.92
15	Byron	30,724	NSW	0.88
16	Pingelly	1,149	WA	0.87
17	Stonnington	90,903	VIC	0.84
18	Break O'Day	6,036	TAS	0.83
19	Nannup	1,213	WA	0.82
20	Bega Valley	31,955	NSW	0.81
21	Campbelltown	47,167	SA	0.81
22	Melbourne	61,670	VIC	0.79
23	Fremantle	26,266	WA	0.76
24	Newcastle	145,633	NSW	0.74
25	Mosman	28,420	NSW	0.74
26	Herberton	5,508	QLD	0.73
27	Pittwater	56,954	NSW	0.72
28	Cootamundra	7,596	NSW	0.66
29	Whitsunday	16,874	QLD	0.65
30	Lismore	43,229	NSW	0.65
31	Baulkham Hills	157,854	NSW	0.63
32	Unley	36,442	SA	0.60
33	Ashfield	40,258	NSW	0.60
34	Randwick	126,431	NSW	0.59
35	Ryde	99,662	NSW	0.56
36	Norwood Payneham	34,054	SA	0.56
37	Lane Cove	32,341	NSW	0.56
38	Wagin	1,816	WA	0.55
39	Boroondara	158,290	VIC	0.55
40	Subiaco	16,399	WA	0.55
41	Booringa	1,861	QLD	0.54
42	Rockdale	95,036	NSW	0.53
43	Victoria Park	28,632	WA	0.52
44	Cleve	1,909	SA	0.52
45	Gold Coast	469,214	QLD	0.52
46	Peterborough	1,917	SA	0.52
47	Glen Eira	122,901	VIC	0.52
48	Blue Mountains	77,011	NSW	0.52
49	Darebin	127,521	VIC	0.52
50	Burwood	31,085	NSW	0.51
51	Crow's Nest	11,677	QLD	0.51
52	Botany Bay	37,192	NSW	0.51
53	Sydney	146,297	NSW	0.51
54	Bridgetown-	3,972	WA	0.50
55	Longreach	4,009	QLD	0.50
56	Mitcham	62,460	SA	0.50
57	Brisbane	957,010	QLD	0.49
58	Berrigan	8,188	NSW	0.49
59	Bayswater	56,565	WA	0.48
60	Brewarrina	2,143	NSW	0.47
61	Hurstville	75,640	NSW	0.46
62	Nillumbik	60,623	VIC	0.46
63	Warringah	138,646	NSW	0.46
64	Maroochy	141,069	QLD	0.46
65	Cairns	125,132	QLD	0.46
66	Wingecarribee	44,311	NSW	0.45
67	Maribyrnong	62,054	VIC	0.45
68	Moonee Valley	109,165	VIC	0.45
69	Bayside	89,232	VIC	0.45
70	Bauhinia	2,240	QLD	0.45
71	Cambridge	24,656	WA	0.45
72	Ku-ring-gai	108,830	NSW	0.43
73	Hunter's Hill	13,911	NSW	0.43
74	Gilgandra	4,682	NSW	0.43
75	Sutherland Shire	214,784	NSW	0.42
76	Alice Springs	26,058	NT	0.42
77	Belmont	30,960	WA	0.42
78	Logan	173,331	QLD	0.42
79	Central Darling	2,418	NSW	0.41
80	Lake Macquarie	189,196	NSW	0.41
81	Willoughby	63,905	NSW	0.41
82	Monto	2,473	QLD	0.40
83	Tamworth	37,272	NSW	0.40
84	Moreland	135,843	VIC	0.40
85	South Perth	38,413	WA	0.39
86	Hornsby	156,929	NSW	0.39
87	Stirling	181,079	WA	0.38
88	Mirani	5,299	QLD	0.38
89	Redland	127,777	QLD	0.37
90	Armidale Dumaresq	24,596	NSW	0.37
91	Prospect	19,265	SA	0.36
92	West Torrens	52,680	SA	0.36
93	Whitehorse	144,935	VIC	0.36
94	Bassendean	14,078	WA	0.36
95	Strathfield	31,129	NSW	0.35
96	Hobart	48,533	TAS	0.35
97	Kiama	20,176	NSW	0.35
98	Yarra Ranges	143,228	VIC	0.34
99	Banyule	117,323	VIC	0.34
100	Gayndah	2,939	QLD	0.34

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

Figure 2.6 Density by Segment

	Other Creative Industries			Firms per	Publishing			Firms per	Software, Web and IMM Devel			Firms per	Total			Firms per
Rank	Area	Population	State	1000 residents	Area	Population	State	1000 residents	Area	Population	State	1000 residents	Area	Population	State	1000 residents
1	Leichhardt	51,430	NSW	3.60	Perth	10,469	WA	1.91	Perth	10,469	WA	30.95	Perth	10,469	WA	69.73
2	Woollahra	53,095	NSW	3.56	North Sydney	60,789	NSW	1.51	North Sydney	60,789	NSW	20.28	North Sydney	60,789	NSW	48.36
3	Yarra	69,749	VIC	3.37	Adelaide	14,361	SA	1.39	Adelaide	14,361	SA	15.60	Adelaide	14,361	SA	47.42
4	Diamantina	306	QLD	3.27	Mount Magnet	759	WA	1.32	Melbourne	61,670	VIC	13.09	Port Phillip	82,857	VIC	32.78
5	Adelaide	14,361	SA	2.92	Melbourne	61,670	VIC	1.25	Port Phillip	82,857	VIC	10.68	Melbourne	61,670	VIC	32.61
6	Ilfracombe	367	QLD	2.72	Leichhardt	51,430	NSW	0.99	Leichhardt	51,430	NSW	9.02	Leichhardt	51,430	NSW	32.34
7	Port Phillip	82,857	VIC	2.70	Cranbrook	1,057	WA	0.95	Willoughby	63,905	NSW	7.92	Woollahra	53,095	NSW	28.46
8	Waverley	62,096	NSW	2.54	Kellerberrin	1,153	WA	0.87	Ku-ring-gai	108,830	NSW	7.87	Yarra	69,749	VIC	25.75
9	Marrickville	75,870	NSW	2.52	Yarra	69,749	VIC	0.86	Sydney	146,297	NSW	7.53	Waverley	62,096	NSW	19.74
10	Perth	10,469	WA	2.39	Corrigin	1,184	WA	0.84	Woollahra	53,095	NSW	7.33	Mosman	28,420	NSW	19.21
11	Tammin	439	WA	2.28	Port Phillip	82,857	VIC	0.83	Manly	38,987	NSW	7.31	Subiaco	16,399	WA	19.15
12	North Sydney	60,789	NSW	2.20	Eacham	6,405	QLD	0.78	Yarra	69,749	VIC	6.74	Pittwater	56,954	NSW	19.02
13	Torres	3,810	QLD	2.10	Sydney	146,297	NSW	0.71	Mosman	28,420	NSW	6.72	Manly	38,987	NSW	18.88
14	Fremantle	26,266	WA	1.98	Toodyay	4,237	WA	0.71	Lane Cove	32,341	NSW	6.71	Stonnington	90,903	VIC	17.98
15	Queenscliffe	3,212	VIC	1.87	Gnowangerup	1,434	WA	0.70	Boroondara	158,290	VIC	6.29	Willoughby	63,905	NSW	17.75
16	Pittwater	56,954	NSW	1.76	Woollahra	53,095	NSW	0.68	Baulkham Hills	157,854	NSW	6.09	Marrickville	75,870	NSW	17.00
17	Mosman	28,420	NSW	1.69	Hindmarsh	6,407	VIC	0.62	Stonnington	90,903	VIC	5.85	Sydney	146,297	NSW	16.89
18	Stonnington	90,903	VIC	1.64	Queenscliffe	3,212	VIC	0.62	Ryde	99,662	NSW	5.83	Ku-ring-gai	108,830	NSW	14.31
19	Melbourne	61,670	VIC	1.62	Manly	38,987	NSW	0.62	Hornsby	156,929	NSW	5.68	Cambridge	24,656	WA	13.99
20	East Fremantle	6,885	WA	1.60	King Island	1,632	TAS	0.61	Pittwater	56,954	NSW	5.58	Norwood Payneham	34,054	SA	13.95
21	Claremont	9,142	WA	1.53	Yilgarn	1,692	WA	0.59	Glen Eira	122,901	VIC	5.29	Lane Cove	32,341	NSW	13.85
22	Alice Springs	26,058	NT	1.50	Pittwater	56,954	NSW	0.56	Bayside	89,232	VIC	5.24	Boroondara	158,290	VIC	13.54
23	Mount Alexander	17,242	VIC	1.45	Herberton	5,508	QLD	0.54	Waverley	62,096	NSW	5.23	Bega Valley	31,955	NSW	12.99
24	Carnamah	710	WA	1.41	Waverley	62,096	NSW	0.53	Subiaco	16,399	WA	5.12	Unley	36,442	SA	12.95
25	Winton	1,543	QLD	1.30	Cambridge	24,656	WA	0.53	Whitehorse	144,935	VIC	4.97	Claremont	9,142	WA	12.80
26	Walkerville	7,093	SA	1.27	Torres	3,810	QLD	0.52	Burwood	31,085	NSW	4.95	Cottesloe	7,617	WA	12.21
27	Bellingen	12,720	NSW	1.26	Coolah	3,877	NSW	0.52	Cambridge	24,656	WA	4.83	Bayside	89,232	VIC	12.08
28	Cook	4,081	QLD	1.23	Bingara	2,029	NSW	0.49	Marrickville	75,870	NSW	4.78	Glen Eira	122,901	VIC	11.33
29	Blue Mountains	77,011	NSW	1.22	Stonnington	90,903	VIC	0.48	Warringah	138,646	NSW	4.77	Baulkham Hills	157,854	NSW	11.22
30	Cambridge	24,656	WA	1.22	Bega Valley	31,955	NSW	0.47	Bega Valley	31,955	NSW	4.63	Fremantle	26,266	WA	10.77
31	Manly	38,987	NSW	1.15	Brewarrina	2,143	NSW	0.47	Norwood Payneham	34,054	SA	4.58	Ryde	99,662	NSW	10.74
32	Williams	873	WA	1.15	Murrurundi	2,165	NSW	0.46	South Perth	38,413	WA	4.50	Warringah	138,646	NSW	10.54
33	Byron	30,724	NSW	1.11	Barraba	2,185	NSW	0.46	Strathfield	31,129	NSW	4.37	Cook	4,081	QLD	10.54
34	Boroondara	158,290	VIC	1.10	Mosman	28,420	NSW	0.46	Manningham	113,920	VIC	4.34	Torres	3,810	QLD	10.50
35	Hobart	48,533	TAS	1.07	Kojonup	2,190	WA	0.46	Monash	161,544	VIC	4.28	Hornsby	156,929	NSW	9.73
36	Norwood Payneham	34,054	SA	1.06	Southern Mallee	2,208	SA	0.45	Unley	36,442	SA	4.25	Burwood	31,085	NSW	9.68
37	Cottesloe	7,617	WA	1.05	Tasman	2,222	TAS	0.45	Hurstville	75,640	NSW	4.16	Randwick	126,431	NSW	9.61
38	Cleve	1,909	SA	1.05	Boroondara	158,290	VIC	0.43	Unincorporated ACT	324,021	ACT	4.16	Hobart	48,533	TAS	9.54
39	Bendemere	994	QLD	1.01	Ku-ring-gai	108,830	NSW	0.42	Randwick	126,431	NSW	3.93	Vincent	26,632	WA	9.46
40	Kondinin	998	WA	1.00	Holbrook	2,470	NSW	0.40	Nedlands	21,964	WA	3.87	Whitehorse	144,935	VIC	9.41
41	Bega Valley	31,955	NSW	1.00	Hepburn	14,828	VIC	0.40	Brisbane	957,010	QLD	3.47	South Perth	38,413	WA	8.77
42	Randwick	126,431	NSW	0.99	Marrickville	75,870	NSW	0.40	Ashfield	40,258	NSW	3.35	Hunter's Hill	13,911	NSW	8.77
43	Macedon Ranges	40,004	VIC	0.97	Bombala	2,545	NSW	0.39	Claremont	9,142	WA	3.28	Queenscliffe	3,212	VIC	8.72
44	Mullewa	1,059	WA	0.94	Wyndham-East	7,678	WA	0.39	Walkerville	7,093	SA	3.24	Byron	30,724	NSW	8.66
45	Hepburn	14,828	VIC	0.94	Byron	30,724	NSW	0.39	Moonee Valley	109,165	VIC	3.21	Westonia	238	WA	8.40
46	Bruce Rock	1,061	WA	0.94	Denmark	5,128	WA	0.39	Mosman Park	8,594	WA	3.14	Manningham	113,920	VIC	8.23
47	Mosman Park	8,594	WA	0.93	Victoria Park	28,632	WA	0.38	Campbelltown	47,167	SA	3.14	Brisbane	957,010	QLD	8.21
48	Ashfield	40,258	NSW	0.89	Barunga West	2,605	SA	0.38	Hobart	48,533	TAS	3.07	Ilfracombe	367	QLD	8.17
49	Augusta-Margaret	11,380	WA	0.88	Mirani	5,299	QLD	0.38	Knox	150,044	VIC	2.99	Hurstville	75,640	NSW	8.17
50	Unley	36,442	SA	0.88	Yarriambiack	8,014	VIC	0.37	Vincent	26,632	WA	2.93	Campbelltown	47,167	SA	8.10
51	Yass Valley	12,549	NSW	0.88	Bayside	89,232	VIC	0.37	Stirling	181,079	WA	2.86	Ashfield	40,258	NSW	8.05
52	Elliston	1,143	SA	0.87	Unley	36,442	SA	0.36	Banyule	117,323	VIC	2.75	Mosman Park	8,594	WA	7.91
53	Subiaco	16,399	WA	0.85	Strathfield	31,129	NSW	0.35	Canning	79,600	WA	2.74	East Fremantle	6,885	WA	7.70
54	Willoughby	63,905	NSW	0.85	Hobart	48,533	TAS	0.35	Burnside	42,925	SA	2.73	Nedlands	21,964	WA	7.69
55	Dungog	8,379	NSW	0.84	Kiama	20,176	NSW	0.35	Nillumbik	60,623	VIC	2.71	Strathfield	31,129	NSW	7.68
56	Darebin	127,521	VIC	0.83	Fremantle	26,266	WA	0.34	Kingston	136,684	VIC	2.66	Walkerville	7,093	SA	7.47
57	Ku-ring-gai	108,830	NSW	0.83	Tennant Creek	2,946	NT	0.34	Crow's Nest	11,677	QLD	2.65	Moonee Valley	109,165	VIC	7.45
58	Nannup	1,213	WA	0.82	Noosa	47,606	QLD	0.34	Victoria Park	28,632	WA	2.65	Unincorporated ACT	324,021	ACT	7.44
59	Bayside	89,232	VIC	0.82	Ryde	99,662	NSW	0.33	Parramatta	151,076	NSW	2.61	Monash	161,544	VIC	7.43
60	Boonah	8,567	QLD	0.82	Yallaroi	3,137	NSW	0.32	Rockdale	95,036	NSW	2.58	Blue Mountains	77,011	NSW	7.43
61	Holbrook	2,470	NSW	0.81	Northam	6,290	WA	0.32	Melville	97,541	WA	2.53	Stirling	181,079	WA	7.09
62	Glen Eira	122,901	VIC	0.81	Manilla	3,254	NSW	0.31	Hunter's Hill	13,911	NSW	2.52	Burnside	42,925	SA	6.92
63	Rylstone	3,821	NSW	0.79	Cooma-Monaro	9,773	NSW	0.31	Sutherland Shire	214,784	NSW	2.50	Nillumbik	60,623	VIC	6.75
64	Moreland	135,843	VIC	0.76	Walcha	3,261	NSW	0.31	Mitcham	62,460	SA	2.50	Herberton	5,508	QLD	6.72
65	Burnside	42,925	SA	0.75	Subiaco	16,399	WA	0.30	Maroondah	100,943	VIC	2.50	Gold Coast	469,214	QLD	6.67
66	Burwood	31,085	NSW	0.74	Warren	3,282	NSW	0.30	Cottesloe	7,617	WA	2.49	Macedon Ranges	40,004	VIC	6.62
67	Coorow	1,358	WA	0.74	Carrathool	3,308	NSW	0.30	Blue Mountains	77,011	NSW	2.48	Victoria Park	28,632	WA	6.60
68	Strathbogie	9,616	VIC	0.73	York	3,323	WA	0.30	Macedon Ranges	40,004	VIC	2.47	Mitcham	62,460	SA	6.50
69	Kyogle	9,628	NSW	0.73	Willoughby	63,905	NSW	0.30	Gosford	162,841	NSW	2.35	Darebin	127,521	VIC	6.27
70	Herberton	5,508	QLD	0.73	Dalby	10,199	QLD	0.29	Joondalup	158,216	WA	2.33	Wingecarribee	44,311	NSW	6.18
71	Maribyrnong	62,054	VIC	0.73	Norwood Payneham	34,054	SA	0.29	Kulin	879	WA	2.28	Banyule	117,323	VIC	6.17
72	Scone	9,819	NSW	0.71	Glen Eira	122,901	VIC	0.29	Botany Bay	37,192	NSW	2.23	Prospect	19,265	SA	6.13
73	Adelaide Hills	38,987	SA	0.69	East Fremantle	6,885	WA	0.29	Yarra Ranges	143,228	VIC	2.23	Rockdale	95,036	NSW	6.07
74	Wingecarribee	44,311	NSW	0.68	Narromine	7,020	NSW	0.28	Pine Rivers	139,228	QLD	2.21	Sutherland Shire	214,784	NSW	5.98
75	Vincent	26,632	WA	0.68	Buloke	7,058	VIC	0.28	East Fremantle	6,885	WA	2.18	Canning	79,600	WA	5.97
76	Prospect	19,265	SA	0.67	Hay	3,549	NSW	0.28	Gold Coast	469,214	QLD	2.14	Kingston	136,684	VIC	5.94
77	Wyndham-East	7,678	WA	0.65	Broome	14,273	WA	0.28	Holdfast Bay	34,073	SA	2.14	Adelaide Hills	38,987	SA	5.93
78	Lane Cove	32,341	NSW	0.65	Lane Cove	32,341	NSW	0.28	Holroyd	91,211	NSW	2.12	Gosford	162,841	NSW	5.87
79	Hunter's Hill	13,911	NSW	0.65	Hurstville	75,640	NSW	0.28	Cleve	1,909	SA	2.10	Knox	150,044	VIC	5.73
80	Northern Areas	4,652	SA	0.64	Roxby Downs	3,621	SA	0.28	Burke	487	QLD	2.05	Moreland	135,843	VIC	5.72
81	Unincorporated ACT	324,021	ACT	0.64	Macedon Ranges	40,004	VIC	0.27	Darebin	127,521	VIC	2.03	Botany Bay	37,192	NSW	5.59
82	Nedlands	21,964	WA	0.64	Lachlan	7,431	NSW	0.27	Adelaide Hills	38,987	SA	2.03	Maroondah	100,943	VIC	5.58
83	Darwin	69,354	NT	0.63	Gundagai	3,763	NSW	0.27	Yass Valley	12,549	NSW	1.99	Maribyrnong	62,054	VIC	5.56
84	Nillumbik	60,623	VIC	0.63	Cootamundra	7,596	NSW	0.26	Moreland	135,843	VIC	1.98	Alice Springs	26,058	NT	5.45
85	Sorell	11,304	TAS	0.62	Burwood	31,085	NSW	0.26	Auburn	62,797	NSW	1.96	Augusta-Margaret	11,380	WA	5.36
86	Warren	3,282	NSW	0.61	Crow's Nest	11,677	QLD	0.26	Fremantle	26,266	WA	1.94	Melville	97,541	WA	5.35
87	Noosa	47,606	QLD	0.61	Bourke	3,924	NSW	0.25	Prospect	19,265	SA	1.92	Maroochy	141,069	QLD	5.32
88	Lismore	43,229	NSW	0.60	Kempsey	28,114	NSW	0.25	Redland	127,777	QLD	1.85	Crow's Nest	11,677	QLD	5.31
89	Coonabarabran	6,673	NSW	0.60	Wingecarribee	44,311	NSW	0.25	Wingecarribee	44,311	NSW	1.83	Yarra Ranges	143,228	VIC	5.28
90	Warringah	138,646	NSW	0.59	Cook	4,081	QLD	0.25	Byron	30,724	NSW	1.82	Mount Alexander	17,242	VIC	5.28
91	Yilgarn	1,692	WA	0.59	Armidale Dumaresq	24,596	NSW	0.24	Bayswater	56,565	WA	1.82	Bellingen	12,720	NSW	5.27
92	Denmark	5,128	WA	0.59	Whitehorse	144,935	VIC	0.24	Herberton	5,508	QLD	1.82	Noosa	47,606	QLD	5.25
93	Flinders Ranges	1,716	SA	0.58	Richmond Valley	20,838	NSW	0.24	Hobsons Bay	83,199	VIC	1.78	Bayswater	56,565	WA	5.20
94	Kilcoy	3,467	QLD	0.58	Warringah	138,646	NSW	0.24	Snowy River	7,322	NSW	1.78	Whitsunday	16,874	QLD	5.16
95	Murrindindi	13,908	VIC	0.58	Randwick	126,431	NSW	0.24	Maribyrnong	62,054	VIC	1.77	Darwin	69,354	NT	5.13
96	Moonee Valley	109,165	VIC	0.57	Katherine	8,437	NT	0.24	Hawkesbury	63,598	NSW	1.76	Broome	14,273	WA	5.11
97	Brisbane	957,010	QLD	0.56	Northern Grampians	12,749	VIC	0.24	Kalamunda	50,202	WA	1.69	Bassendean	14,078	WA	5.11
98	Tatiara	7,104	SA	0.56	Halls Creek	4,274	WA	0.23	Belmont	30,960	WA	1.68	Joondalup	158,216	WA	5.11
99	Mornington Peninsula	138,773	VIC	0.53	Boonah	8,567	QLD	0.23	Canterbury	135,048	NSW	1.67	Parramatta	151,076	NSW	5.01
100	Banyule	117,323	VIC	0.52	Mosman Park	8,594	WA	0.23	Swan	91,697	WA	1.67	Pine Rivers	139,228	QLD	5.00

Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

Across all seven market segments, New South Wales consistently had more entries than any other State in the top 100 LGAs by density of firms per 1 000 residents (See Figure 2.7 below). Western Australia was also heavily represented, vying with Victoria for the second highest number of top one hundred entries in most segments, and coming second in four. South Australia and Queensland had similar numbers of LGA's in the top one hundred, except for in Music and Performing Arts where Queensland had 17 top one hundred entries against South Australia's 9 – as noted earlier Queensland does well in this segment.

Figure 2.7 LGAs in the top 100 by firms per person

	NSW	VIC	QLD	SA	WA	TAS	ACT	NT
Advertising and Marketing	35	18	13	11	21	2	0	0
Architecture, Design, Visual Arts	32	23	11	9	20	2	1	2
Film, TV and Radio	34	16	9	13	23	3	0	2
Music and Performing Arts	41	15	17	9	14	2	0	2
Other Creative Industries	30	20	11	12	22	2	1	2
Publishing	44	15	9	6	21	3	0	2
Software, Web and IMM Devel.	37	22	7	11	21	1	1	0
Overall	32	23	11	9	21	1	1	2

Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

Firms in the creative industries often locate together in the same LGA. In Figure 2.8 the correlation between the densities of firms in two segments across LGAs are given in a matrix. Although all the correlations are above 0.9, meaning they generally move together, some distinctions can be made. Notably, Software, Web and IMM Development firms have a relatively low correlation to Music and Performing Arts and Other Creative Industries (0.925 and 0.930 respectively). This is perhaps unsurprising, as there would tend to be fewer overlaps in staffing requirements and product than between, for example, Film, TV and Radio and Advertising and Marketing. Indeed, these two segments have a relatively strong correlation of 0.991.

Figure 2.8 Correlation Matrix of Creative Industries

	Advertising and Marketing	Architecture, Design, Visual Arts	Film, TV and Radio	Music and Performing Arts	Other Creative Industries	Publishing	Software, Web and IMM Devel.
Advertising and Marketing	1.000						
Architecture, Design, Visual Arts	0.980	1.000					
Film, TV and Radio	0.991	0.973	1.000				
Music and Performing Arts	0.938	0.945	0.938	1.000			
Other Creative Industries	0.946	0.950	0.951	0.993	1.000		
Publishing	0.961	0.967	0.958	0.991	0.989	1.000	
Software, Web and IMM Devel.	0.980	0.988	0.966	0.925	0.930	0.958	1.000

Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

2.3 Density: Firms per Square kilometre

The *density* of the creative industries can also be measured physically by the number of creative industry firms per square kilometre. To do this, spatial data has been taken from the Australian Bureau of Statistics National Regional Profiles catalogue number 1379.0.55.01. Figure 2.9 lists the 100 LGA's with the highest physical density of firms in the creative industries.

Figure 2.9 Creative Industry Firms per km^2

Area	State	Population	Land Area in km^2	Rank	Overall	Advertising and Marketing	Architecture, Design and Visual Arts	Film, TV and Radio	Music and Performing Arts	Other Creative Industries	Publishing	Software, Web and IMM Dev.
North Sydney	NSW	60,789	10.5	1	280.00	41.43	55.81	33.52	10.29	12.76	8.76	117.43
Sydney	NSW	146,297	12.4	2	199.27	30.81	44.11	15.97	5.97	5.24	8.39	88.79
Leichhardt	NSW	51,430	10.6	3	156.89	11.89	45.66	23.58	9.72	17.45	4.81	43.77
Port Phillip	VIC	82,857	20.6	4	131.84	18.83	32.28	16.36	7.18	10.87	3.35	42.96
Waverley	NSW	62,096	9.3	5	131.83	11.72	33.12	22.26	9.25	16.99	3.55	34.95
Woollahra	NSW	53,095	12.3	6	122.85	15.45	32.03	19.59	5.85	15.37	2.93	31.63
Yarra	VIC	69,749	19.5	7	92.10	8.15	31.79	8.26	4.67	12.05	3.08	24.10
Marrickville	NSW	75,870	16.5	8	78.18	4.30	23.15	8.67	6.67	11.58	1.82	22.00
Stonnington	VIC	90,903	25.6	9	63.83	8.48	18.71	5.35	2.97	5.82	1.72	20.78
Mosman	NSW	28,420	8.7	10	62.76	10.34	15.40	5.63	2.41	5.52	1.49	21.95
Perth	WA	10,469	12.7	11	57.48	6.54	18.27	1.89	1.73	1.97	1.57	25.51
Melbourne	VIC	61,670	36.2	12	55.55	5.86	16.91	4.25	1.35	2.76	2.13	22.29
Manly	NSW	38,987	14.5	13	50.76	5.52	13.38	4.97	2.48	3.10	1.66	19.66
Willoughby	NSW	63,905	22.6	14	50.18	4.96	11.95	6.50	1.15	2.39	0.84	22.39
Subiaco	WA	16,399	7.0	15	44.86	4.43	21.71	2.71	1.29	2.00	0.71	12.00
Adelaide	SA	14,361	15.6	16	43.65	5.96	14.04	4.04	1.28	2.69	1.28	14.36
Lane Cove	NSW	32,341	10.6	17	42.26	4.91	8.77	3.58	1.70	1.98	0.85	20.47
Burwood	NSW	31,085	7.2	18	41.81	3.47	8.06	2.36	2.22	3.19	1.11	21.39
Ashfield	NSW	40,258	8.3	19	39.04	2.17	9.76	3.13	2.89	4.34	0.48	16.27
Glen Eira	VIC	122,901	38.7	20	35.97	3.20	8.60	2.22	1.65	2.56	0.93	16.80
Boroondara	VIC	158,290	60.0	21	35.72	3.70	8.18	1.75	1.45	2.90	1.13	16.60
Randwick	NSW	126,431	36.4	22	33.38	2.80	7.50	3.10	2.06	3.43	0.82	13.65
Unley	SA	36,442	14.3	23	33.01	4.27	10.56	2.66	1.54	2.24	0.91	10.84
Norwood Payneham S	SA	34,054	15.1	24	31.46	3.91	9.60	3.31	1.26	2.38	0.66	10.33
Bayside	VIC	89,232	37.0	25	29.14	3.59	7.24	1.70	1.08	1.97	0.89	12.65
Hurstville	NSW	75,640	22.8	26	27.11	2.11	6.89	0.57	1.54	1.27	0.92	13.82
Ryde	NSW	99,662	40.5	27	26.42	1.88	4.99	1.75	1.38	1.26	0.81	14.35
Vincent	WA	26,632	10.4	28	24.23	2.88	9.42	1.63	0.58	1.73	0.48	7.50
Claremont	WA	9,142	4.9	29	23.88	2.86	9.80	1.43	0.41	2.86	0.41	6.12
Cottesloe	WA	7,617	3.9	30	23.85	2.05	12.56	1.79	0.26	2.05	0.26	4.87
Whitehorse	VIC	144,935	64.3	31	21.21	1.46	5.13	0.96	0.81	1.10	0.54	11.20
Hunter's Hill	NSW	13,911	5.8	32	21.03	2.93	6.38	2.59	1.03	1.55	0.52	6.03
Rockdale	NSW	95,036	28.1	33	20.53	2.06	5.48	0.93	1.78	1.14	0.43	8.72
Moonee Valley	VIC	109,165	44.2	34	18.39	1.56	5.38	0.75	1.11	1.40	0.27	7.92
Ku-ring-gai	NSW	108,830	85.5	35	18.21	1.43	3.39	1.24	0.55	1.05	0.54	10.01
Strathfield	NSW	31,129	13.9	36	17.19	1.73	2.73	0.72	0.79	0.65	0.79	9.78
East Fremantle	WA	6,885	3.1	37	17.10	0.65	5.16	1.61	0.65	3.55	0.65	4.84
South Perth	WA	38,413	19.8	38	17.02	1.06	4.65	0.81	0.76	0.61	0.40	8.74
Canterbury	NSW	135,048	33.6	39	16.10	1.58	3.87	1.04	1.10	1.22	0.57	6.73
Mosman Park	WA	8,594	4.3	40	15.81	1.86	4.19	1.16	0.00	1.86	0.47	6.28
Cambridge	WA	24,656	22.0	41	15.68	1.55	5.32	0.95	0.50	1.36	0.59	5.41
Campbelltown	SA	47,167	24.4	42	15.66	1.64	4.59	0.70	1.56	0.86	0.25	6.07
Moreland	VIC	135,843	50.9	43	15.27	0.88	4.36	1.26	1.06	2.02	0.39	5.28
Walkerville	SA	7,093	3.5	44	15.14	1.43	2.86	1.14	0.57	2.57	0.00	6.57
Prospect	SA	19,265	7.8	45	15.13	1.79	5.13	0.64	0.90	1.67	0.26	4.74
Darebin	VIC	127,521	53.4	46	14.96	1.03	4.72	0.81	1.24	1.99	0.34	4.85
Fremantle	WA	26,266	19.0	47	14.89	1.11	5.79	1.05	1.05	2.74	0.47	2.68
Monash	VIC	161,544	81.5	48	14.74	1.19	3.08	0.48	0.45	0.72	0.33	8.48
Parramatta	NSW	151,076	61.0	49	12.41	1.33	2.87	0.41	0.61	0.57	0.16	6.46
Stirling	WA	181,079	105.1	50	12.21	1.12	3.78	0.57	0.66	0.75	0.40	4.93
Holdfast Bay	SA	34,073	13.8	51	11.96	1.16	2.83	0.65	0.51	1.23	0.29	5.29
Pittwater	NSW	56,954	90.6	52	11.95	1.38	3.54	1.61	0.45	1.10	0.35	3.51
Banyule	VIC	117,323	62.5	53	11.58	0.85	3.36	0.37	0.64	0.98	0.22	5.17
Maribyrnong	VIC	62,054	31.2	54	11.06	0.90	2.92	0.93	0.90	1.44	0.45	3.53
Burnside	SA	42,925	27.5	55	10.80	1.13	2.91	0.58	0.47	1.16	0.29	4.25
Victoria Park	WA	28,632	18.0	56	10.50	0.44	3.39	0.61	0.83	0.39	0.61	4.22
Kogarah	NSW	55,012	15.6	57	9.94	0.77	2.05	0.51	0.38	0.71	0.26	5.26
Melville	WA	97,541	52.6	58	9.92	0.86	2.74	0.29	0.29	0.76	0.30	4.70
Warringah	NSW	138,646	149.6	59	9.77	1.10	2.16	0.90	0.43	0.55	0.22	4.42
Botany Bay	NSW	37,192	22.1	60	9.41	1.13	2.13	0.54	0.86	0.77	0.23	3.76
Maroondah	VIC	100,943	61.4	61	9.17	0.99	2.65	0.31	0.39	0.49	0.23	4.10
Holroyd	NSW	91,211	40.3	62	9.16	0.62	2.11	0.42	0.55	0.52	0.15	4.79
Bayswater	WA	56,565	32.8	63	8.96	0.85	2.99	0.67	0.82	0.27	0.21	3.14
Kingston	VIC	136,684	91.3	64	8.89	0.94	2.67	0.35	0.43	0.39	0.12	3.99
Nedlands	WA	21,964	20.0	65	8.45	0.40	2.35	0.20	0.30	0.70	0.25	4.25
Manningham	VIC	113,920	113.5	66	8.26	0.74	1.83	0.35	0.29	0.46	0.23	4.35
Joondalup	WA	158,216	98.9	67	8.18	0.77	2.46	0.37	0.34	0.32	0.19	3.72
Charles Sturt	SA	103,553	54.8	68	7.86	0.82	2.26	0.49	0.58	0.58	0.27	2.85
Auburn	NSW	62,797	32.4	69	7.59	0.93	1.57	0.19	0.28	0.52	0.31	3.80
Knox	VIC	150,044	113.8	70	7.56	0.72	1.99	0.21	0.26	0.30	0.13	3.94
Bankstown	NSW	175,428	76.8	71	7.55	0.82	1.99	0.31	0.46	0.35	0.21	3.41
Canning	WA	79,600	64.8	72	7.33	0.82	2.07	0.28	0.26	0.45	0.09	3.36
Bassendean	WA	14,078	10.4	73	6.92	0.87	1.92	0.77	0.48	0.48	0.29	2.12
Hobsons Bay	VIC	83,199	64.2	74	6.32	0.45	2.15	0.50	0.28	0.50	0.14	2.31
Hobart	TAS	48,533	77.8	75	5.95	0.55	2.08	0.30	0.22	0.67	0.22	1.92
Brisbane	QLD	957,010	1326.8	76	5.92	0.64	1.58	0.31	0.35	0.41	0.13	2.50
Mitcham	SA	62,460	75.6	77	5.37	0.45	1.56	0.29	0.41	0.42	0.17	2.06
West Torrens	SA	52,680	37.0	78	5.35	0.57	1.51	0.22	0.51	0.51	0.14	1.89
Redcliffe	QLD	52,303	38.1	79	5.14	0.60	1.52	0.13	0.42	0.26	0.16	2.05
Marion	SA	80,512	55.5	80	4.81	0.41	1.32	0.22	0.23	0.43	0.16	2.04
Fairfield	NSW	187,683	101.7	81	4.50	0.44	1.32	0.18	0.21	0.25	0.15	1.97
Baulkham Hills	NSW	157,854	400.6	82	4.42	0.40	0.92	0.22	0.25	0.18	0.05	2.40
Blacktown	NSW	278,532	240.0	83	3.90	0.41	0.95	0.13	0.28	0.21	0.05	1.89
Sutherland Shire	NSW	214,784	334.5	84	3.84	0.40	1.10	0.16	0.27	0.24	0.06	1.61
Newcastle	NSW	145,633	182.6	85	3.82	0.33	1.20	0.19	0.59	0.30	0.07	1.14
Frankston	VIC	118,951	129.5	86	3.69	0.44	1.05	0.12	0.22	0.28	0.12	1.46
Brimbank	VIC	174,426	123.3	87	3.63	0.41	1.04	0.14	0.19	0.24	0.04	1.58
Hornsby	NSW	156,929	462.4	88	3.30	0.19	0.64	0.19	0.13	0.16	0.06	1.93
Queenscliffe	VIC	3,212	8.6	89	3.26	0.23	1.51	0.12	0.00	0.70	0.23	0.47
Greater Dandenong	VIC	127,230	129.5	90	3.24	0.34	1.10	0.06	0.12	0.12	0.04	1.46
Belmont	WA	30,960	39.8	91	3.19	0.25	0.88	0.08	0.33	0.28	0.08	1.31
Darwin	NT	69,354	112.0	92	3.18	0.23	1.08	0.21	0.21	0.39	0.07	0.99
Tea Tree Gully	SA	100,080	95.2	93	2.91	0.24	0.86	0.09	0.22	0.22	0.06	1.21
Port Adelaide Enfield	SA	103,830	91.7	94	2.89	0.19	0.80	0.17	0.12	0.23	0.08	1.31
Logan	QLD	173,331	251.4	95	2.79	0.37	0.80	0.08	0.29	0.18	0.05	1.03
Mount Gambier	SA	23,640	26.7	96	2.73	0.26	1.27	0.37	0.07	0.11	0.04	0.60
Toowoomba	QLD	94,043	116.5	97	2.33	0.28	0.74	0.16	0.15	0.13	0.05	0.81
Gold Coast	QLD	469,214	1406.5	98	2.22	0.38	0.62	0.15	0.17	0.13	0.06	0.72
Bunbury	WA	31,314	65.7	99	1.78	0.21	0.84	0.14	0.08	0.15	0.05	0.32
Cockburn	WA	74,606	167.5	100	1.64	0.10	0.47	0.06	0.12	0.13	0.02	0.74

Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

In the top 100 LGA's by physical density per km^2, New South Wales was the leading state with 34 entries (see figure 2.10). Indeed, the results were broadly similar to the breakdown of LGA's in the top 100 by firms per person, although here, Queensland has fewer top 100 LGA's and South Australia has more.

Figure 2.10 LGAs in the top 100 by km^2

	NSW	VIC	QLD	SA	WA	TAS	ACT	NT
Advertising and Marketing	34	24	5	15	20	1	0	1
Architecture, Design, Visual Arts	35	23	5	15	20	1	0	1
Film, TV and Radio	35	22	6	15	20	1	0	1
Music and Performing Arts	37	22	5	15	19	1	0	1
Other Creative Industries	34	22	6	14	22	1	0	1
Publishing	34	21	8	14	21	1	0	1
Software, Web and IMM Devel.	35	23	5	15	20	1	0	1
Overall	34	23	5	15	21	1	0	1

Figure 2.11 is a correlation matrix of firms in the creative industries by physical density per km^2. Correlations of the physical densities of firms are not as great as the correlations by firms per 1 000 residents given above, but they are still quite high. All correlations are over 0.85 except for some of those with Other Creative Industries. This means that where there is a high physical density of one creative industry segment, there is generally a high density of another sector as well. Software, Web and IMM Development and Advertising and Marketing had the highest correlation again (0.977), closely followed by Software, Web and IMM Development and Publishing (0.976).

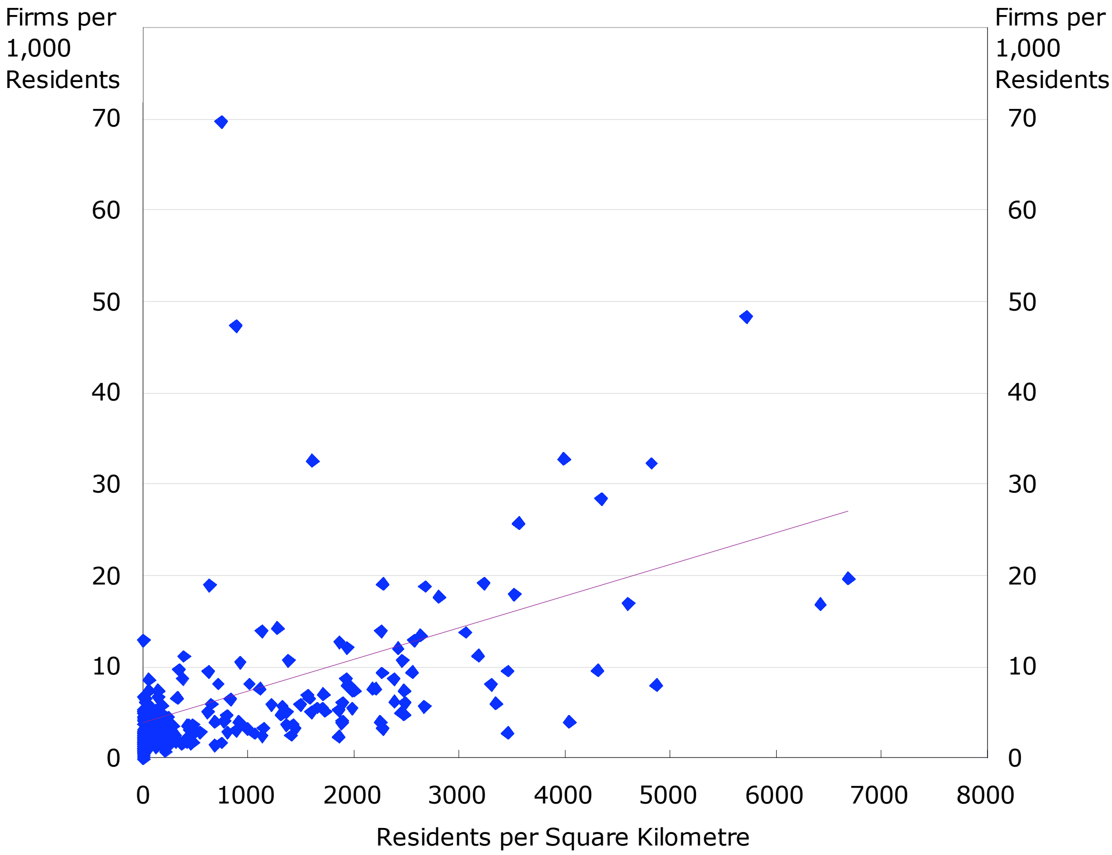
Figure 2.11 Correlation Matrix

	Advertising and Marketing	Architecture, Design, Visual Arts	Film, TV and Radio	Music and Performing Arts	Other Creative Industries	Publishing	Software, Web and IMM Devel.
Advertising and Marketing	1.000						
Architecture, Design, Visual Arts	0.918	1.000					
Film, TV and Radio	0.913	0.936	1.000				
Music and Performing Arts	0.857	0.947	0.954	1.000			
Other Creative Industries	0.757	0.911	0.914	0.954	1.000		
Publishing	0.969	0.942	0.919	0.894	0.798	1.000	
Software, Web and IMM Devel.	0.977	0.928	0.902	0.879	0.766	0.976	1.000

2.4 Population Density

Figure 2.12 below shows that as population density increases (per square kilometre), so does the density of creative industry firms (per 1 000 residents). This may be because the services provided by creative industries are often confined to local areas. That makes it more likely that those areas with relatively large, densely located, local populations will have greater clusters of creative industries. It also helps explain why so many of the LGA's with the highest densities of creative industry firms are located in the two most populous states, Victoria and New South Wales, as well as in capital cities. Of course, many firms provide services outside of their local area (software, publishing, etc.) so the density of firms will not be entirely driven by the size of the local market. Indeed, using a regression, population density only explains 29 per cent of variation in the density of firms per 1 000 residents (the estimated line is shown in purple). Still, the result confirms the notion that the local population does play a significant role.

Figure 2.12 The Effect of Population Density



Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

3 Dynamics

This section overviews the *growth* and *survival* rates of firms, the *timing* of firm exits from the industry and the amount of the *churn* as firms enter and exit the industry.

3.1 Growth

The compound annual growth rates (CAGR) of firms in the Creative Industries over five years from 2000 to 2005 are given in Figure 3.1.

Figure 3.1 Growth Rates in the Creative Industries

		Australia		NSW		VIC		QLD		WA		SA		TAS		ACT		NT	
Segments	Entity Type	Total	CAGR	Total	CAGR	Total	CAGR	Total	CAGR	Total	CAGR	Total	CAGR	Total	CAGR	Total	CAGR	Total	CAGR
Advertising and Marketing	Public Company	92	8.2%	36	8.4%	21	7.0%	15	6.4%	17	13.6%	1	0.0%	1	0.0%	1	0.0%	0	0.0%
	Private Company	5,488	12.5%	2,582	12.1%	1,450	11.7%	858	14.6%	260	15.6%	222	11.1%	51	12.0%	49	17.4%	16	14.9%
	Partnership	1,006	17.7%	310	19.4%	214	18.7%	262	15.4%	115	19.1%	71	15.9%	18	12.5%	12	19.1%	4	32.0%
	Sole Trader	3,650	17.9%	1,376	18.1%	885	19.1%	754	18.1%	299	17.1%	207	14.5%	58	13.3%	46	14.9%	25	17.8%
	Other	1,379	11.6%	298	11.6%	495	10.8%	295	15.6%	157	9.9%	106	9.3%	13	5.4%	13	10.2%	2	14.9%
Advertising and Marketing Total		11,615	14.3%	4,602	14.0%	3,065	13.8%	2,184	15.9%	848	15.3%	607	12.4%	141	11.7%	121	15.4%	47	17.5%
Architecture, Design & Visual Arts	Public Company	72	12.5%	29	11.3%	20	17.3%	15	13.4%	4	5.9%	0	0.0%	2	0.0%	1	0.0%	1	0.0%
	Private Company	10,064	6.6%	4,434	6.4%	2,792	6.2%	1,505	8.1%	603	6.7%	420	6.1%	105	7.0%	155	8.1%	50	4.6%
	Partnership	3,807	8.2%	1,231	9.8%	814	8.2%	724	8.1%	552	6.1%	327	7.5%	82	4.4%	61	7.2%	16	7.8%
	Sole Trader	14,735	10.3%	5,397	11.0%	3,966	9.3%	2,464	12.1%	1,385	8.8%	902	9.3%	254	6.8%	251	8.5%	116	11.6%
	Other	3,294	6.8%	562	6.7%	1,227	6.2%	658	9.0%	536	6.2%	213	6.2%	41	3.2%	38	6.3%	18	6.7%
Total		31,972	8.4%	11,653	8.8%	8,819	7.8%	5,366	9.9%	3,080	7.4%	1,862	7.8%	484	6.0%	506	8.1%	201	8.8%
Film, TV and Radio	Public Company	86	7.1%	32	6.8%	18	8.4%	23	5.0%	5	0.0%	6	14.9%	0	0.0%	1	0.0%	1	0.0%
	Private Company	4,025	7.5%	2,290	6.7%	939	7.9%	418	11.2%	139	8.6%	154	8.2%	30	4.6%	43	9.0%	12	3.7%
	Partnership	642	14.8%	253	15.5%	147	17.4%	105	17.4%	73	9.2%	43	12.4%	11	0.0%	8	32.0%	2	0.0%
	Sole Trader	2,220	13.8%	992	13.4%	506	14.5%	335	15.8%	180	12.7%	121	10.0%	35	16.9%	32	13.5%	19	18.9%
	Other	767	7.2%	205	6.0%	268	6.3%	109	8.6%	78	7.2%	69	10.4%	15	6.4%	12	11.4%	11	12.9%
Film, TV and Radio Total		7,740	9.6%	3,772	8.7%	1,878	9.9%	990	12.7%	475	9.8%	393	9.6%	91	8.0%	96	12.2%	45	11.6%
Music and Performing Arts	Public Company	33	9.5%	11	0.0%	8	21.7%	7	28.5%	1	0.0%	2	14.9%	3	0.0%	1	0.0%	0	0.0%
	Private Company	1,066	7.7%	558	7.5%	262	7.9%	154	7.8%	48	11.4%	26	8.9%	4	5.9%	8	2.7%	6	3.7%
	Partnership	1,130	12.8%	459	11.6%	234	14.3%	238	11.4%	100	18.4%	58	14.1%	19	11.6%	13	21.1%	9	8.4%
	Sole Trader	3,805	8.4%	1,558	8.0%	815	7.3%	818	10.6%	278	8.6%	226	6.6%	40	5.2%	39	9.3%	31	15.6%
	Other	470	8.5%	129	7.5%	157	7.0%	82	12.3%	45	10.0%	39	6.1%	2	0.0%	11	9.5%	5	38.0%
Music and Performing Arts Total		6,504	9.0%	2,715	8.4%	1,476	8.4%	1,299	10.5%	472	10.8%	351	7.8%	68	7.2%	72	9.9%	51	13.6%
Other Creative Arts	Public Company	9	12.5%	6	24.6%	1	0.0%	1	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.0%	0	0.0%
	Private Company	989	7.7%	514	7.1%	274	6.5%	99	10.9%	35	18.5%	35	11.8%	12	3.7%	17	9.1%	3	8.4%
	Partnership	555	8.7%	189	9.1%	152	8.7%	101	8.9%	42	11.8%	38	4.8%	19	3.5%	10	14.9%	4	14.9%
	Sole Trader	7,082	6.7%	2,720	7.0%	1,944	5.8%	1,074	8.7%	556	6.9%	429	5.5%	123	6.2%	171	4.2%	65	8.6%
	Other	341	9.5%	75	9.8%	113	8.5%	59	13.0%	27	9.7%	23	13.9%	7	7.0%	8	14.9%	29	3.0%
Other Creative Arts Total		8,976	7.0%	3,504	7.2%	2,484	6.2%	1,334	9.0%	660	7.7%	525	6.1%	161	5.7%	207	5.3%	101	7.0%
Software, Web and IMM Development	Public Company	239	10.7%	91	10.2%	53	13.6%	47	11.7%	32	6.8%	9	12.5%	0	0.0%	7	7.0%	0	0.0%
	Private Company	25,645	9.3%	11,502	9.0%	7,088	8.8%	3,306	11.6%	1,529	10.4%	981	8.8%	207	11.2%	952	8.4%	79	7.9%
	Partnership	2,471	16.6%	817	16.7%	560	18.6%	458	16.4%	322	15.9%	189	13.4%	49	10.3%	62	18.1%	14	22.9%
	Sole Trader	12,702	20.6%	4,890	22.9%	3,133	21.1%	2,198	20.2%	1,197	16.9%	779	15.1%	177	16.1%	259	17.8%	68	14.9%
	Other	4,072	11.5%	809	13.9%	1,587	10.6%	768	14.9%	513	8.4%	287	9.2%	33	10.5%	68	10.1%	7	28.5%
Development Total		45,129	12.5%	18,109	12.4%	12,421	11.9%	6,777	14.7%	3,593	12.4%	2,245	11.2%	466	12.7%	1,348	10.3%	168	12.1%
Text and Other Publishing	Public Company	47	3.8%	18	2.4%	22	5.3%	0	0.0%	3	0.0%	1	0.0%	2	14.9%	1	0.0%	0	0.0%
	Private Company	1,550	6.5%	709	6.4%	396	5.9%	227	7.7%	101	8.9%	66	6.6%	21	4.3%	25	3.5%	5	4.6%
	Partnership	367	9.5%	116	9.4%	92	8.6%	72	10.9%	44	9.5%	23	8.9%	12	14.9%	4	5.9%	4	5.9%
	Sole Trader	763	8.1%	304	8.1%	190	7.2%	122	10.5%	70	7.0%	33	8.4%	13	7.6%	22	8.0%	9	8.4%
	Other	489	4.7%	119	4.0%	181	5.0%	72	6.7%	60	3.3%	37	4.3%	9	8.4%	9	5.2%	2	0.0%
Text and Other Publishing Total		3,216	6.9%	1,266	6.8%	881	6.2%	493	8.6%	278	7.0%	160	6.6%	57	7.9%	61	5.4%	20	5.9%
Total Creative Industries	Public Company	578	9.2%	223	8.4%	143	11.0%	108	10.0%	62	7.6%	19	11.6%	8	2.7%	13	7.6%	2	14.9%
	Private Company	48,827	8.7%	22,589	8.4%	13,201	8.3%	6,567	10.8%	2,715	9.9%	1,904	8.3%	430	9.0%	1,249	8.5%	171	6.8%
	Partnership	9,978	11.8%	3,375	12.6%	2,213	12.5%	1,960	11.7%	1,248	10.6%	749	10.1%	210	7.0%	170	13.6%	53	12.1%
	Sole Trader	44,957	12.5%	17,237	13.2%	11,439	11.8%	7,765	14.0%	3,965	11.3%	2,697	10.2%	700	9.5%	820	10.4%	333	12.6%
	Other	10,812	9.1%	2,197	9.6%	4,028	8.4%	2,043	12.0%	1,416	7.5%	774	8.1%	120	6.6%	159	9.1%	74	8.2%
Total		115,152	10.4%	45,621	10.4%	31,024	9.8%	18,443	12.3%	9,406	10.1%	6,143	9.3%	1,468	8.7%	2,411	9.5%	633	10.3%

Overall, the Creative Industries grew at a CAGR of 10.4 per cent. Advertising and Marketing and Software, Web and IMM Development were the two fastest growing segments with CAGRs of 14.3 and 12.5 per cent respectively. Queensland led the growth in Software, Web and IMM Development, and indeed Queensland had the highest growth rates in five of the seven Creative Industry segments. This meant it also had the highest overall growth rate of any state at 12.3 per cent. Tasmania on the other hand, had the lowest overall CAGR at 8.7 per cent and was the slowest growing State in four of the seven segments. But in spite of this, was the second fastest growing State in Publishing at 7.9 per cent, a segment where Tasmania has a larger than expected number of firms. In contrast to this, despite its relatively high number of Software, Web and IMM Development enterprises, the ACT was the slowest growing jurisdiction in that segment (10.3 per cent against the national average of 12.5 per cent). Overall, Publishing and Other Creative Industries were the two slowest growing segments at 6.9 and 7.0 per cent

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

respectively. Sole Traders were the firm type that showed the most rapid growth over the period (12.5 per cent) while the most prevalent firm type, Private Companies, had the slowest growth (8.7 per cent).

The Entity Type, Segment and State all play a role in determining the CAGR of firms. In Figure 3.2 the results of a regression of the CAGR on the Entity Type, Segment and State of the sector are given, which explains 38 per cent of the variation in observed growth rates (given by the R-Square of 0.3828). The advantage of this method of presenting the data in the above table is that it is possible to see the effect of each of the three elements on the growth rate individually, holding the other elements constant. So while the overall growth rate of private companies (8.7%) might be 0.5 per cent lower than public companies (9.2%), this might be because more private companies are in slow growing states or industry segments than public companies. Given a group of private companies in a given State and industry segment, we would in fact expect those companies to have grown 3.3 per cent faster than public companies in that State and industry segment, as shown by the regression results.

Figure 3.2 Growth Rates in the Creative Industries

Variable	Estimated Coefficient	Standard Error	P-Value
Constant	9.4	1.3	0.0000
Entity Type (baseline is Public Company)			
Private Company	3.3	0.96	0.0006
Partnership	7.4	0.96	0.0000
Sole Trader	6.6	0.96	0.0000
Other	4.1	0.96	0.0000
Segment (baseline is Advertising and Marketing)			
Architecture, Design and Visual Arts	-5.7	1.1	0.0000
Film, TV and Radio	-3.3	1.1	0.0035
Music and Performing Arts	-3.1	1.1	0.0065
Other Creative Arts	-5.2	1.1	0.0000
Text and Other Publishing	-6.8	1.1	0.0000

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

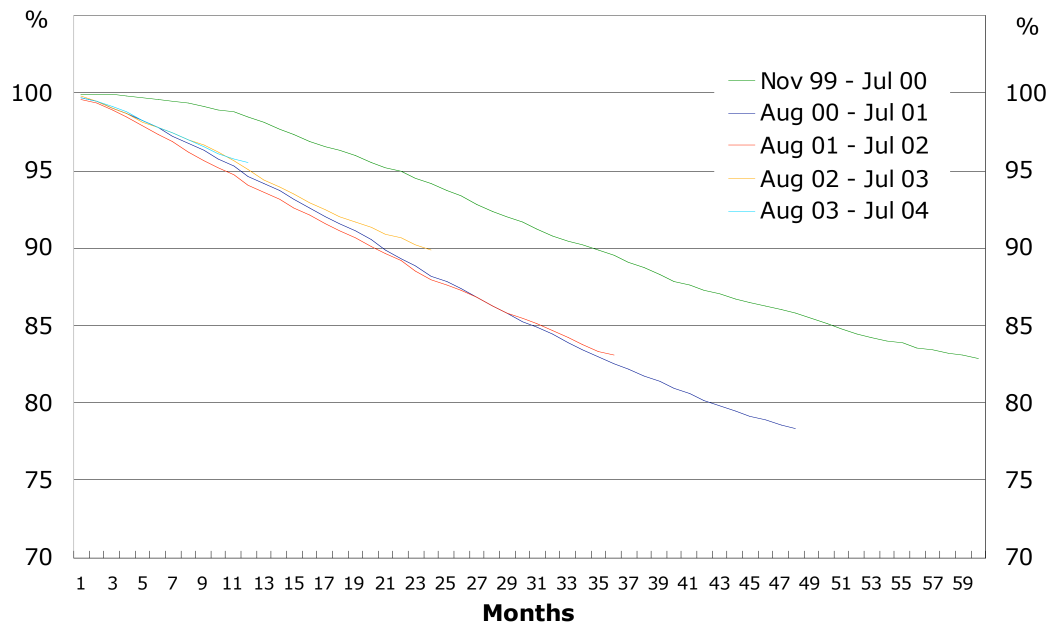
Software, Web and IMM Development	0.1	1.1	0.9309
State (baseline is NSW)			
VIC	0.1	1.2	0.9357
QLD	1.2	1.2	0.3100
WA	-0.8	1.2	0.4897
SA	-1.4	1.2	0.2503
TAS	-3.6	1.2	0.0036
ACT	-0.9	1.2	0.4629
NT	-0.5	1.2	0.6585
Observations = 280 R-SQUARE = 0.3828 R-SQUARE ADJUSTED = 0.3428			

The baseline scenario in the regression is for a Public Company, from the Advertising and Marketing Segment, in New South Wales. As shown by the estimated coefficient on the constant, these firms were predicted to have a CAGR of 9.4 per cent, close to the 8.4 per cent observed. Variables that caused a statistically significant difference to this rate, at the five per cent level of significance, have been put in bold. Private Companies(+3.3%), Partnerships(+7.4%), Sole Traders(+6.6%) and Other Companies(+4.1%) all grew at a significantly faster rate. All other Segments grew 3 to 7 per cent slower than Advertising and Marketing except for Software, Web and IMM Development which did not grow at a statistically significant different rate. The growth rates of firms in the creative industries were the same across all States except Tasmania, where they grew on average 3.6 per cent slower.

3.2 Survival

The length of time between a firm's entry and exit in the market is taken as the time between its ABN registration and cancellation dates. The *survival rate* of a cohort of firms is the percentage of firms registered in a particular period that are still registered at a given point in time. The population of firms that registered for an ABN between November 1999 and July 2000, while containing the longest run of time-series data, undoubtedly includes pre-existing market participants[5]. There were 103 570 firms registered in this period, many more than the 16 372, 15 638, 12 061 and 11 191 in the following four years. But because their ABN registration date does not record their true, earlier, time of entry into the market, these firms are biased towards those that are long-established and thus more likely to survive into the future. The unusually large size of the cohort of firms registered up to July 2000 is a further indication that they contain characteristics unlike those registered in later years. This makes for an interesting natural experiment. As shown in Figure 3.3, those (largely pre-existing) firms registered up to July 2000 have a distinctly slower rate of attrition than any of the other four year's cohorts. This result is particularly striking because of the similarity in the survival curves from those later years. Because of the relatively large proportion of pre-existing firms in the pre-July 2000 cohort, this reinforces the intuitively appealing notion that 'startups' are more likely to fail.

Figure 3.3 Survival Rates by ABN Registration Date



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[5] Note that the time period chosen for each cohort (generally August to July) was chosen because each year around June 30 there are an unusually large number of ABN registrations and cancellations, probably related to the end of financial year.

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

The yearly survival rates of firms in the Creative Industries over five years are given in Figure 3.4 for those firms registered up to July 2000. The Advertising and Marketing and Software, Web and IMM Development sectors both had low survival rates after five years (78.6 and 80.1 per cent respectively) while Film, TV and Radio and Other Creative Industries had the highest rates of survival (85.7 and 86.8 per cent respectively).

Figure 3.4 Survival Rates by ABN Registration Date: Firms Registered up to July 2000

		Australia	Survival Rate by Year					CAGR			
Segments	Entity Type	Total	First	Second	Third	Fourth	Fifth	Australia	NSW	VIC	QLD
Advertising and Marketing	Public Company	4,080	100.0%	97.5%	88.9%	82.7%	79.0%	-4.6%	-3.6%	-3.6%	-4.7%
	Private Company	81	99.0%	94.8%	88.8%	85.2%	82.7%	-3.7%	-3.8%	-3.4%	-4.5%
	Partnership	11	94.9%	84.1%	76.2%	69.6%	64.4%	-8.4%	-8.1%	-8.3%	-7.9%
	Sole Trader	520	96.0%	89.5%	84.0%	79.4%	75.2%	-5.5%	-5.1%	-5.2%	-6.2%
	Other	2,842	98.9%	94.6%	90.3%	86.8%	83.3%	-3.6%	-4.6%	-2.9%	-3.8%
Advertising and Marketing Total		4	97.7%	92.1%	86.3%	82.1%	78.6%	-4.7%	-4.5%	-4.2%	-5.5%
Architecture, Design Visual Arts	Public Company	920	100.0%	93.3%	86.7%	86.7%	86.7%	-2.8%	-2.2%	-4.4%	-2.6%
	Private Company	84	99.2%	96.5%	93.1%	90.3%	88.1%	-2.5%	-2.5%	-2.3%	-2.7%
	Partnership	301	97.4%	91.0%	83.7%	77.2%	73.1%	-6.1%	-6.2%	-5.9%	-6.8%
	Sole Trader	62	98.5%	94.4%	90.4%	86.5%	83.6%	-3.5%	-3.6%	-3.0%	-4.3%
	Other	0	99.4%	96.5%	94.0%	91.7%	89.7%	-2.1%	-2.4%	-1.8%	-1.8%
Architecture, Design Visual Arts Total		8,905	98.7%	94.8%	90.6%	86.9%	84.1%	-3.4%	-3.4%	-2.9%	-4.0%
Film,TV and Radio	Public Company	9,063	98.6%	97.2%	91.5%	90.1%	88.7%	-2.4%	-2.4%	-2.8%	-1.1%
	Private Company	45	99.1%	96.4%	93.0%	90.9%	89.1%	-2.3%	-2.5%	-2.1%	-2.1%
	Partnership	6	98.0%	91.2%	83.1%	76.1%	69.9%	-6.9%	-6.1%	-9.0%	-8.0%
	Sole Trader	3,031	98.5%	93.4%	89.9%	85.6%	82.8%	-3.7%	-3.6%	-3.6%	-4.5%
	Other	14,219	99.7%	95.2%	92.7%	91.5%	89.2%	-2.3%	-3.5%	-1.7%	-3.5%
Film,TV and Radio Total		10	98.9%	95.0%	91.3%	88.2%	85.7%	-3.0%	-3.0%	-2.9%	-3.7%
Music and Performing Arts	Public Company	2,697	100.0%	92.3%	88.5%	84.6%	84.6%	-3.3%	-4.4%	-5.6%	0.0%
	Private Company	178	99.5%	96.5%	92.4%	89.0%	86.6%	-2.8%	-2.9%	-2.4%	-3.7%
	Partnership	1,026	95.1%	82.4%	73.1%	66.9%	61.7%	-9.2%	-8.2%	-9.7%	-10.1%
	Sole Trader	55	98.4%	95.3%	92.7%	90.2%	88.5%	-2.4%	-2.3%	-2.2%	-2.5%
	Other	0	98.6%	95.5%	93.7%	92.3%	89.9%	-2.1%	-2.3%	-1.2%	-2.8%
Music and Performing Arts Total		30,330	98.0%	93.3%	89.5%	86.3%	83.9%	-3.4%	-3.3%	-3.1%	-3.9%
Other Creative Industries	Public Company	3,450	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%
	Private Company	71	99.6%	95.8%	91.4%	88.3%	85.5%	-3.1%	-2.8%	-2.7%	-3.6%
	Partnership	21	96.9%	89.9%	82.5%	78.3%	73.5%	-6.0%	-5.4%	-4.8%	-7.2%
	Sole Trader	294	98.5%	95.4%	92.6%	90.0%	87.9%	-2.5%	-2.8%	-2.1%	-2.6%
	Other	1,882	100.0%	95.5%	91.8%	89.4%	87.3%	-2.7%	-2.6%	-2.6%	-3.1%
Other Creative Industries Total		7	98.6%	95.1%	91.9%	89.2%	86.8%	-2.8%	-2.9%	-2.3%	-3.1%
Publishing	Public Company	416	100.0%	97.6%	92.9%	92.9%	90.5%	-2.0%	-4.1%	0.0%	-
	Private Company	174	99.0%	96.1%	92.3%	89.8%	87.5%	-2.6%	-3.0%	-2.2%	-2.0%
	Partnership	244	96.6%	88.8%	80.7%	72.4%	69.5%	-7.0%	-6.7%	-7.3%	-7.9%
	Sole Trader	73	98.3%	94.0%	88.8%	85.2%	82.0%	-3.9%	-4.2%	-3.4%	-4.0%
	Other	0	98.6%	95.0%	92.1%	90.1%	88.5%	-2.4%	-3.6%	-1.4%	-2.6%
Publishing Total		6,632	98.5%	94.5%	89.9%	86.5%	84.0%	-3.4%	-3.7%	-2.8%	-3.5%
Software, Web and IMM Devel	Public Company	938	100.0%	98.8%	96.4%	92.3%	87.5%	-2.6%	-2.2%	-4.4%	-0.8%
	Private Company	26	99.0%	94.9%	88.9%	85.1%	82.2%	-3.8%	-3.9%	-3.7%	-4.2%
	Partnership	6	95.8%	84.7%	75.1%	67.6%	63.2%	-8.8%	-8.5%	-8.9%	-8.8%
	Sole Trader	450	97.2%	91.4%	85.7%	80.6%	76.5%	-5.2%	-5.4%	-4.9%	-5.6%
	Other	5,336	99.2%	95.7%	92.0%	88.1%	85.3%	-3.1%	-4.0%	-2.6%	-3.8%
Software, Web and IMM Devel Total		12	98.4%	93.6%	87.7%	83.3%	80.1%	-4.3%	-4.4%	-4.0%	-4.9%
Total Creative Industries	Public Company	216	99.8%	97.3%	92.5%	89.3%	86.3%	-2.9%	-2.8%	-3.2%	-1.8%
	Private Company	194	99.1%	95.4%	90.4%	87.0%	84.4%	-3.3%	-3.4%	-3.2%	-3.6%
	Partnership	887	96.5%	87.8%	79.6%	73.0%	68.4%	-7.3%	-7.1%	-7.3%	-7.9%
	Sole Trader	78	98.1%	93.8%	89.8%	86.1%	83.2%	-3.6%	-3.7%	-3.2%	-4.1%
	Other	0	99.2%	95.7%	92.6%	89.8%	87.3%	-2.7%	-3.4%	-2.2%	-2.9%
Total		8,143	98.4%	94.1%	89.3%	85.5%	82.7%	-3.7%	-3.7%	-3.3%	-4.3%

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

The survival rates of firms registered from August 2000 up to July 2001 are given in Figure 3.5. Note that there are only four full years of data for this cohort. Advertising and Marketing and Publishing were the two segments with the lowest survival rates after four years (72.1 per cent and 75.8 per cent respectively). Film, TV and Radio and Other Creative Industries again had the highest survival rates (82.4 and 84.7 per cent respectively). Partnerships, by quite a large margin, were the firm type with the lowest survival rate at 55.1 per cent.

Figure 3.5 Survival Rates by ABN Registration Date: Firms Registered from August 2000 to July 2001

		Australia	Survival Rate by Year				CAGR			
Segments	Entity Type	Total	First	Second	Third	Fourth	Australia	NSW	VIC	QLD
Advertising and Marketing	Public Company	6	100.0%	83.3%	83.3%	83.3%	-4.5%	0.0%	0.0%	-
	Private Company	589	97.5%	91.3%	87.1%	83.9%	-4.3%	-4.4%	-4.0%	-4.8%
	Partnership	244	81.6%	66.4%	56.1%	51.6%	-15.2%	-15.6%	-17.0%	-15.1%
	Sole Trader	879	89.3%	80.8%	74.5%	69.2%	-8.8%	-7.8%	-9.5%	-10.7%
	Other	72	95.8%	93.1%	86.1%	80.6%	-5.3%	-4.5%	-5.2%	-7.8%
Advertising and Marketing Total		1,790	91.2%	82.8%	76.6%	72.1%	-7.8%	-7.1%	-7.5%	-9.8%
Architecture, Design Visual Arts	Public Company	8	100.0%	87.5%	87.5%	87.5%	-3.3%	-15.9%	0.0%	0.0%
	Private Company	605	99.3%	97.4%	94.0%	92.6%	-1.9%	-2.3%	-1.7%	-1.6%
	Partnership	485	91.1%	76.3%	65.4%	57.5%	-12.9%	-12.5%	-14.0%	-14.6%
	Sole Trader	2,577	95.9%	91.2%	86.4%	82.3%	-4.8%	-4.5%	-4.7%	-5.0%
	Other	109	99.1%	98.2%	93.6%	89.9%	-2.6%	-2.9%	-2.2%	-2.6%
Architecture, Design Visual Arts Total		3,784	95.9%	90.4%	85.1%	81.0%	-5.1%	-5.0%	-4.9%	-5.6%
Film,TV and Radio	Public Company	6	100.0%	100.0%	100.0%	83.3%	-4.5%	-100.0%	-	0.0%
	Private Company	280	99.6%	97.1%	91.8%	88.9%	-2.9%	-3.3%	-1.0%	-3.8%
	Partnership	105	83.8%	73.3%	65.7%	57.1%	-13.1%	-9.4%	-10.2%	-10.9%
	Sole Trader	472	95.3%	90.9%	87.5%	84.5%	-4.1%	-4.6%	-4.6%	-4.0%
	Other	42	97.6%	92.9%	90.5%	78.6%	-5.9%	-7.5%	-10.5%	0.0%
Film,TV and Radio Total		905	95.5%	90.9%	86.5%	82.4%	-4.7%	-4.7%	-4.1%	-4.7%
Music and Performing Arts	Public Company	0	-	-	-	-	-	-	-	-
	Private Company	75	92.0%	86.7%	80.0%	78.7%	-5.8%	-7.4%	-5.4%	-2.9%
	Partnership	269	85.9%	72.1%	64.3%	55.8%	-13.6%	-14.5%	-12.0%	-6.8%
	Sole Trader	796	96.0%	92.2%	88.3%	85.1%	-4.0%	-4.3%	-3.5%	-3.8%
	Other	46	89.1%	89.1%	84.8%	80.4%	-5.3%	-6.9%	-4.7%	-4.5%
Music and Performing Arts Total		1,186	93.2%	87.2%	82.2%	77.8%	-6.1%	-6.8%	-5.4%	-4.4%
Other Creative Industries	Public Company	1	100.0%	100.0%	0.0%	0.0%	-100.0%	-100.0%	-	-
	Private Company	88	97.7%	94.3%	92.0%	90.9%	-2.4%	-1.8%	-2.2%	-3.5%
	Partnership	87	95.4%	85.1%	74.7%	67.8%	-9.3%	-2.7%	-10.1%	-13.1%
	Sole Trader	1,251	95.6%	92.5%	87.9%	85.5%	-3.9%	-4.0%	-3.5%	-4.1%
	Other	19	94.7%	94.7%	89.5%	89.5%	-2.7%	0.0%	0.0%	-3.8%
Other Creative Industries Total		1,446	95.7%	92.2%	87.3%	84.7%	-4.1%	-3.8%	-3.8%	-4.7%
Publishing	Public Company	3	100.0%	100.0%	100.0%	100.0%	0.0%	-	0.0%	-
	Private Company	137	97.8%	90.5%	84.7%	82.5%	-4.7%	-4.0%	-7.5%	-4.9%
	Partnership	56	87.5%	78.6%	67.9%	60.7%	-11.7%	-9.6%	-11.4%	-14.3%
	Sole Trader	138	93.5%	83.3%	78.3%	72.5%	-7.7%	-6.9%	-3.7%	-14.8%
	Other	17	100.0%	100.0%	100.0%	94.1%	-1.5%	0.0%	0.0%	0.0%
Publishing Total		351	94.6%	86.3%	80.3%	75.8%	-6.7%	-5.2%	-5.6%	-10.1%
Software, Web and IMM Devel	Public Company	31	100.0%	96.8%	90.3%	87.1%	-3.4%	0.0%	0.0%	-7.7%
	Private Company	2,806	98.0%	93.3%	88.6%	84.7%	-4.1%	-4.5%	-4.0%	-3.4%
	Partnership	667	86.2%	71.7%	59.8%	52.0%	-15.1%	-13.2%	-15.0%	-18.4%
	Sole Trader	3,151	93.4%	85.7%	79.4%	75.0%	-7.0%	-6.9%	-7.2%	-6.7%
	Other	255	93.7%	87.1%	81.6%	78.4%	-5.9%	-8.6%	-4.8%	-6.8%
Software, Web and IMM Devel Total		6,910	94.6%	87.5%	81.4%	76.9%	-6.4%	-6.2%	-6.1%	-6.7%
Total Creative Industries	Public Company	55	100.0%	94.5%	89.1%	85.5%	-3.9%	-7.7%	0.0%	-5.1%
	Private Company	4,580	98.1%	93.6%	89.1%	85.9%	-3.7%	-4.1%	-3.5%	-3.4%
	Partnership	1,913	87.1%	73.1%	62.6%	55.1%	-13.8%	-12.9%	-13.8%	-14.5%
	Sole Trader	9,264	94.3%	88.4%	83.2%	79.2%	-5.7%	-5.5%	-5.6%	-6.0%
	Other	560	95.2%	91.3%	86.3%	82.0%	-4.9%	-6.1%	-4.3%	-5.4%
Total		16,372	94.6%	88.2%	82.6%	78.4%	-5.9%	-5.7%	-5.6%	-6.4%

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

As with growth rates, the Entity Type, State and Industry Segment of firms all play a role in determining survival rates. Figure 3.6 presents the results of a regression of four year survival rates on those three characteristics. The regression has an R-square of 0.66, implying that it explains 66 per cent of the variation in firms' survival rates over four years. The baseline set of firms were again taken to be Public Companies in the Advertising and Marketing segment, operating in New South Wales which were estimated to have a survival rate of 74.9 per cent. At the five per cent level of significance, a number of other variables caused significant differences in survival rates (again these have been highlighted in bold). Partnerships were the only entity type to have a significantly different survival rate to public companies (20.1 per cent lower). Architecture, Design and Visual Arts(+10.1%), Film, TV and Radio(+5.7%), Music and Performing Arts(+6.6%) and Other Creative Arts(+12.4%) all had significantly higher survival rates than Advertising and Marketing. None of the States appeared to have any significantly different survival rates from New South Wales.

Figure 3.6 Survival rate over 4 Years: August 2000 to July 2001 Cohort

Variable	Estimated Coefficient	Standard Error	P-Value
Constant	74.9	6.0	0.0000
Entity Type (baseline is Public Company)			
Private Company	6.0	5.7	0.2920
Partnership	-20.1	5.7	0.0007
Sole Trader	-1.1	5.7	0.8476
Other	-1.0	5.7	0.8642
Segment (baseline is Advertising and Marketing)			
Architecture, Design and Visual Arts	10.1	2.2	0.0000
Film, TV and Radio	5.7	2.6	0.0278
Music and Performing Arts	6.6	2.3	0.0061
Other Creative Arts	12.4	2.5	0.0000
Text and Other Publishing	3.7	2.8	0.1880
Software, Web and IMM Development	3.1	2.2	0.1619

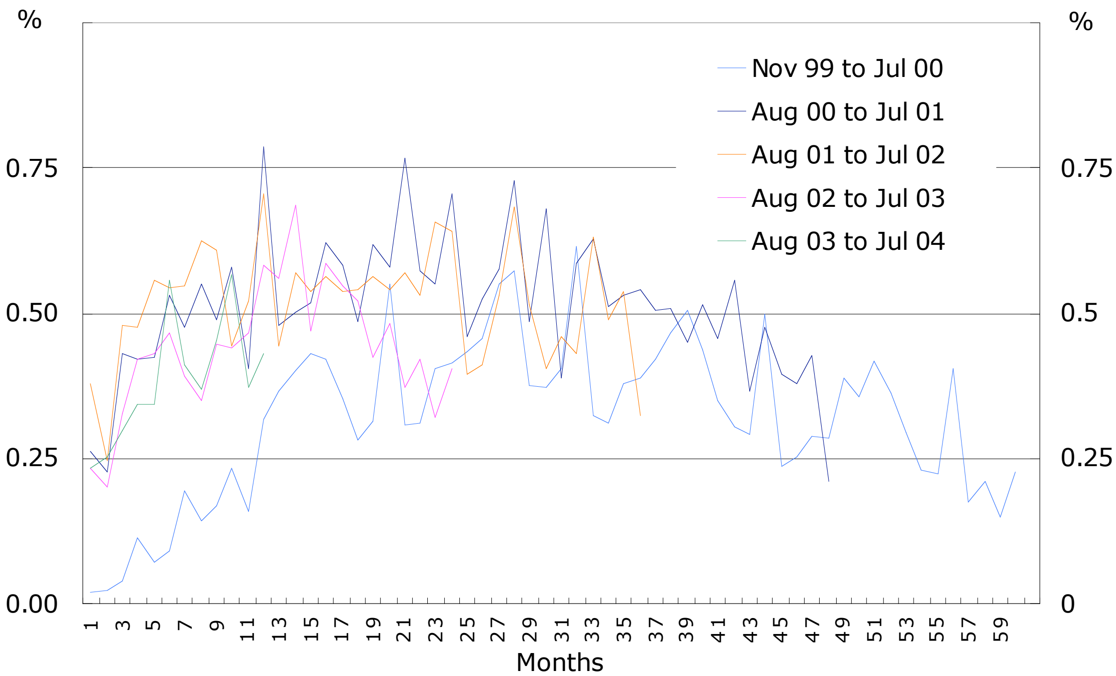
Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

State (baseline is NSW)			
VIC	-0.1	2.1	0.9644
QLD	-1.7	2.1	0.4110
WA	1.7	2.2	0.4382
SA	-0.7	2.5	0.7872
TAS	1.8	3.1	0.5638
ACT	-3.1	3.1	0.3259
NT	-1.1	3.5	0.7647
Observations = 136 (observations with Survival rates of 50% or less or 100% have been excluded) R-SQUARE = 0.6610 R-SQUARE ADJUSTED = 0.6121			

3.3 Exit Rates

Related to the survival rate of a pool of firms is their *exit rate*. This is a convenient way to view the timing of firms exit from the industry. To do this the number of firms exiting the market as a percentage of the total number of firms remaining each month is given in Figure 3.7.

Figure 3.7 Exit Rates in the Creative Industries by ABN Registration Date

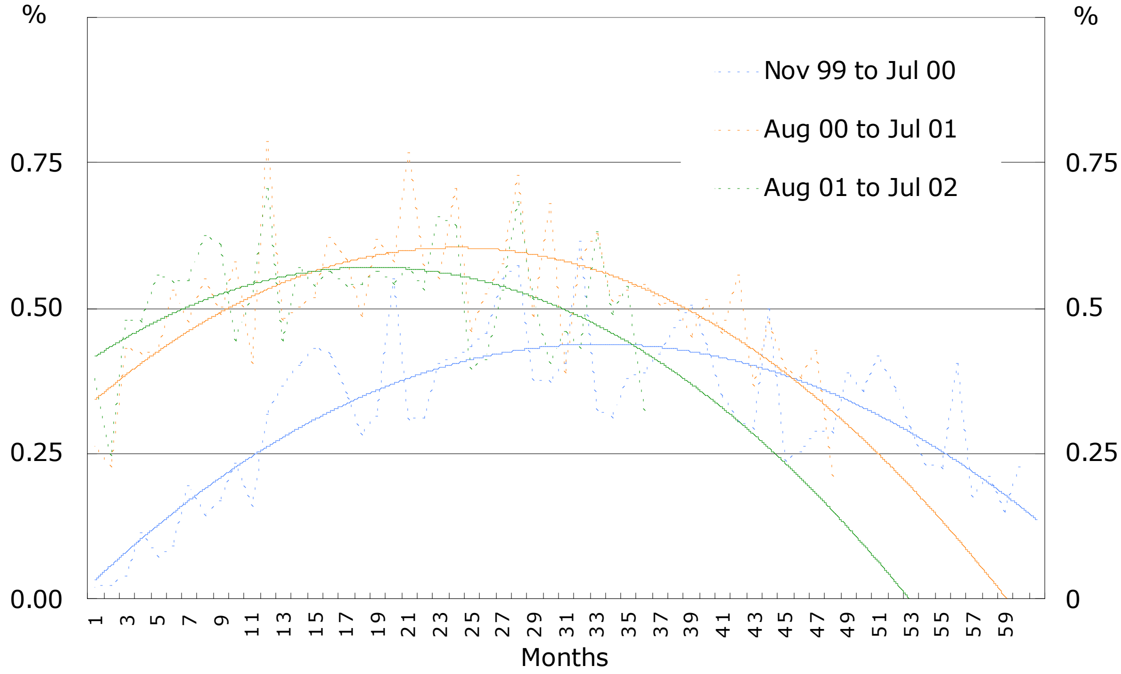


Again, the firms registered up to July 2000 have a lower rate, at least for the first few years, than

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

firms registered after August 2000. However, across all of the cohorts there appears to be a similar inverted U-shape, as shown below in Figure 3.8.

Figure 3.8 Exit Rates in the Creative Industries by ABN Registration Date: Trend Lines



For the first year exit rates are low but rising, before peaking and remaining high in years two and three and then falling in later years. This indicates that firms are unlikely to exit in the first year while establishing their business, but that for the two years following this there is a strong tendency for firms to fail. This may reflect that firms start out with some capital to last them through that first year but that they then start to fail if they cannot generate significant cash flows. After the second and third year probability of firms exiting then begins to fall. This is probably because they are increasingly those firms which have mastered the ability to raise sufficient cash flows and now have a greater amount of experience and human capital than younger firms. In Darwinian terms, the "fittest" have survived.

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

Figure 3.9 Exit Rates in the Creative Industries: Firms Registered from August 2000 to July 2001

			Exit Rate by Quarter																
Segments	Entity Type	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Average
Advertising and Marketing	Public Company	6	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%
	Private Company	589	0.3%	0.7%	0.9%	0.7%	0.9%	1.6%	2.3%	2.0%	1.3%	1.3%	1.3%	0.8%	1.6%	0.6%	0.6%	0.4%	1.1%
	Partnership	244	3.3%	4.3%	6.3%	6.2%	4.6%	5.9%	7.9%	0.6%	2.5%	3.8%	4.6%	6.9%	0.7%	2.2%	3.8%	0.0%	4.0%
	Sole Trader	879	2.8%	2.6%	2.8%	2.9%	3.5%	2.1%	2.3%	2.5%	2.4%	1.0%	1.8%	2.0%	1.8%	2.3%	1.8%	1.0%	2.2%
	Other	72	0.0%	2.8%	0.0%	1.4%	0.0%	0.0%	0.0%	2.9%	4.5%	3.1%	0.0%	3.2%	1.7%	0.0%	0.0%	1.7%	1.3%
Advertising and Marketing Total		1,790	1.9%	2.2%	2.5%	2.5%	2.6%	2.3%	2.8%	2.1%	2.1%	1.5%	1.8%	2.1%	1.6%	1.6%	1.4%	0.7%	2.0%
Architecture, Design Visual Arts	Public Company	8	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%
	Private Company	605	0.0%	0.0%	0.3%	0.7%	0.0%	0.7%	0.7%	0.3%	1.0%	0.7%	0.9%	0.9%	0.5%	0.7%	0.4%	0.0%	0.5%
	Partnership	485	1.4%	2.9%	3.5%	2.2%	4.1%	4.1%	5.7%	2.9%	4.3%	4.0%	5.6%	1.9%	3.8%	2.0%	4.1%	1.4%	3.4%
	Sole Trader	2,577	0.9%	1.2%	1.1%	1.4%	1.1%	1.0%	1.5%	1.1%	1.4%	1.1%	1.7%	1.4%	1.4%	1.4%	1.3%	0.4%	1.2%
	Other	109	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.9%	0.0%	0.9%	0.9%	1.9%	1.0%	1.0%	1.0%	1.0%	1.0%	0.7%
Architecture, Design Visual Arts Total		3,784	0.8%	1.2%	1.2%	1.4%	1.3%	1.3%	1.8%	1.2%	1.6%	1.3%	1.9%	1.3%	1.5%	1.3%	1.3%	0.4%	1.3%
Film,TV and Radio	Public Company	6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	1.0%
	Private Company	280	0.0%	0.0%	0.4%	0.0%	0.4%	0.7%	0.4%	1.8%	2.2%	0.8%	1.5%	1.2%	1.2%	0.0%	0.4%	0.8%	0.7%
	Partnership	105	1.9%	3.9%	1.0%	10.3%	3.4%	6.0%	0.0%	3.8%	3.9%	0.0%	1.4%	4.2%	4.3%	4.5%	1.6%	3.2%	3.3%
	Sole Trader	472	0.8%	1.3%	1.3%	2.0%	0.9%	2.0%	0.0%	1.4%	0.7%	1.2%	0.7%	1.2%	1.7%	1.2%	0.3%	0.0%	1.0%
	Other	42	0.0%	0.0%	2.4%	0.0%	2.4%	2.5%	0.0%	0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	7.9%	5.7%	0.0%	1.5%
Film,TV and Radio Total		905	0.7%	1.1%	1.0%	2.2%	1.0%	2.0%	0.1%	1.7%	1.5%	1.0%	1.0%	1.5%	1.7%	1.4%	0.7%	0.5%	1.2%
Music and Performing Arts	Public Company	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Private Company	75	6.7%	0.0%	1.4%	0.0%	1.4%	0.0%	1.5%	3.0%	3.1%	1.6%	3.2%	0.0%	0.0%	0.0%	0.0%	1.7%	1.5%
	Partnership	269	1.1%	5.3%	3.6%	4.6%	4.3%	4.5%	3.3%	4.4%	2.6%	2.1%	3.8%	3.9%	2.9%	4.2%	4.4%	1.3%	3.5%
	Sole Trader	796	1.0%	0.6%	1.4%	0.9%	0.5%	1.6%	0.9%	1.1%	1.0%	1.5%	0.7%	1.1%	1.3%	0.6%	1.2%	0.3%	1.0%
	Other	46	0.0%	6.5%	2.3%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.9%	2.6%	0.0%	0.0%	2.6%	1.3%
Music and Performing Arts Total		1,186	1.4%	1.9%	1.9%	1.7%	1.4%	2.0%	1.4%	1.8%	1.4%	1.6%	1.4%	1.7%	1.5%	1.2%	1.6%	0.6%	1.5%
Other Creative Industries	Public Company	1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%	-	-	-	-	-	-	-	-
	Private Company	88	0.0%	0.0%	2.3%	0.0%	0.0%	2.3%	1.2%	1.2%	0.0%	0.0%	1.2%	0.0%	0.0%	1.2%	0.0%	0.0%	0.6%
	Partnership	87	0.0%	3.4%	0.0%	1.2%	1.2%	2.4%	6.3%	1.3%	2.7%	4.2%	2.9%	4.5%	1.6%	4.8%	1.7%	0.0%	2.4%
	Sole Trader	1,251	1.3%	1.0%	1.0%	1.1%	0.9%	0.6%	0.6%	1.1%	1.3%	1.0%	1.6%	1.4%	0.9%	0.8%	0.4%	0.2%	0.9%
	Other	19	0.0%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%
Other Creative Industries Total		1,446	1.1%	1.1%	1.1%	1.0%	0.9%	0.8%	1.0%	1.2%	1.4%	1.1%	1.6%	1.5%	0.9%	1.0%	0.4%	0.2%	1.0%
Publishing	Public Company	3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Private Company	137	0.7%	1.5%	0.0%	0.7%	0.8%	2.3%	2.3%	2.4%	2.4%	1.7%	0.8%	0.9%	1.7%	0.9%	0.0%	0.0%	1.2%
	Partnership	56	1.8%	3.6%	5.7%	4.0%	2.1%	0.0%	4.3%	2.2%	4.5%	9.5%	0.0%	0.0%	5.3%	5.6%	0.0%	0.0%	3.0%
	Sole Trader	138	0.7%	0.7%	1.5%	4.5%	3.1%	2.4%	3.3%	1.7%	1.7%	1.8%	1.8%	1.8%	1.9%	1.9%	1.9%	1.0%	2.0%
	Other	17	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	0.0%	0.0%	0.4%
Publishing Total		351	0.9%	1.4%	1.5%	2.7%	1.8%	1.9%	2.8%	1.9%	2.3%	2.7%	1.0%	1.1%	2.1%	2.2%	0.7%	0.4%	1.7%
Software, Web and IMM Devel	Public Company	31	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	3.3%	3.4%	0.0%	0.0%	3.6%	0.0%	0.0%	0.0%	0.8%
	Private Company	2,806	0.2%	0.3%	0.9%	0.7%	1.1%	0.7%	1.9%	1.7%	1.8%	1.1%	0.8%	1.2%	1.2%	0.8%	1.4%	0.7%	1.0%
	Partnership	667	3.0%	3.3%	4.2%	4.0%	4.4%	4.9%	5.2%	3.7%	5.5%	4.5%	4.7%	3.7%	2.5%	4.7%	2.5%	2.5%	4.0%
	Sole Trader	3,151	1.3%	1.9%	2.1%	2.0%	2.0%	2.4%	2.0%	1.9%	1.7%	2.0%	2.2%	1.7%	1.7%	1.5%	1.2%	0.8%	1.8%
	Other	255	1.6%	1.6%	1.2%	2.1%	3.0%	0.9%	0.9%	2.2%	1.4%	1.8%	1.4%	1.9%	0.0%	1.9%	1.0%	0.5%	1.5%
Software, Web and IMM Devel Total		6,910	1.0%	1.4%	1.7%	1.6%	1.8%	1.8%	2.2%	2.0%	2.0%	1.8%	1.7%	1.6%	1.5%	1.4%	1.4%	0.9%	1.6%
Total Creative Industries	Public Company	55	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	3.7%	3.8%	2.0%	0.0%	2.0%	2.1%	0.0%	0.0%	0.0%	1.0%
	Private Company	4,580	0.3%	0.3%	0.8%	0.6%	0.8%	0.9%	1.7%	1.6%	1.7%	1.0%	1.0%	1.0%	1.1%	0.7%	1.0%	0.6%	0.9%
	Partnership	1,913	2.2%	3.7%	3.8%	4.1%	4.1%	4.5%	5.2%	3.1%	4.2%	3.8%	4.4%	3.6%	2.9%	3.7%	3.2%	1.6%	3.6%
	Sole Trader	9,264	1.2%	1.5%	1.6%	1.7%	1.6%	1.6%	1.5%	1.5%	1.5%	1.4%	1.7%	1.5%	1.5%	1.3%	1.1%	0.5%	1.4%
	Other	560	0.7%	1.6%	1.3%	1.3%	1.5%	0.6%	0.6%	1.5%	1.4%	1.6%	1.0%	1.8%	0.6%	1.9%	1.1%	0.9%	1.2%
Total		16,372	1.1%	1.4%	1.6%	1.7%	1.6%	1.7%	1.9%	1.7%	1.8%	1.5%	1.7%	1.6%	1.5%	1.4%	1.2%	0.6%	1.5%

As shown in Figure 3.9 above, Advertising and Marketing has the highest average rate of exit of any industry segment (2.0 per cent) while Partnerships have the highest average exit rate each quarter among entity types (3.6 per cent). The contrast between this rate of exit and the rate of exit of Private Companies (0.9 per cent) is quite striking. The variations in exit rates themselves over time also contain interesting information. Exit rates in Advertising and Marketing and Music and Performing Arts appear to peak in the first two years, while Architecture, Design and Visual Arts peak towards the third year. On the other hand, Other Creative Industries category has an unusual pattern where relatively high numbers of firms exit in both the first year and the third year, this perhaps reflects the diverse range of industries underlying this category.

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

3.4 Churn: Firm Entry and Exit

Each year a number of firms will exit the industry while others enter it. This is the *churn* of firms, measured as a share of the number of firms in the industry. The calculation used, is to take the number of new firms plus the number of failed firms as a percentage of all existing firms. Churn provides an indication of how dynamic a sector is and how powerfully the 'gales of creative destruction' are operating in that area. Those sectors which exhibit a high churn rate, and therefore a high proportion of firms moving into and out of the industry, are those with a lot of new startups bringing fresh innovative ideas and practices to the market, as well as a high rate of failures, removing less successful concepts and systems from the market.

Aggregating the data into quarterly observations, Figure 3.10 and Figure 3.11 display a gradual fall in the churn rate over the four years from July 2001 across all sectors. Notably, the Advertising and Marketing sectors display markedly higher churn rates throughout the four years, followed by Software, Web and IMM Development firms. Other Creative Industries usually exhibit the lowest churn rate.

Figure 3.10 Quarterly Churn by Industry Segment

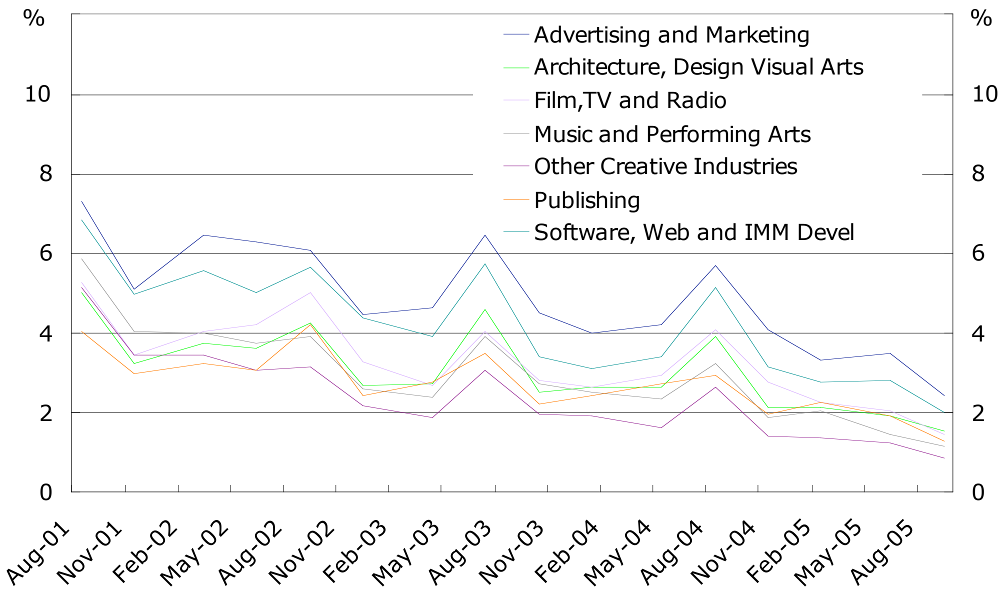
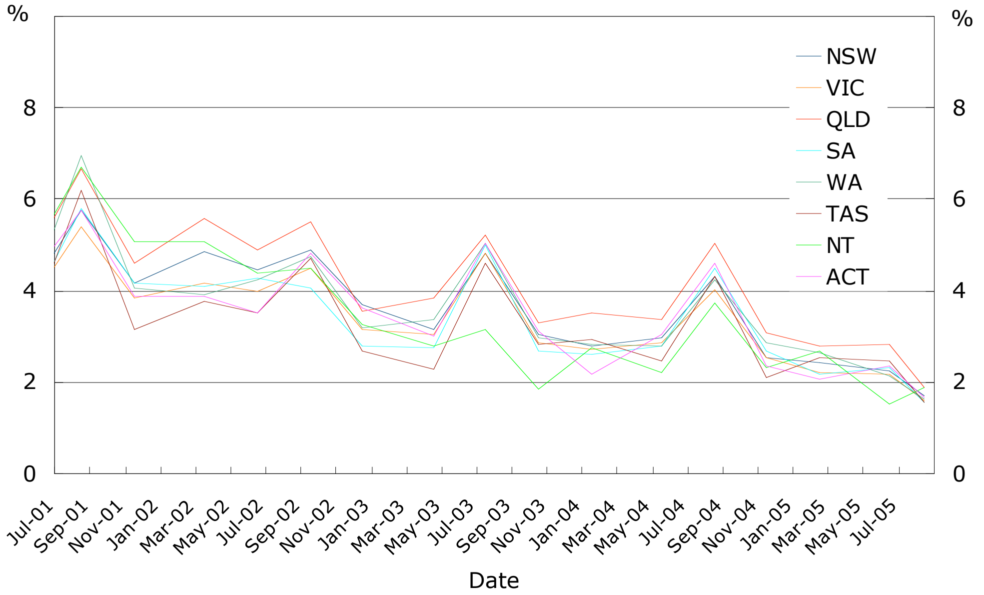


Figure 3.11 below demonstrates that most of the States have broadly similar churn rates over the past four years. The exceptions are Queensland, with a consistently higher rate than other jurisdictions, and Tasmania, which generally has a lower churn rate then the others. Interestingly, the Northern Territory shows substantial volatility in its rate, going from the jurisdiction with the highest churn rate to the jurisdiction with the lowest churn rate in the first two years.

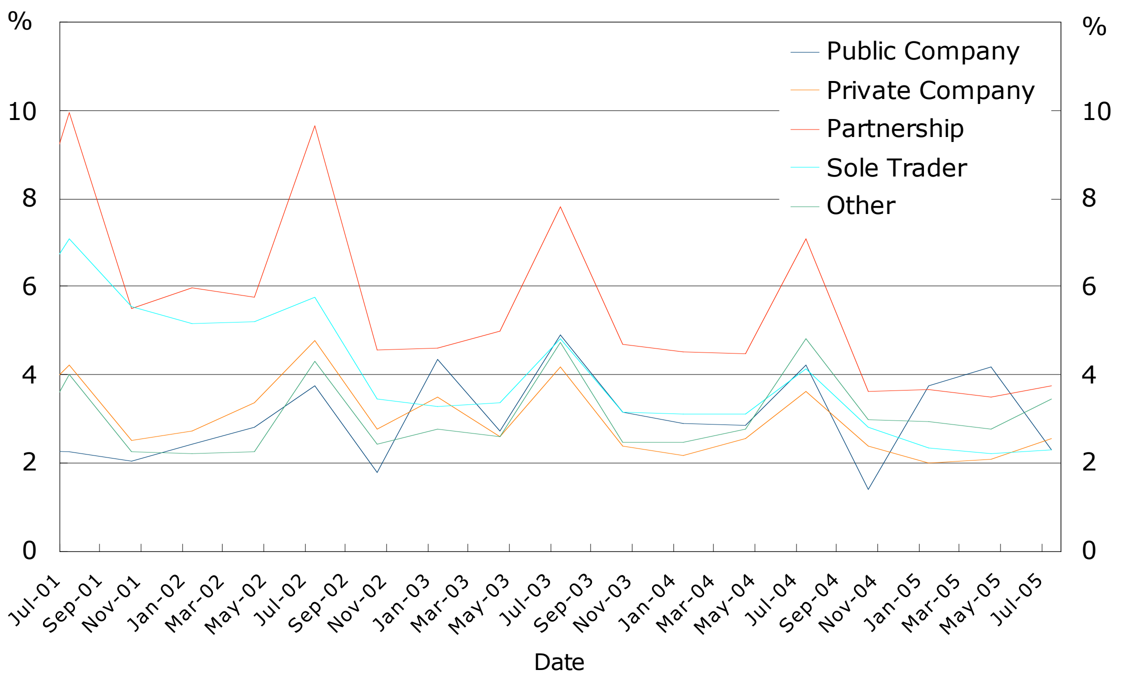
Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

Figure 3.11 Quarterly Churn by State



The quarterly churn rates of the different entity types are shown in Figure 3.12.

Figure 3.12 Quarterly Churn by Entity Type



Partnerships have a consistently higher churn rate than other entity types. Their churn rate is significantly above the rest of the entity types' throughout the sample, although it does appear to be trending down. Sole Traders also had a high churn rate in the first two years but then converged with Private companies and Other entities at around the three per cent level each quarter.

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

Figure 3.13 shows the yearly churn rates in the Creative Industries, alongside the yearly averages for each of the States and Territories. Note that the Churn rate for 2005 will be lower because the data extends only to 5 September of that year.

Figure 3.13 Yearly Churn in the Creative Industries

		Australia						States						
Segment	Entity Type	2001	2002	2003	2004	2005	Average	NSW	VIC	QLD	WA	SA	TAS	ACT
Advertising and Marketing	Public Company	4.6%	19.3%	10.3%	8.6%	13.3%	11.2%	10.0%	8.8%	11.2%	15.6%	20.0%	20.0%	20.0%
	Private Company	15.3%	19.2%	15.4%	12.8%	7.5%	14.1%	13.8%	13.3%	16.1%	15.9%	12.4%	12.1%	15.2%
	Partnership	35.0%	32.0%	28.8%	26.3%	14.2%	27.3%	29.5%	27.7%	24.8%	27.9%	25.1%	18.1%	35.1%
	Sole Trader	30.4%	26.4%	22.0%	20.2%	9.9%	21.8%	22.1%	22.0%	22.9%	20.1%	18.5%	17.3%	19.9%
	Other	11.9%	13.5%	16.1%	15.7%	9.9%	13.4%	14.5%	12.4%	16.4%	11.3%	10.0%	16.5%	15.5%
Advertising and Marketing Total		22.0%	22.4%	19.0%	16.9%	9.2%	17.9%	17.6%	16.9%	20.0%	18.6%	15.9%	15.8%	19.3%
Architecture, Design Visual Arts	Public Company	15.1%	12.2%	19.7%	11.6%	8.0%	13.3%	13.4%	17.6%	12.4%	9.0%	-	0.0%	-
	Private Company	8.5%	10.3%	9.4%	8.4%	4.7%	8.3%	8.1%	7.7%	9.8%	9.0%	7.5%	8.7%	9.3%
	Partnership	17.9%	18.9%	17.9%	15.5%	7.0%	15.5%	16.6%	15.9%	16.6%	12.8%	13.2%	10.7%	14.3%
	Sole Trader	18.1%	15.8%	13.0%	11.7%	5.4%	12.8%	13.5%	11.6%	14.5%	11.9%	12.1%	10.7%	11.3%
	Other	6.6%	7.9%	9.8%	10.1%	6.7%	8.2%	8.5%	7.3%	9.8%	8.4%	8.9%	5.1%	8.9%
Architecture, Design Visual Arts Total		14.4%	13.9%	12.3%	11.0%	5.5%	11.4%	11.7%	10.4%	13.2%	11.0%	11.1%	9.8%	11.0%
Film,TV and Radio	Public Company	9.1%	9.2%	14.3%	9.3%	4.4%	9.3%	9.0%	9.4%	5.7%	7.3%	13.7%	40.0%	10.0%
	Private Company	9.5%	11.8%	9.1%	9.0%	5.1%	8.9%	8.5%	8.8%	11.3%	9.9%	8.7%	7.7%	10.5%
	Partnership	25.2%	28.3%	21.2%	24.4%	11.8%	22.2%	22.9%	22.7%	24.8%	18.7%	20.0%	5.2%	30.6%
	Sole Trader	22.6%	20.3%	14.5%	13.3%	5.1%	15.2%	15.3%	14.6%	16.3%	15.3%	12.1%	19.6%	14.8%
	Other	9.6%	10.3%	9.0%	11.6%	4.5%	9.0%	9.4%	8.5%	10.2%	6.9%	10.2%	5.8%	10.7%
Film,TV and Radio Total		15.0%	15.9%	12.0%	11.9%	5.6%	12.1%	11.5%	11.6%	14.5%	13.0%	11.7%	12.2%	13.6%
Music and Performing Arts	Public Company	8.3%	8.3%	18.5%	18.2%	2.9%	11.3%	4.6%	22.2%	20.9%	-	10.0%	0.0%	0.0%
	Private Company	9.6%	14.0%	11.3%	9.3%	6.3%	10.1%	10.0%	9.9%	10.3%	12.8%	10.8%	12.0%	2.5%
	Partnership	30.8%	28.2%	23.4%	20.3%	8.5%	22.2%	21.1%	24.5%	20.0%	27.1%	21.7%	16.4%	38.1%
	Sole Trader	15.4%	11.1%	8.8%	7.3%	3.1%	9.2%	8.9%	8.4%	10.4%	10.1%	7.5%	8.8%	9.6%
	Other	10.9%	10.2%	10.0%	10.4%	6.3%	9.6%	9.3%	7.3%	12.3%	12.1%	10.3%	9.0%	10.3%
Music and Performing Arts Total		17.0%	14.0%	11.4%	9.7%	4.5%	11.3%	10.9%	10.7%	12.2%	13.3%	10.1%	10.4%	13.1%
Other Creative Industries	Public Company	0.0%	20.0%	0.0%	44.4%	0.0%	12.9%	23.3%	0.0%	0.0%	-	-	-	0.0%
	Private Company	10.7%	13.6%	8.6%	9.0%	4.8%	9.3%	8.5%	8.3%	11.9%	17.3%	15.4%	6.9%	12.3%
	Partnership	19.6%	16.5%	17.4%	13.2%	6.1%	14.5%	13.4%	13.5%	15.9%	17.0%	18.2%	6.7%	18.3%
	Sole Trader	14.8%	11.0%	8.1%	6.6%	2.9%	8.7%	9.2%	7.5%	10.2%	8.1%	7.7%	8.9%	8.1%
	Other	10.4%	14.2%	14.9%	13.5%	6.0%	11.8%	13.8%	9.3%	14.5%	14.6%	15.1%	12.4%	20.2%
Other Creative Industries Total		14.6%	11.6%	8.8%	7.4%	3.4%	9.1%	9.4%	7.9%	10.8%	9.1%	8.9%	8.7%	9.0%
Publishing	Public Company	2.2%	11.4%	4.3%	4.3%	4.2%	5.3%	6.3%	5.0%	-	0.0%	0.0%	10.0%	0.0%
	Private Company	10.1%	11.3%	9.0%	7.2%	5.2%	8.6%	8.5%	8.2%	9.5%	10.1%	7.4%	8.7%	6.6%
	Partnership	21.1%	18.5%	18.6%	16.1%	7.6%	16.4%	15.4%	16.2%	19.0%	14.3%	16.6%	21.4%	21.2%
	Sole Trader	16.0%	15.1%	13.1%	10.7%	5.7%	12.1%	11.9%	10.7%	14.9%	9.9%	16.3%	15.4%	10.2%
	Other	6.5%	8.3%	6.3%	7.4%	4.3%	6.6%	6.8%	6.2%	8.0%	5.5%	5.4%	11.5%	7.5%
Publishing Total		12.5%	12.8%	10.8%	9.1%	5.5%	10.1%	9.9%	9.2%	12.2%	9.7%	10.8%	13.3%	9.2%
Software, Web and IMM Devel	Public Company	11.8%	10.6%	13.7%	14.2%	9.8%	12.0%	11.2%	14.1%	13.2%	8.9%	17.3%	-	5.4%
	Private Company	13.6%	15.5%	11.9%	11.1%	5.9%	11.6%	11.4%	11.2%	13.5%	11.8%	10.8%	12.3%	10.8%
	Partnership	36.4%	32.7%	28.2%	22.3%	11.5%	26.2%	26.6%	27.3%	26.3%	25.1%	24.6%	18.8%	28.4%
	Sole Trader	34.5%	27.1%	21.5%	18.0%	8.7%	21.9%	23.5%	22.3%	21.6%	19.4%	18.4%	18.2%	21.9%
	Other	11.9%	13.9%	14.3%	16.0%	9.4%	13.1%	15.7%	11.6%	16.1%	11.1%	10.9%	14.6%	12.0%
Software, Web and IMM Devel Total		20.5%	19.8%	15.9%	14.3%	7.4%	15.6%	15.5%	14.9%	17.6%	15.7%	14.9%	15.6%	13.9%
Total Creative Industries	Public Company	9.3%	12.2%	13.2%	12.2%	8.4%	11.0%	10.4%	11.7%	11.6%	10.3%	14.6%	8.7%	7.1%
	Private Company	12.1%	14.3%	11.3%	10.4%	5.7%	10.8%	10.5%	10.3%	12.6%	11.5%	10.1%	10.7%	10.7%
	Partnership	26.1%	25.1%	22.3%	19.2%	9.3%	20.4%	21.0%	20.9%	20.7%	19.1%	18.8%	13.4%	23.7%
	Sole Trader	21.8%	18.0%	14.4%	12.6%	5.9%	14.5%	15.1%	13.7%	15.8%	13.7%	12.8%	12.7%	13.8%
	Other	9.7%	11.2%	12.1%	13.1%	7.8%	10.8%	12.0%	9.6%	13.2%	9.7%	10.0%	9.9%	11.3%
Total		17.4%	16.7%	13.8%	12.3%	6.3%	13.3%	13.3%	12.4%	15.1%	13.3%	12.5%	12.1%	12.8%

Queensland has a higher average overall churn rate (15.1 per cent) than the other states and the highest churn rate in five of the seven industry segments (all but Music and Performing Arts and Publishing). Advertising and Marketing had the highest average churn rate of any industry segment over the four years (17.9 per cent) while Publishing (10.1 per cent) and Other Creative Industries (9.1 per cent) had the lowest. Partnerships had the highest churn rate of any entity types (20.4 per cent) while Private Companies and Other entities shared the lowest rate (10.8 per cent).

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

Taking the average yearly churn rates for the years 2001 to 2005, Figure 3.14 below presents the results of a regression of the churn rates on Entity Type, Industry Segment and State. Around 54 per cent of the variation in observed churn rates is explained by this model which has an R-Square of 0.5428. The baseline case is again that of a Public Company, in the Advertising and Marketing Segment in New South Wales.

Figure 3.14 Average Yearly Churn Rates

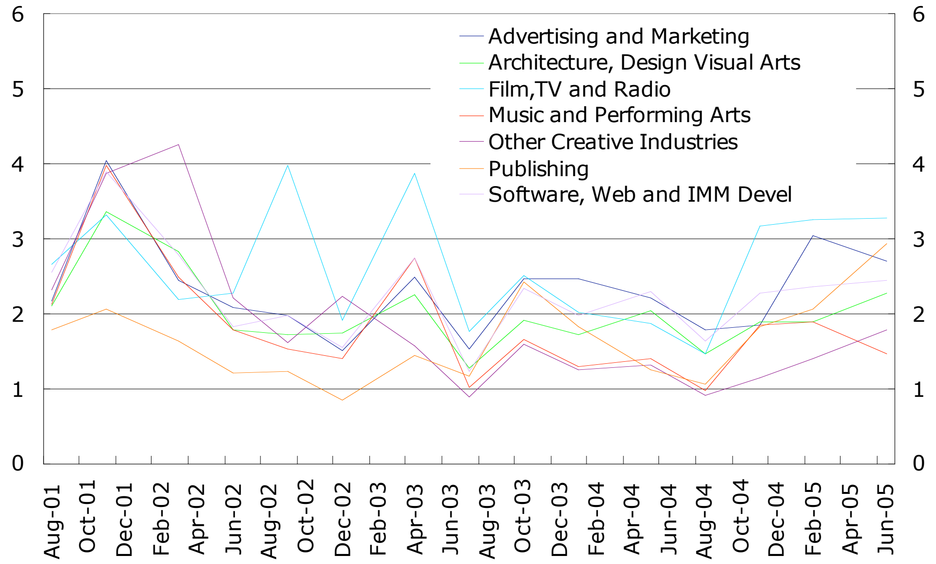
Variable	Estimated Coefficient	Standard Error	P-Value
Constant	15.16	1.28	0.0000
Entity Type (baseline is Australian Private Company)			
Private Company	0.33	1.01	0.7453
Partnership	11.14	1.01	0.0000
Sole Trader	4.39	1.01	0.0000
Other	0.83	1.01	0.4099
Segment (baseline is Advertising and Marketing)			
Architecture, Design and Visual Arts	-7.84	1.12	0.0000
Film, TV and Radio	-4.59	1.11	0.0001
Music and Performing Arts	-5.37	1.12	0.0000
Other Creative Industries	-6.87	1.13	0.0000
Text and Other Publishing	-8.36	1.12	0.0000
Software, Web and IMM Development	-1.61	1.12	0.1523
State (baseline is NSW)			
VIC	-0.64	1.17	0.5863
QLD	0.69	1.18	0.5600
WA	-0.64	1.19	0.5928
SA	-0.66	1.19	0.5781

TAS	-1.31	1.19	0.2743
NT	0.07	1.18	0.9504
ACT	0.21	1.24	0.8644
Observations = 266 R-SQUARE = 0.5428 R-SQUARE ADJUSTED = 0.5114			

The estimated constant of a 15.14 per cent churn rate (which is statistically significant) is quite close to 13.33 per cent observed in the data. Coefficients apart from the constant indicate that, at the five per cent level of significance, a number of different characteristics were found to have a statistically significant effect. Amongst entity types, Partnerships(+11.14%) and Sole Traders(+4.39%) experience higher churn rates than Public Companies. Figure 3.12 showed that the quarterly churn rates of the Advertising and Marketing Segment were above those of the other segments, so it is not surprising that all bar one of those segments exhibited significantly lower churn rates in the regression. They were: Architecture, Design and Visual Arts(-7.84%); Film, TV and Radio(-4.59%); Music and Performing Arts(-5.37%); Other Creative Industries(-6.87%) and Text and Other Publishing(-8.36%). None of the States had a significantly different churn rates from New South Wales.

The ratio of entries to exits is a useful way to decompose churn into its two driving forces and compare their relative magnitudes. The overall churn in an industry can often remain relatively stable, disguising periods of high and low entry to exit ratios. As shown in Figure 3.15, most industry segments had higher quarterly entry to exit ratios from August 2001 to 2003 than from August 2003 to 2004, before increasing again for the final year of the sample. The Film, TV and Radio segment, which was shown above to experience a relatively low level of churn, in general has the highest ratio of entries to exits. Publishing had the lowest level up to June 2003, with Other Creative Industries the lowest from then onwards.

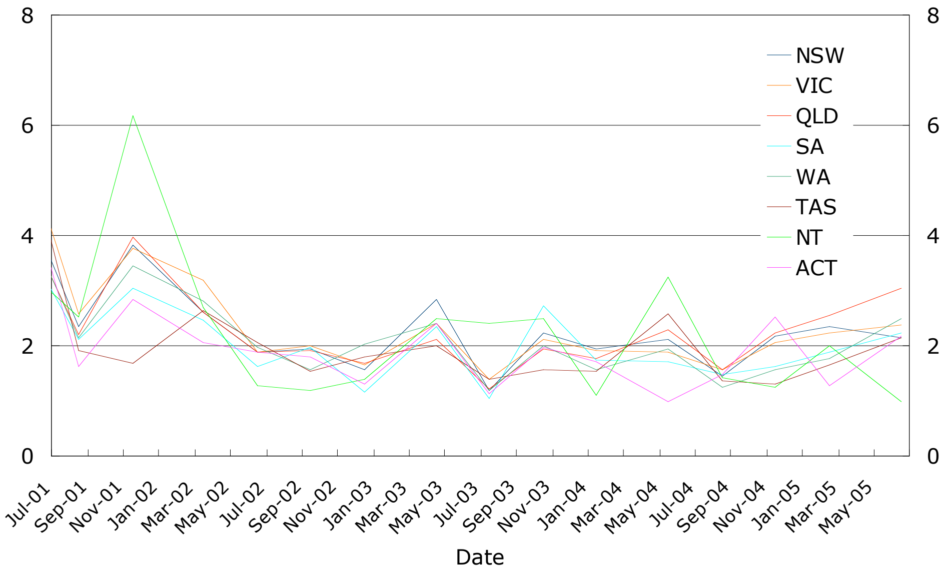
Figure 3.15 Quarterly Entries per Exit: Segment



Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

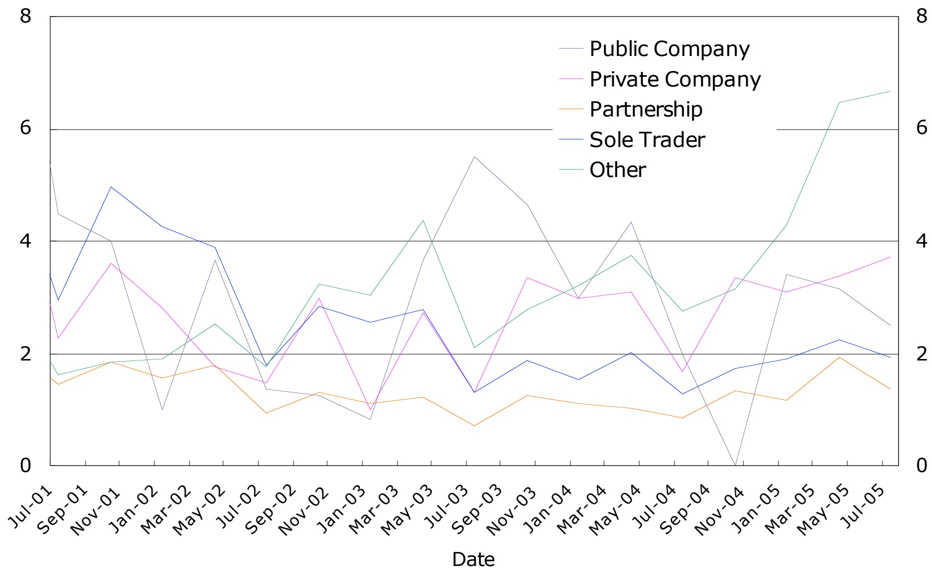
As shown in Figure 3.16, the quarterly ratio of entries to exits across the States does not show any significant outliers. The Northern Territory does have more variation than the other jurisdictions, but that is probably because of its relatively small population of firms.

Figure 3.16 Quarterly Entries per Exit: State



Quarterly ratios of entries to exits by entity type show some patterns but a significant amount of noise as well (see Figure 3.17).

Figure 3.17 Quarterly Entries per Exit: Entity Type



Notably, Partnerships while possessing a high churn rate, do not have a particularly high or volatile ratio of entries to exits. On the other hand, Other entities appear have picked up from a fairly low level of entries to exits in 2001 to a significantly high level in 2005. Sole Traders have moved in the opposite direction, starting out with a high level of entries to exits before falling off in 2002. Private Companies appear to fluctuate between a ratio of around one and three.

Figure 3.18 shows that Film, TV and Radio have the highest average yearly entry to exit rate (2.8), while Music and Performing Arts and Publishing share the lowest rate (1.8 respectively). Victoria and Queensland are the States with the highest ratios (2.4 respectively), while Tasmania has the lowest at 1.9. Public Companies and Other Companies shared the highest average entry to exit ratio at 3.3, while Partnerships had the lowest ratio at 1.3.

Figure 3.18 Yearly Entries per Exit

		Australia						States							
Segment	Entity Type	2001	2002	2003	2004	2005	Average	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
Advertising and Marketing	Public Company	3.0	1.1	0.8	7.0	2.3	2.8	-	-	-	-	-	-	-	-
	Private Company	4.1	2.0	2.8	3.4	4.4	3.3	2.9	3.8	4.6	3.0	5.2	-	-	-
	Partnership	1.8	1.4	1.2	1.2	2.5	1.6	1.9	1.7	1.7	0.7	1.8	-	-	-
	Sole Trader	3.3	2.3	1.9	1.6	2.3	2.3	2.5	2.5	2.1	1.4	2.2	2.8	-	2.2
	Other	1.9	2.0	2.8	3.1	7.3	3.4	3.6	3.7	6.2	1.9	-	-	-	-
Advertising and Marketing Total		3.0	2.0	2.1	2.1	3.2	2.5	2.5	2.8	2.6	1.4	2.3	2.6	4.6	2.6
Architecture, Design Visual Arts	Public Company	3.0	0.2	-	-	-	-	-	-	-	-	-	-	-	-
	Private Company	2.9	1.8	2.2	2.6	4.3	2.8	2.8	2.5	3.6	1.5	2.5	3.7	3.2	-
	Partnership	1.5	1.1	0.8	1.1	1.3	1.2	1.3	1.2	1.0	0.6	1.4	0.8	2.0	-
	Sole Trader	3.9	2.5	1.7	1.7	2.0	2.3	2.4	2.6	2.3	1.3	2.3	1.6	2.5	4.8
	Other	1.5	2.3	2.7	3.3	6.3	3.2	3.0	3.8	4.7	0.9	3.2	-	-	-
Architecture, Design Visual Arts Total		2.9	2.0	1.6	1.8	2.4	2.2	2.2	2.3	2.2	1.1	2.0	1.5	2.4	3.4
Film,TV and Radio	Public Company	6.0	0.8	5.0	1.7	-	-	-	-	-	-	-	-	-	-
	Private Company	3.7	2.1	2.9	3.7	4.3	3.3	2.8	4.1	5.1	5.9	4.6	-	-	-
	Partnership	2.4	2.0	1.4	1.0	1.8	1.7	2.0	2.2	1.7	1.0	1.8	-	-	-
	Sole Trader	4.6	3.5	2.1	1.8	3.1	3.0	2.8	3.5	3.5	2.0	2.8	-	1.9	-
	Other	1.5	2.2	4.9	2.4	6.6	3.5	3.2	3.8	-	-	-	-	-	-
Film,TV and Radio Total		3.6	2.5	2.3	2.1	3.3	2.8	2.6	3.2	3.0	2.2	3.0	-	3.1	-
Music and Performing Arts	Public Company	0.0	1.0	4.0	-	-	-	-	-	-	-	-	-	-	-
	Private Company	2.9	1.6	2.2	2.5	3.4	2.5	2.3	4.1	2.5	-	-	-	-	-
	Partnership	1.4	1.0	1.0	0.8	1.2	1.1	1.1	1.2	0.9	0.8	1.2	-	1.1	-
	Sole Trader	4.2	2.6	1.6	1.3	2.1	2.4	2.5	2.5	2.8	1.2	2.0	1.3	-	-
	Other	1.8	3.1	3.2	2.4	3.0	2.7	2.4	3.7	2.9	2.1	-	-	-	-
Music and Performing Arts Total		2.7	1.8	1.5	1.3	1.9	1.8	1.8	2.0	1.9	1.0	1.7	2.2	1.6	3.8
Other Creative Industries	Public Company	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
	Private Company	3.2	1.7	2.1	1.8	3.5	2.5	2.5	2.5	-	-	-	-	-	-
	Partnership	1.5	1.3	1.0	0.9	1.2	1.2	1.3	1.6	0.9	0.6	0.6	-	-	-
	Sole Trader	3.6	2.7	1.1	1.0	1.8	2.0	2.0	2.1	2.5	1.7	1.9	1.9	1.3	2.2
	Other	2.2	2.9	2.1	3.6	7.0	3.6	3.4	-	-	-	-	-	-	-
Other Creative Industries Total		3.3	2.4	1.2	1.1	2.0	2.0	2.0	2.1	2.2	1.5	1.7	1.7	1.4	2.0
Publishing	Public Company	-	0.7	-	1.0	-	-	-	-	-	-	-	-	-	-
	Private Company	3.2	1.4	2.0	1.7	3.5	2.4	2.8	2.4	4.6	1.5	-	-	-	-
	Partnership	1.1	0.8	1.2	0.8	2.3	1.2	1.3	1.7	1.8	0.7	-	-	-	-
	Sole Trader	3.4	1.3	1.6	1.2	1.3	1.7	1.7	2.3	2.0	1.5	1.2	0.8	-	-
	Other	0.9	1.7	1.4	2.6	5.0	2.3	3.2	3.6	-	0.8	-	-	-	-
Publishing Total		2.3	1.2	1.6	1.4	2.5	1.8	1.8	2.1	2.0	1.1	1.4	1.4	-	1.8
Software, Web and IMM Devel	Public Company	11.0	3.6	3.6	2.2	2.1	4.5	-	4.0	-	-	-	-	-	-
	Private Company	3.2	1.5	1.9	2.3	3.2	2.4	2.3	2.3	3.0	1.8	2.9	3.1	2.0	3.7
	Partnership	2.2	1.4	1.0	1.1	1.8	1.5	1.6	1.6	1.4	1.0	1.2	-	-	-
	Sole Trader	5.1	3.2	2.0	1.8	2.2	2.9	3.2	3.0	2.8	1.4	2.4	2.9	2.3	-
	Other	2.5	2.3	2.9	3.5	6.0	3.5	3.5	3.7	4.7	1.4	3.0	-	-	-
Software, Web and IMM Devel Total		3.7	2.0	1.8	2.0	2.8	2.5	2.5	2.5	2.6	1.3	2.2	2.5	2.1	2.6
Creative Industries Total	Public Company	4.8	1.3	3.8	3.4	3.3	3.3	3.4	4.2	6.3	-	-	-	-	-
	Private Company	3.3	1.6	2.1	2.5	3.6	2.6	2.4	2.6	3.3	1.9	3.0	2.7	2.2	3.7
	Partnership	1.7	1.2	1.0	1.0	1.6	1.3	1.4	1.4	1.2	0.7	1.2	1.2	1.6	1.2
	Sole Trader	4.2	2.7	1.8	1.6	2.1	2.5	2.6	2.7	2.5	1.4	2.1	2.0	1.9	2.6
	Other	1.9	2.3	2.8	3.2	6.0	3.3	3.1	3.5	4.4	1.3	2.9	2.0	3.3	-
Total		3.3	2.0	1.8	1.9	2.7	2.3	2.3	2.4	2.4	1.3	2.1	1.9	2.0	2.4

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

4 Influences on Growth and Survival

This section investigates influences on growth and survival rates at the LGA level of aggregation. Local Government level data was used because it is highly detailed while still being useful. Even so, LGA's with less than 30 firms had to be excluded because in those LGAs, growth and survival rates often had extreme values. The data was further weighted by the number of firms in the LGA for the regressions. Thus, the regressions gave more weight to those LGA's with large numbers of firms.

The models presented below have good explanatory power and find the following key relationships:

There is an inverse relationship between growth and survival rates, that is, where there are high survival rates there tend to be low growth rates and visa-versa;

A higher density of creative industry firms (in both firms per person and firms per km^2 terms) has a positive impact on growth and a negative impact on survival;

Queensland consistently had higher growth and survival rates than the other states while the ACT consistently had lower growth and survival rates;

Advertising and Marketing, Software, Web and IMM Development and Text and Other Publishing consistently appear to have higher growth rates and lower survival rates than other segments.

The first result indicates that having a greater share of firms fail actually helps the industry grow in the long run. This can be viewed in an evolutionary sense. Higher failure rates may indicate more poorly performing firms in the sector are being weeded out. This creates more room for good firms to grow, new firms to enter and spin-offs to emerge. It also means that LGA's can emerge with a set of top-quality firms in the creative industries, reinforcing each other and creating an environment for growth overall.

The second result suggests that by having more firms clustered densely together, it may help increase local competition. In turn, this lowers the survival rate, by helping weed out uncompetitive firms, and increases the growth rate, as more space is created for successful firms. The higher growth and survival rates for Queensland may indicate a market which is growing rapidly but is still immature and in which there is not as much competitive pressure as in other states. On the other hand, the ACT may be a mature market, with low rates of growth in spite of a higher failure rate.

Finally, it was interesting to see that Other Text and Publishing ranked alongside Advertising and Marketing and Software, Web and IMM Development in growth rates at the LGA level. This is interesting because while overall Advertising and Marketing and Software, Web and IMM Development have high growth rates (14.3% and 12.5% respectively), Text and Other Publishing does not (6.9%), although it does have a low survival rate (75.8%). It appears that the data needs to be examined at the LGA level for this to come out.

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

4.1 Growth and Survival

Figure 4.1 shows the results of the regression of growth rates of firms from 2000 to 2005 with the same Entity Type and Industry Segment within an LGA on the survival rates of similar firms. The effect of the Entity Type, Industry Segment and State of the firms has been taken account of with variables for those factors.

Figure 4.1 Growth and Survival Rates by LGA

Variable	Estimated Coefficient	Standard Error	P-Value
Constant	17.0	159.0	0.9148
Survival Rate	-0.15	0.0	0.0000
Entity Type (baseline is Private Company)			
Private Company	1.1	159.0	0.9946
Partnership	-6.8	159.0	0.9658
Sole Trader	5.2	159.0	0.9739
Other	2.5	159.0	0.9876
Segment (baseline is Advertising and Marketing)			
Architecture, Design and Visual Arts	-5.2	0.5	0.0000
Film, TV and Radio	-1.1	1.1	0.3399
Music and Performing Arts	-6.1	0.7	0.0000
Other Creative Industries	-7.0	0.6	0.0000
Text and Other Publishing	-2.6	9.5	0.7862
Software, Web and IMM Development	-0.8	0.5	0.0928
State (baseline is NSW)			
VIC	0.1	0.2	0.4386
QLD	2.1	0.1	0.0000
WA	1.3	1.1	0.2234

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

SA	0.2	3.4	0.9412
TAS	-0.5	9.2	0.9581
NT	0.2	14.3	0.9890
ACT	-1.0	0.1	0.0000

Observations = 940 (Observations with fewer than 30 creative industry firms were excluded).

R-SQUARE = 0.8628 R-SQUARE ADJUSTED = 0.8602

The number of firms squared was used to weight the data in this regression.

The above model has an R-Square of 0.8628, suggesting that around 86 per cent of the variation in CAGR is attributable to variation in those variables included in the model. Notably, an increase in the survival rate has a negatively impact on CAGR. The effect however is small, for every one per cent increase in the survival rate, the CAGR is predicted to decrease by 0.15 per cent. This result is statistically significant. Of the Entity Types, Private Companies(+1.1%), Sole Traders(+5.2%) and Other Entities(+2.5%) were all found to grow at a statistically significantly faster rate than Public Companies. The Architecture, Design and Visual Arts(-5.2%), Music and Performing Arts(-6.1%) and Other Creative Industries(-7.0%) were all found to grow at a significantly slower pace than the other segments. Of the States, Queensland grew significantly faster(+2.1%) and ACT significantly slower(-1.0%) than New South Wales.

It is also interesting to reverse the above causation. Can growth rates help explain variation in survival rates? The regression of survival rates on CAGR, again taking into account the influences of Entity Type, Industry Segment and State, is given in Figure 4.2. Around 83 per cent of the variation in survival rates can be explained by the model which has an R-Square of 0.8277. The CAGR of firms in an LGA is a significant influence on the survival rate, with a one per cent increase in the CAGR implying a 0.72 per cent decrease in the survival rate. This effect is much more powerful than the effect of survival rates on growth. Of the Entity Types, none had significantly different survival rates from Public Companies. All segments except for Publishing had a significantly higher survival rate than Advertising and Marketing. Other Creative Industries had the highest survival rates(+9.07%), while Software, Web and IMM Development were only 2.73 per cent higher. Interestingly, Queensland had a significantly higher survival rate (+3.49%) than New South Wales, while ACT(-0.68%) had a significantly lower survival rate. Recall in the above regression that Queensland had a significantly higher growth rate, while ACT had a significantly lower one.

Figure 4.2 Survival and Growth Rates by LGA

Variable	Estimated Coefficient	Standard Error	P-Value
Constant	78.41	350.26	0.8229
CAGR	-0.72	0.07	0.0000
Entity Type (baseline is Private Company)			
Private Company	8.17	350.26	0.9814
Partnership	-41.40	350.29	0.9060
Sole Trader	-0.98	350.26	0.9978
Other	1.08	350.26	0.9975
Segment (baseline is Advertising and Marketing)			
Architecture, Design and Visual Arts	8.00	1.13	0.0000
Film, TV and Radio	5.48	2.45	0.0254
Music and Performing Arts	5.84	1.60	0.0003
Other Creative Industries	9.07	1.36	0.0000
Text and Other Publishing	4.32	20.92	0.8363
Software, Web and IMM Development	2.73	1.00	0.0067
State (baseline is NSW)			
VIC	-0.61	0.37	0.1021
QLD	3.49	0.22	0.0000
WA	3.78	2.36	0.1087
SA	-0.24	7.44	0.9746
TAS	2.93	20.18	0.8846
NT	6.15	31.54	0.8454
ACT	-0.68	0.34	0.0413

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

Observations = 940 (Observations with fewer than 30 creative industry firms were excluded).

R-SQUARE = 0.8277 R-SQUARE ADJUSTED = 0.8243

The number of firms squared was used to weight the data in this regression.

4.2 Density[6]

The density of the Creative Industries (firms per 1,000 residents) also has an effect on growth (and survival) at the LGA level. The outcome of this regression is given in Figure 4.3. The overall fit of the regression is quite good, with around 85 per cent of the variation in growth rates explained by this model (the R-Square is 0.8480). The baseline scenario is again for Public Companies, in the Advertising and Marketing Segment in New South Wales. Density was found to have a statistically significant positive influence on growth rates. Specifically, for every additional firm per thousand of population, growth rises by 0.01 per cent. None of the entity types had a statistically significant impact on growth rates different from the baseline case of Public Companies. Advertising and Marketing was again found to be the highest growth segment; all other segments had significantly lower growth rates except for Text and Other Publishing, with Other Creative Industries the lowest(-9.36%) and Software, Web and IMM(-1.27%) only just lower. Of the States, Queensland especially(+2.04%) and also Victoria(+0.38%) had higher growth rates than New South Wales while ACT(-0.72%) was significantly lower. The other States were similar to New South Wales.

Figure 4.3 Growth Rates and Density by LGA

Variable	Estimated Coefficient	Standard Error	P-Value
Constant	5.51	167.34	0.9737
Density	0.01	0.00	0.0013
Entity Type (baseline is Private Company)			
Private Company	-0.15	167.34	0.9993
Partnership	-0.73	167.35	0.9965
Sole Trader	5.99	167.34	0.9714
Other	2.58	167.34	0.9877
Segment (baseline is Advertising and Marketing)			
Architecture, Design and Visual Arts	-7.12	0.49	0.0000

[6] Note that here the density used was firms per 1,000 residents. Similar results are obtained if density per square kilometer is used instead.

Film, TV and Radio	-2.19	1.17	0.0617
Music and Performing Arts	-7.76	0.72	0.0000
Other Creative Arts	-9.36	0.57	0.0000
Text and Other Publishing	-3.57	9.99	0.7212
Software, Web and IMM Development	-1.27	0.48	0.0079
State (baseline is NSW)			
VIC	0.38	0.18	0.0386
QLD	2.04	0.13	0.0000
WA	0.99	1.13	0.3792
SA	0.36	3.55	0.9192
TAS	-0.74	9.64	0.9391
NT	-0.45	15.07	0.9759
ACT	-0.72	0.18	0.0001
Observations = 940 (Observations with fewer than 30 creative industry firms were excluded). R-SQUARE = 0.8480 R-SQUARE ADJUSTED = 0.8450 The number of firms squared was used to weight the data in this regression.			

Taking the survival rate data at the LGA level, density also appears to have some explanatory power, as shown in the regression results in figure 4.4 below. Around 81 per cent of the variation in LGA level survival rates can be explained by this model (the R-Square is 0.8115). Notably, density has a negative effect on survival rates; in this case for each additional creative industry firm per 1000 residents in the LGA, the survival rate falls by 0.05 per cent. Again, none of the entity types are statistically different from Public Companies. All the industry segments aside from Text and Other Publishing have significantly higher survival rates than Advertising and Marketing. Other Creative Industries(+15.73%) had the highest survival rates, while Software, Web and IMM Development(+3.53%) were only marginally higher than Advertising and Marketing. Victoria(-1.21%) and ACT(-0.96%) had significantly lower survival rates than New South Wales, while Western Australia(+2.67%) and Queensland(+1.25%) had significantly higher survival rates.

Figure 4.4 Survival Rates and Density by LGA

Variable	Estimated Coefficient	Standard Error	P-Value
Constant	82.72	153.32	0.5896
Density	-0.05	0.01	0.0000
Entity Type (baseline is Private Company)			
Private Company	1.17	153.32	0.9939
Partnership	-47.82	153.34	0.7552
Sole Trader	-12.44	153.32	0.9353
Other	-7.90	153.32	0.9589
Segment (baseline is Advertising and Marketing)			
Architecture, Design and Visual Arts	13.04	0.63	0.0000
Film, TV and Radio	7.26	1.51	0.0000
Music and Performing Arts	11.34	0.93	0.0000
Other Creative Arts	15.73	0.74	0.0000
Text and Other Publishing	6.69	12.74	0.5998
Software, Web and IMM Development	3.53	0.62	0.0000
State (baseline is NSW)			
VIC	-1.21	0.24	0.0000
QLD	1.25	0.17	0.0000
WA	2.67	1.45	0.0661
SA	-0.50	4.56	0.9119
TAS	2.95	12.30	0.8103
NT	5.69	19.29	0.7679
ACT	-0.96	0.24	0.0001

Data Source: Analysis by QUT of a custom, confidentialised extract of the ABR (accessed under Section 30 of the ABN Act 1999) and under contract to DCITA as at 29th September 2005

Observations = 940 (Observations with fewer than 30 creative industry firms were excluded).

R-SQUARE = 0.8115   R-SQUARE ADJUSTED = 0.8102

The number of firms squared was used to weight the data in this regression.

Conclusions

To be written

References

To be inserted

Appendices

Detailed tables from the body of the report to be moved here with highlights only in the body.