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# WORKING PAPER:

## An economic profile of the arts in New Zealand

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***An economic profile of the arts in New Zealand  
Working Paper***

**Adolf Stroombergen, Infometrics**

A report prepared for  
Creative New Zealand and  
Manatū Taonga – Ministry for Culture and Heritage

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# Executive summary

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Creative New Zealand and Manatū Taonga, the Ministry for Culture and Heritage commissioned the economic research and analysis firm Infometrics to research the economic characteristics of the New Zealand arts sector, using available national-level data.

For this research ‘the arts’ was defined in a way that aligns with the areas that Creative New Zealand and the Ministry focus on. For data to be included as relevant to the arts, the data had to satisfy both of the following criteria:

- First, the activity to which the data related had to involve ‘creation’ for a unique or distinctive experience.
- Second, the researchers had to be confident that the data category was overwhelmingly arts-related.

The research also excluded some specific data categories – first, those related to creative design (because they were mostly geared to mass commercial production); and second, categories relating to the film industry (because it wasn’t possible to isolate the relevant data adequately).

Given the definition of the arts used for this research and data limitations, we note that this working paper reflects findings for the substantively not-for-profit arts-related sector.

## The main activity categories used

The following arts-related activities (which are based on Statistics New Zealand’s industry categories) were selected as the main areas for the research:

- Book publishing
- Professional photographic services
- Arts education
- Museum operation
- Performing arts operation
- Creative artists, musicians, writers and performers
- Performing arts venue operation.

Overall, the research and analysis in this report takes a cautious approach to deciding what data should be included. As a result, the findings may be conservative – rather than generous – in describing the economic profile of the New Zealand arts sector.

## Types of data profiled and the structure of this working paper

This research profiles:

- arts-related employment and earnings (see Section 2, at page 12)
- arts-related sales and value added (see Section 3, at page 18)
- arts-related household spending (see Section 4, at page 22), and
- government and other funding for the arts (see Section 5, at page 23).

Finally, the research uses an Input-Output<sup>1</sup> framework to provide an overall economic picture of the arts in New Zealand (see Section 6, at page 25).

## Specific findings

The research resulted in the following findings:

- There was a rise over time in the total number of people employed in arts-related industries, from 13,100 in 2006 to 14,600 in 2013. Of those employed in arts-related industries in 2013, less than half (42%) were working in arts-related occupations, with the other 58% employed in other occupations such as accountancy.
- While arts-related employment rose between 2006 and 2013, sales data suggests that arts-related activity hasn't yet regained the peak reached in 2008.
- Total household spending on the arts, which is estimated to have been about \$433 million in 2006/07, rose to \$538 million in 2010.
- The arts involve a considerable amount of services and products that are not sold to consumers at market prices ('non-market activity').
- For 2006/07, sales plus non-market activity (gross outputs) of the arts-related industries amounted to about \$0.9 billion, with value added (the return to labour and capital) of about \$0.4 billion. (We note that 2006/07 is the latest year for which the most integrated data is available.)
- Government support for the arts (both central and local government) is difficult to quantify, as there are multiple funding streams and it's not always possible to identify funding for specific arts-related activities within the broader ranges of activities supported.
- The arts-related industries selected for this research account for about 0.56% of total employment in New Zealand, but for only about 0.24% of GDP. This suggests that the return to labour and capital (value added) is relatively low. However, given the cautious approach used for defining 'the arts' for this research, it's likely that both of those figures understate the real economic contribution of the arts.

## Towards a more accurate picture of the arts sector

This research provides a useful starting point for gaining a better understanding of the economic characteristics of the New Zealand arts sector. Further understanding and more accurate measurements will require better and more up-to-date information. Information about how much time New Zealanders spend on arts-related activities would also be useful.

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<sup>1</sup> An input-output framework ensures that expenditure by consumers matches income earned by providers.

# 1. Introduction

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In recent years there has been greater interest in gaining a better understanding of how the arts contribute to economic and social outcomes and in measuring that contribution more accurately (Americans for the Arts, 2010; Arts Council England, 2013; Australia Council, 2014; University of Western Sydney, 2005). International literature has repeatedly demonstrated the positive social contribution made by the arts sector (Arts Council England, 2004; Carnwath & Brown, 2014; Ruiz, 2004; Staricoff 2004). Although interpreting that research is made more complicated by the inconsistent definitions used for ‘the arts’, all of the research generally shows that – however the term is defined – the arts are associated with positive economic and social outcomes.

Creative New Zealand and Manatū Taonga, the Ministry for Culture and Heritage commissioned the research in this working paper to bring together available national-level data, with the objectives of providing an understanding of the economic characteristics of the arts sector in New Zealand and of identifying what additional information is needed to improve this understanding

This project will contribute to Creative New Zealand’s work to better understand New Zealand’s art sector and determining further research needs, and to the public value research strand of the Ministry’s policy research programme. The public value research strand identifies a broad range of tangible and intangible benefits that the arts can contribute to, one of which is direct economic outcomes.

## Defining ‘the arts’

For this research ‘the arts’ are defined to align with the kinds of activities that Creative New Zealand and the Ministry focus on. However, because the research is limited to secondary data analysis (that is, the data wasn’t collected specifically for the purpose of this analysis), the data and the way in which it was collected were not the most ideal for this analysis.

For that reason, the process of deciding what data categories to include or exclude was a complex one. The decisions were based on the following principles:

1. If the data category involved creative expression for an original artistic work or performance, it was included.
2. Alternatively, if the data category was defined well enough that the researchers could be certain that the vast majority of that data in the category related to the arts, that category was also included.
3. **But** if including a data category couldn’t be reasonably and logically defended against criticism that it was an exaggeration to see it as arts-related, then the category was excluded.

The aim was that those principles would capture the arts-related activities intended to be covered by the Arts Council of New Zealand Toi Aotearoa Act 1994 (now replaced by the Arts Council of New Zealand Toi Aotearoa Act 2014, which isn’t materially different for our purposes here). The Act includes the following definitions relevant to this discussion:

- **‘Projects’** is defined as including productions, workshops, educational programmes, individual art works, programmes involving individuals, companies, or organisations, and other kinds of arts activities.



- **‘Community arts’** is defined as meaning projects undertaken within a local community (a) that may represent either a specific geographical area or defined community of interest; and (b) that allow for access and participation by the wider community. The definition also specifies that ‘community arts’ includes recreational arts.
- **‘Professional arts’** means projects that provide significant income for those undertaking the projects.

Creative design activities such as graphic design and fashion design were excluded from the research, as most of the output of this type of activity involves mass commercial production. Classifications relating to the film industry were also excluded, because film-related classifications were grouped in such a way that it was impossible to isolate figures that related to the arts in New Zealand. Given the definition of the arts used for this research and data limitations, we note that this working paper reflects findings for the substantively not-for-profit arts-related sector.

## Use of Statistics New Zealand classifications

Most of the data used in this research is drawn from Statistics New Zealand datasets and is reported according to their coding classifications for occupations and industries.

Under that classification system a significant proportion of arts activities are not captured with sufficient detail to allow them to be readily identified and analysed. For this research a cautious, rather than generous, approach has been taken in deciding what activity categories should be included in the analysis, as discussed above (Under ‘Defining “the arts”’). As a result, this report is more likely to underestimate than overestimate the economic characteristics of the arts sector. However, despite that qualification, this analysis provides a useful starting point for understanding the economic characteristics of the New Zealand arts sector and its contribution to the broader New Zealand economy.

Below are the Statistics New Zealand industry and occupation categories that were used for this analysis. The relevant statistical codes and details of the corresponding primary activities are provided in Appendix A (see page 30). Further technical information about the statistical classifications and detailed data and calculations is set out in appendices B to E, each of which relates to a different section of this working paper.

The industry categories include activities that would not be considered to be arts-related activities but could not be separated, as noted below:

Industries	
Book publishing <sup>2</sup>	Enterprises mainly engaged in publishing (creating and disseminating) books, including atlases, textbooks and travel guides
Professional photographic services	Enterprises mainly engaged in providing still, video or computer photography services, including the videotaping of special events such as weddings.
Arts education <sup>3</sup>	Enterprises mainly engaged in providing non-vocational

<sup>2</sup> Atlases, textbooks etc are not part of the arts and should ideally be excluded.

<sup>3</sup> Includes adult, community and ‘other’ education related to the arts, but excludes arts education that is part of the normal syllabus in preschool, school, and tertiary-level education.

	instruction in the arts, including art, dance, drama and music.
Museum operation <sup>4</sup>	Enterprises mainly engaged in preserving and exhibiting heritage objects and artefacts and/or visual arts and crafts with aesthetic, historical, cultural, and/or educational value. This class also includes people operating historical places, sites or houses.
Performing arts operation	Enterprises mainly engaged in providing or producing live theatrical or musical presentations or performances. These are people who aren't usually involved in creating original artistic or cultural works.
Creative artists, musicians, writers and performers	Independent (freelance) individuals or groups who are mainly engaged in regularly creating original artistic or cultural works and who may or may not also produce and perform their works. This class also includes units providing independent technical expertise necessary for these productions. It also includes celebrities engaged in endorsing products or making speeches or public appearances for which they receive a fee, which are, however, activities not considered to be arts-related.
Performing arts venue operation	Enterprises mainly engaged in operating venues for presenting and rehearsing performing arts.

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### Occupations

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Gallery or Museum Curator	Singer
Conservator	Music Teacher (Private Tuition)
Photographer	Dancer or Choreographer
Photographer's Assistant	Dance Teacher (Private Tuition)
Author	Actor
Painter (Visual Arts)	Actors, Dancers and Other Entertainers nec <sup>5</sup>
Potter or Ceramic Artist	Artistic Director
Sculptor	Art Director (Film, Television or Stage)
Visual Arts and Crafts Professionals nec <sup>5</sup>	Director (Film, Television, Radio or Stage)
Art Teacher (Private Tuition)	Director of Photography
Composer	Program Director (Television or Radio)
Music Director	Stage Manager
Musician (Instrumental)	Technical Director
Music Professionals nec <sup>5</sup>	Musical Instrument Maker or Repairer
Entertainer or Variety Artist	

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<sup>4</sup> Includes core arts-related activities as well as heritage-related activities that would ideally be excluded.

<sup>5</sup> nec = not elsewhere classified.

## Analysis approach and format of this working paper

Our analysis approach uses an Input-Output (IO) framework. An Input-Output table provides an internally consistent measure of sales and purchases within an industry. The next sections of this report (sections 2 to 5) present data relating to the contributing components for this framework, namely:

- arts-related employment and earnings (see Section 2, at page 12)
- arts-related sales and value added (see Section 3, at page 18)
- arts-related household spending (see Section 4, at page 22), and
- government and other funding for the arts (see Section 5, at page 23).

The report's final section then describes the IO framework and uses this data to develop an overall economic profile of the arts in New Zealand (see Section 6, at page 25).

## 2. Employment and earnings

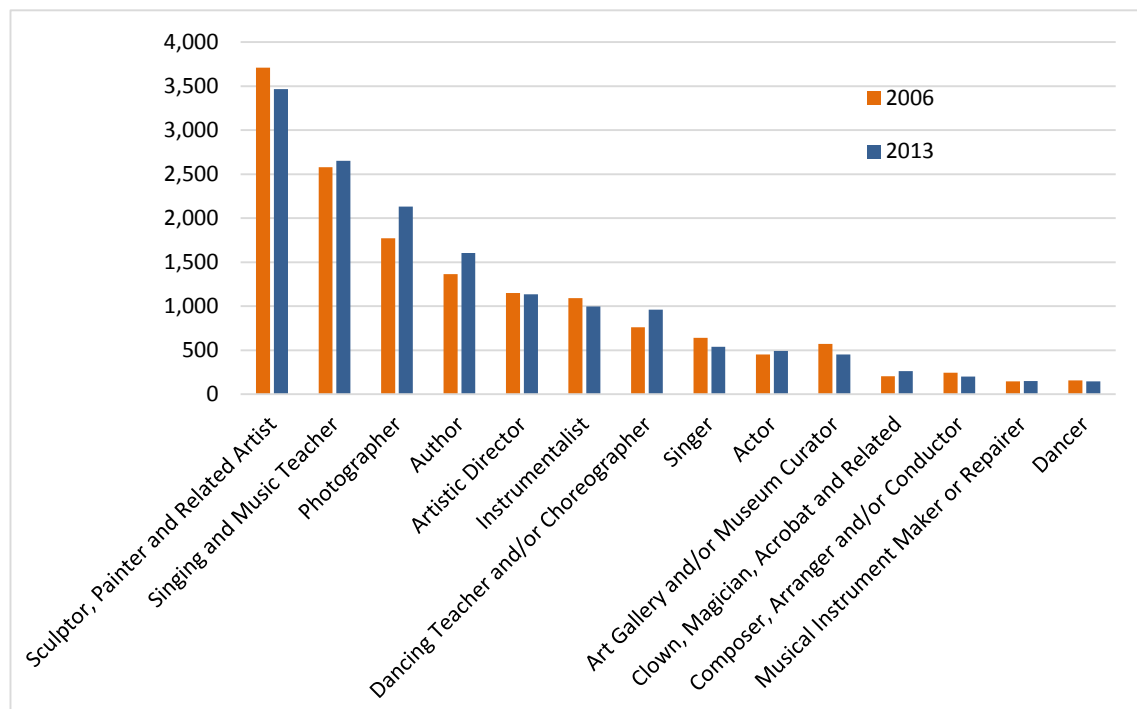
### Employment

This section examines employment in arts-related occupations and arts-related industries, and associated earnings. Arts-related employment (including both employees and the self-employed) is reported both in terms of people employed in arts-related occupations (who may or may not work in arts-related industries) and in terms of people employed in arts-related industries (who may or may not be in arts-related occupations).

An example of someone in an arts-related occupation who doesn't work in an arts-related industry would be a music teacher in a school, while an example of someone in an arts-related industry but not in an arts-related occupation would be a clerical worker in a museum.

Total self-reported employment in arts-related occupations in 2006 was just over 14,800, compared with just under 15,200 in 2013, according to census data. These occupations were distributed across 14 broad occupation categories, as shown in Figure 1 below. The largest groups are 'Sculptors, Painters and Related Artists', and 'Singing and Music Teachers'.

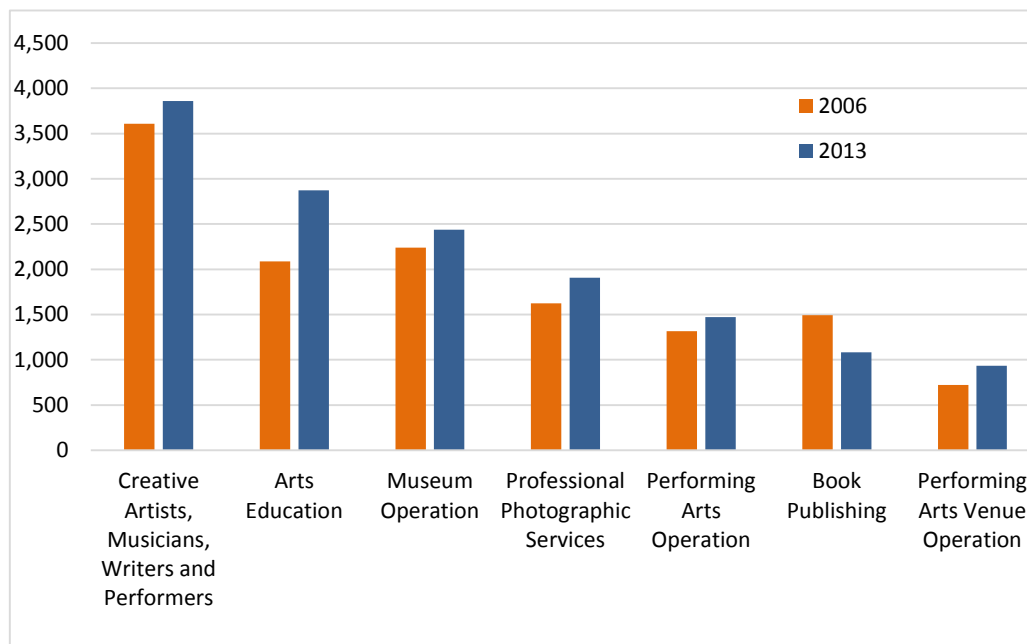
**Figure 1: Employment by occupation in 2006 and 2013**



Source: 2006 and 2013 Censuses of Population and Dwellings, Statistics New Zealand

In 2006 there were just under 13,100 people employed in arts-related industries, and this figure increased to 14,600 in 2013. Numbers for each of the main industries these people were employed in are shown in Figure 2.

**Figure 2: Employment by arts-related industry in 2006 and 2013**



Source: 2006 and 2013 Censuses of Population and Dwellings, Statistics New Zealand

Table 1 below shows whether the 15,168 people working in arts-related occupations in 2013 were working in arts-related industries or other industries. It's notable that well under half of people employed in arts-related occupations (6,300, or 42%) were also employed in an arts-related industry. The table also shows how many of the 14,571 people employed in arts-related industries in 2013 were working in arts-related occupations: the proportion is again well under half (43%).

**Table 1: Employment in arts-related occupations and industries 2013**

	Arts-related Industries	Other Industries	Not elsewhere included	Total
Arts-related occupations	6,300	7,869	996	15,168
Other occupations	7,971			
Not elsewhere included	297			
Total	14,571			2,001,009

Source: 2013 Census of Population and Dwellings, Statistics New Zealand

Further detail about which industries people in arts-related occupations were employed in is presented in Table 1b below.

**Table 1b: Employment in arts-related occupations across arts-related and other industries 2013**

Occupation	Book Publishing	Professional Photographic Services	Arts Education	Museum Operation	Performing Arts Operation	Creative Artists, Musicians, Writers and Performers	Performing Arts Venue Operation	Total Selected Arts Industries	Other Industries	Not Elsewhere Included	Total
Gallery or Museum Curator				183		3	3	192	180		375
Conservator				30		3		30	42	3	75
Photographer	6	1,221	6	9		15	3	1,260	798	54	2,112
Photographer's Assistant		9						9	9		18
Author	105	6	3	9	9	426	3	561	927	117	1,605
Painter (Visual Arts)	3	12	12	42	6	564		642	1,491	246	2,379
Potter or Ceramic Artist						12		15	147	12	171
Sculptor			3			84		87	75	15	180
Visual Arts and Crafts Professionals nec <sup>1</sup>						21		21	324	18	363
Art Teacher (Private Tuition)			69	12		24		111	246	15	372
Composer					9	39		51	48	3	105
Music Director			6		12	6		24	75		96
Musician (Instrumental)			48		330	204	6	597	315	72	981
Music Professionals nec <sup>1</sup>					3	3		3	9		15
Entertainer or Variety Artist				3	48	144	9	207	195	27	429
Singer					21	24		48	45	12	108
Music Teacher (Private Tuition)			1,263		21	21	6	1,317	1,020	312	2,652
Dancer or Choreographer			21		54	12	3	93	45	6	144
Dance Teacher (Private Tuition)			600		36	3		645	291	27	960
Actor			3		78	57	24	159	309	21	492
Actors, Dancers and Other Entertainers nec <sup>1</sup>				6	15	36	6	63	183	15	261
Artistic Director			3		18		3	24	18		45
Art Director (Film, Television or Stage)			3		3	6	0	9	165		174
Director (Film, Television, Radio or Stage)		6	9		33	18	6	75	339	6	417
Director of Photography		6						9	54		63
Program Director (Television or Radio)									21		18
Stage Manager					15	3	6	27	36		63
Technical Director						6		12	345		354
Musical Instrument Maker or Repairer				3		3		6	129	18	150
<b>Total Selected Arts-Related Occupations</b>	<b>114</b>	<b>1,269</b>	<b>2,058</b>	<b>309</b>	<b>717</b>	<b>1,752</b>	<b>87</b>	<b>6,300</b>	<b>7,869</b>	<b>996</b>	<b>15,168</b>
Other Occupations	948	618	753	2,079	738	2,025	813	7,971	1,849,290	28,173	1,885,434
Not Elsewhere Included	24	24	57	54	21	84	33	297	49,665	50,445	100,407
<b>Total Employed</b>	<b>1,083</b>	<b>1,908</b>	<b>2,871</b>	<b>2,439</b>	<b>1,473</b>	<b>3,861</b>	<b>933</b>	<b>14,571</b>	<b>1,906,824</b>	<b>79,614</b>	<b>2,001,009</b>

Note 1. nec = not elsewhere classified

Source: 2013 Census of Population and Dwellings, Statistics New Zealand

Further insight into the nature of arts-related employment in New Zealand can be gained by comparing the findings from the 2013 census with Statistics New Zealand's Integrated Data Infrastructure (IDI). The IDI uses Inland Revenue payroll data on the number of filled jobs in the middle month of each quarter, whereas census data is self-reported and, strictly speaking, applies only to the week in which the census is undertaken.

For the whole year ended March 2013, employment in the arts industry according to the IDI is estimated at about 12,400 (or about 85% of the census figure for employment by industry), suggesting rather fewer people who are actually in paid employment over the course of an entire year. This may be caused by an element of project based work

To provide additional context for understanding employment in the arts, we can consider other industries that compete for discretionary spending. The research looked at IDI data on combined employment in the three sports industries, 'Sports and Physical Recreation Clubs and Sports Professionals', 'Sports and Physical Recreation Venues, Grounds and Facilities Operation' and 'Sports and Physical Recreation Administrative Service' – the total was 13,800 people in 2012/13, comparable to the arts-related figure. On a rather larger scale the Café and Restaurant industry employed over 56,000 people in 2012/13.

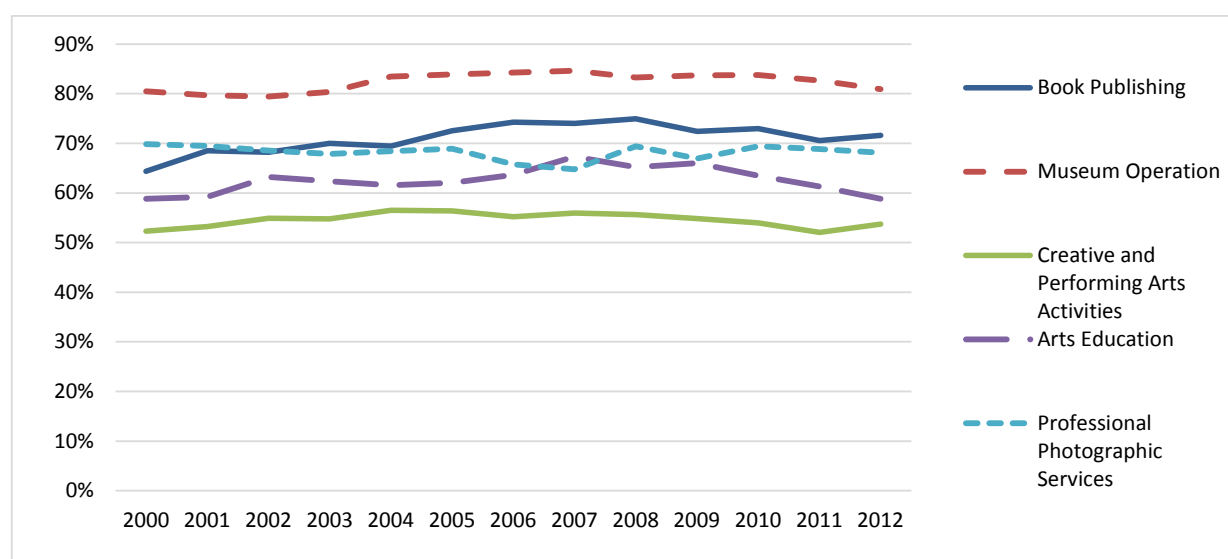
Total employment in New Zealand in 2012/13 was around 2.2 million (based on the IDI). Therefore employment in arts-related industries accounted for only about 0.56% of total employment, while people in arts-related occupations (regardless of which industry they worked in) made up 0.80% of total employment.

## Types of employment

Statistics New Zealand's Integrated Data Infrastructure data can also be used to examine the extent to which employment in the arts sector is primary or secondary and the extent to which it involves self-employment.

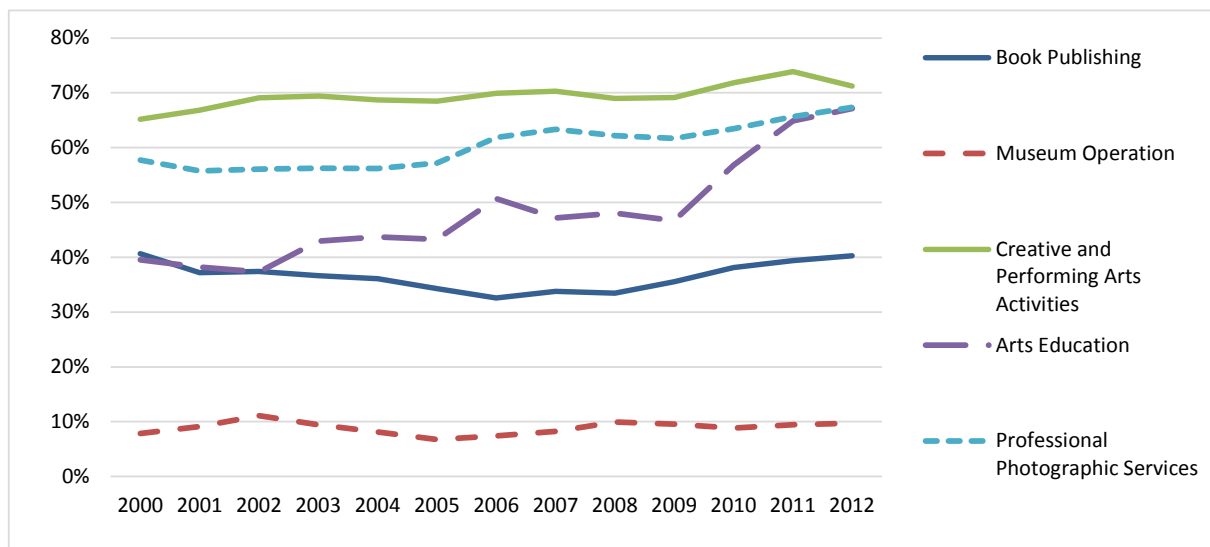
Figure 3 shows, by arts-related industry, the proportion of employment in each industry that is the individual's primary employment, while Figure 4 shows what proportion of employment in each industry is self-employment.

**Figure 3: Proportion of employment that is primary employment**



Source: Integrated Data Infrastructure, Statistics New Zealand

**Figure 4: Proportion of employment that is self-employment**



Source: Integrated Data Infrastructure, Statistics New Zealand

Museum Operation has the highest ratio of primary to total employment. That industry also has the lowest ratio of self-employed people to employees – clearly there are few self-employed people working in museums. In contrast, the Creative and Performing Arts Activities industry has a relatively low proportion of people who classify their employment as primary employment, while over 60% of employment in that industry is self-employment.

The proportions shown in Figures 3 and 4 are fairly stable over time, except for the self-employment ratio in the Arts Education industry, which has risen markedly. Further detail is provided in Appendix B (see page 34), which shows that in recent years much of the secondary employment in three industries – Creative and Performing Arts Activities; Arts Education; and Professional Photographic Services – was self-employment.

## Earnings

Table 2 shows the estimated average earnings of people employed (either as employees or self-employed) in all arts-related industries. Further details are provided in Appendix B.

**Table 2: Estimated average earnings in arts-related industries**

Year	Annual Earnings
2005/06	\$31,300
2006/07	\$32,000
2007/08	\$33,500
2008/09	\$35,000
2009/10	\$35,700
2010/11	\$34,990
2011/12	\$36,300

Source: Integrated Data Infrastructure, Statistics New Zealand



The figures shown in Table 2 above suggest the arts sector is providing relatively modest remuneration to its employees in comparison to an economy-wide average in 2009/10 of about \$49,800.

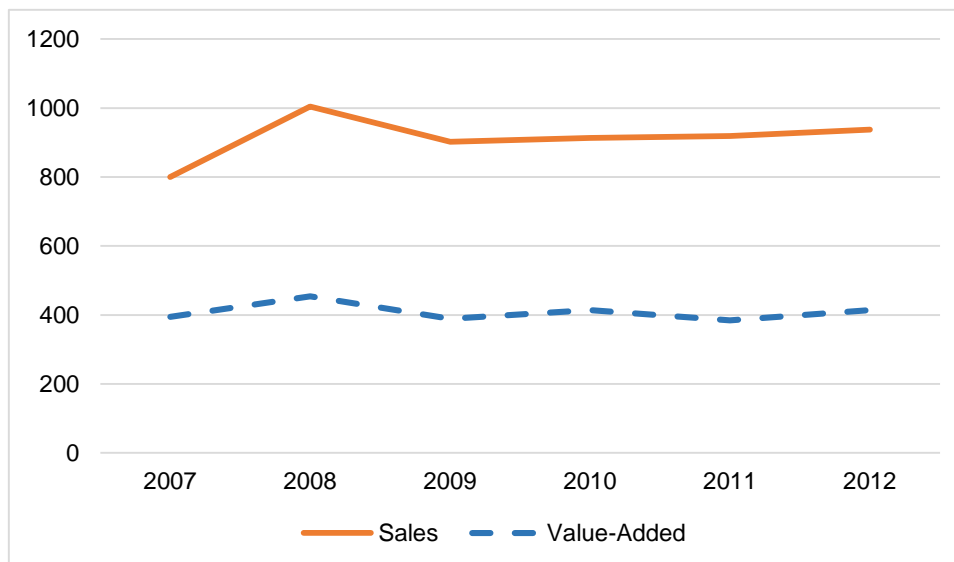
### 3. Sales and value added

The value of the sales of goods and services in an industry is a common way of measuring the industry's size. Figure 5 below shows total sales in the arts-related industries from 2007 to 2012. Sales are currently around \$900 to \$950 million, and have not yet regained their 2008 peak of \$1,004 million, before the global financial crisis. The data are presented in terms of the sale prices for the year reported, without any adjustment for inflation. If the figures are inflation-adjusted, the difference in sales in recent years compared to 2008 would probably be even greater.

Another measure of industry size is value added. Value added is calculated by subtracting the inputs that are used in the production of a good or service – inputs such as paper, energy, legal services and transport.<sup>6</sup> Using value added as a measure also removes the double counting that exists in sales. For example, an author may sell a manuscript to a publisher, who then on-sells it in the form of a book for a set price. This price has been set by the publisher to include a component that is payable to the author when a book is sold. This means that part of the value of sales is counted twice – as income to the author and as income to the publisher. Value added corresponds to contribution to gross domestic product (GDP).

Figure 5 shows that value added across the arts-related industries has been around \$400 million in recent years, and has not yet regained the peak of over \$450 million achieved in 2008.

**Figure 5: Sales and value-added over time (\$m)**



Source: Integrated Data Infrastructure, Statistics New Zealand

<sup>6</sup> What is left is the return to labour (wages and salaries) and the return to capital (depreciation and operating surplus). There may also be a component of indirect taxation.

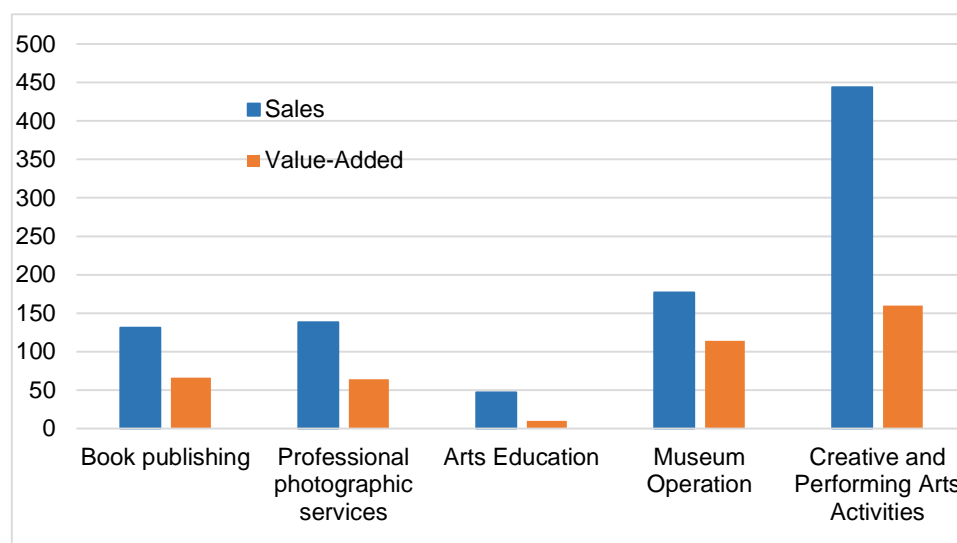
## Sales and value added by industry

Figure 6 presents the sales and value-added data for 2012 by industry. Creative and Performing Arts Activities is the largest industry by both measures. By contrast, value added in the Arts Education industry is close to zero, indicating that little net income is being earned in this industry.

Sales and value-added data over time is presented in Tables 3 and 4. Notably, the value-added figures for Arts Education and for Museums Operations are either negative or relatively small (the ranges for each industry are respectively -2 to 5, and 8 to -15, in \$ million). It's therefore clear that these industries would be commercially unsustainable without donations and government funding (such as local government funds and through departmental votes and lottery funding).<sup>7</sup>

We also note that it's possible that some income reported as wages in fact represents a return to capital invested. Among the self-employed this type of misclassification is quite common. For example a self-employed music teacher should ideally be earning a return on the capital invested in musical instruments, and perhaps on a vehicle used to visit clients or on home premises used for providing lessons; but in practice these assets may be replaced out of the household budget and all revenue recorded as wages and salaries.

**Figure 6: Sales and value added by industry 2012 (\$m)**



Source: Integrated Data Infrastructure, Statistics New Zealand

**Table 3: Sales in Current Prices (\$m)**

Description	2007	2008	2009	2010	2011	2012
Book publishing	250	290	177	183	180	131
Professional photographic services	89	102	130	117	137	138
<b>Excluding funding from government, donations and subscriptions</b>						
Arts Education	20	24	19	19	25	31

<sup>7</sup> This data seems to exclude some government support for arts activities. See Section 5 (page 23).

Museum Operation	71	84	93	78	75	76
Creative & Performing Arts Activities	324	407	360	390	396	436
<b>Including funding from government, donations and subscriptions</b>						
Arts Education	35	42	36	37	41	47
Museum Operation	102	163	186	169	158	177
Creative & Performing Arts Activities	324	407	373	407	403	444
<b>Total</b>	<b>800</b>	<b>1004</b>	<b>902</b>	<b>913</b>	<b>919</b>	<b>937</b>

Source: Integrated Data Infrastructure, Statistics New Zealand

**Table 4: Value-added in current prices (\$m)**

<b>Description</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Book publishing	123	128	79	79	85	66
Professional Photographic Services	44	45	62	54	56	64
<b>Excluding funding from government, donations and subscriptions</b>						
Arts Education	-2	-2	-1	-2	1	5
Museum Operation	8	-5	-1	-10	-11	-15
Creative & Performing Arts Activities	127	142	119	146	113	119
<b>Including funding from government, donations and subscriptions</b>						
Arts Education	4	3	2	3	4	10
Museum Operation	68	101	102	102	102	114
Creative & Performing Arts Activities	156	177	144	176	137	160
<b>Total</b>	<b>395</b>	<b>454</b>	<b>389</b>	<b>414</b>	<b>384</b>	<b>414</b>

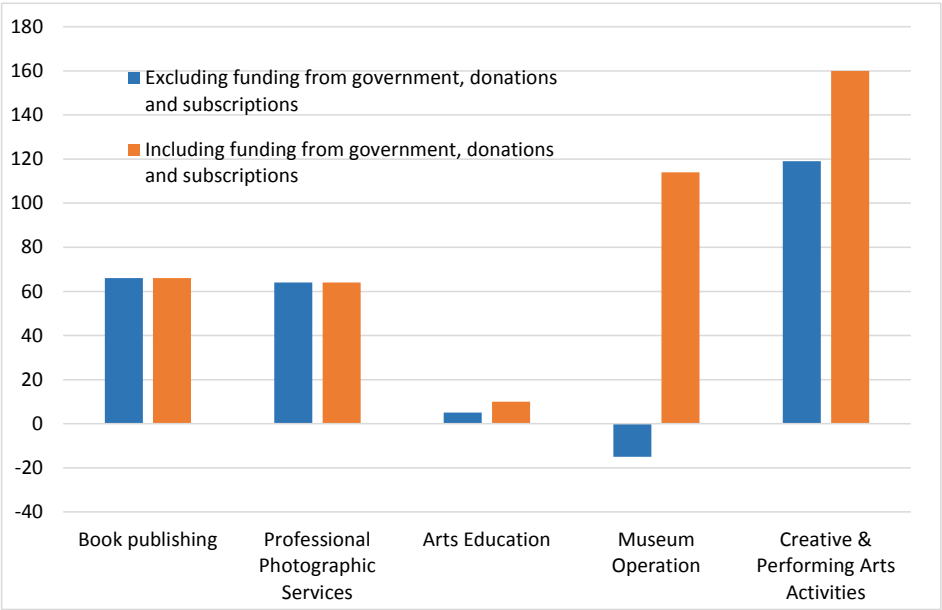
Source: Integrated Data Infrastructure, Statistics New Zealand

## Government funding and other non-market support

The low value-added finding (which combines returns to labour and capital) indicates that some arts-related industries are unable to charge market prices for all of their activities, perhaps because higher prices would deter potential consumers. In these situations non-market sources of income are essential for these industries to be sustainable and for broad sections of New Zealanders to continue to be able to enjoy the arts.

The bar chart in Figure 7 shows the importance of government support for 'Museum Operation', 'Creative and Performing Arts Activities' and, to a lesser extent, 'Arts Education' for 2012.

Figure 7: Value added in 2012 for arts-related industries



Source: Integrated Data Infrastructure, Statistics New Zealand

## 4. Household spending

Another indicator of the size of the arts sector is spending by households on arts-related goods and services. Table 5 below presents some broad categories of spending for 2007 and 2010.

**Table 5: Household spending on arts-related goods and services (\$m)**

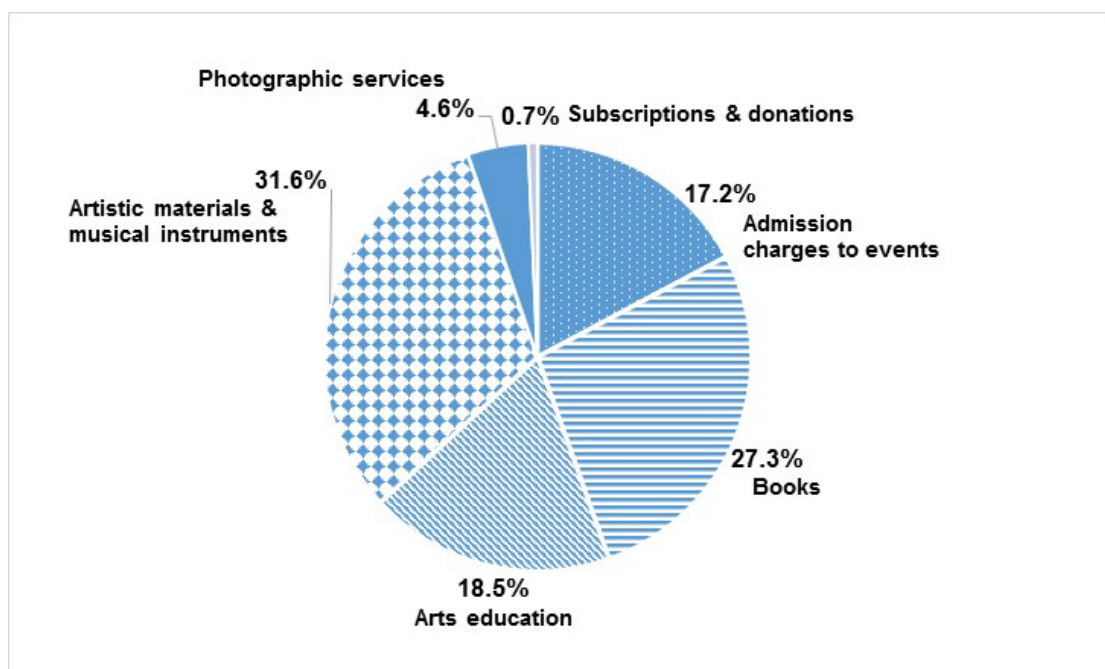
	2007	2010
Admission charges to events	78.4	92.7
Books	136.9	147.1
Arts education	61.5	99.8
Artistic materials and musical instruments	125.9	170.2
Photographic services	28.3	24.6
Subscriptions and donations	1.6	3.7
Total	432.7	538.1

Source: Household Expenditure Survey, Statistics New Zealand

The largest expenditure category in 2007 was 'Books', at around \$137 million. However, in 2010 expenditure on 'Artistic Materials and Musical Instruments' topped the list at \$170 million.

Expenditure on 'Arts Education' in 2010 was almost \$100 million. Another broad expenditure group is 'Admission to Events and Exhibitions', which for 2010 comes to just under \$93 million. Appendix D provides more detail on how these numbers have been calculated (see page 39).

**Figure 8: Composition of household spending on the arts 2010**



Source: Household Expenditure Survey, Statistics New Zealand

## 5. Government and other funding

### Government funding for the arts

Government support for the arts is difficult to quantify, as it is wrapped up in funding for cultural activities generally and delivered across a range of portfolios. At the time of this research, there was no readily available combined data on recent overall government funding for the arts. Therefore, a range of information sources was considered, some broader and some narrower than the scope of this research, in order to develop some informed estimates.

Table 6 below presents specific arts-related funding information. This covers a total estimated funding of around \$181 million, but this is a very approximate figure. We note that this figure is rather higher than the estimate of \$140 million that we've derived from the overall Input-Output calculation for 2006/07 in the following section (see page 25), but there is of course a six-year gap between the two estimates.

**Table 6: Public funding for the arts**

Funding Source	Amount	Source/comment
Creative New Zealand	\$15.7m	The Estimates of Appropriations 2014/15: Vote Arts, Culture and Heritage
Creative New Zealand	\$37.4m	New Zealand Lottery Grants Board – Creative New Zealand Annual Report 2014
Te Papa <sup>8</sup>	\$32.6m	The Estimates of Appropriations 2014/15: Vote Arts, Culture and Heritage
NZ Symphony Orchestra	\$13.4m	
NZ Music Commission	\$1.6m	
Royal NZ Ballet	\$4.4m	
Te Matatini	\$1.2m	
Local government spending on museums & art galleries	Approx \$50m	<i>Government Spending on Culture 2000-2004</i> , Statistics New Zealand. However, new data from MCH suggests that local government funding for museums could currently be around \$80-\$85m, while local authority financial statistics suggest \$92m in 2011 for museums and galleries.
Local government spending on cultural venues	Approx \$25m	

<sup>8</sup> A substantial part of this funding will be heritage-related rather than arts-related.

## Other estimates of government funding

NZIER (the New Zealand Institute of Economic Research) estimates that local government spends more than \$2 billion on heritage, culture and recreation, but of course those areas have a much broader scope than simply the arts.<sup>9</sup>

The Ministry for Culture and Heritage estimates that government (excluding the Lottery Grants Board) spends \$570 million on cultural activities.<sup>10</sup> However, this includes broadcasting, film and libraries and archives, which are not within the scope of ‘the arts’ as the term is used for this research.

## Private funding

BERL (Business and Economic Research Ltd) estimates that \$77.9 million was provided to culture and recreation activities in 2011 by trusts, foundations, individuals and businesses.<sup>11</sup> Again, those areas have a wider scope than the arts.

## Composition of support for the arts

Table 7 presents preliminary results on the composition of support for the arts from a 2012 survey on sponsorship and giving commissioned by the Ministry for Culture and Heritage. The data suggests that total government funding (consisting of central, local and Lottery Grants Board funding) is roughly double (66%) the combined funding from private sources (corporate, trust and family sources – 34%).

**Table 7: Composition of support for the arts**

Government (Central, Local and Lottery Grants Board)	Corporate	Trusts, foundations, other	Individuals, couples, families	Total
66.1%	12.7%	14.3%	6.9%	100.0%

Source: Cultural organisations: Giving and Sponsorship survey 2012 (unpublished preliminary results), Manatū Taonga – Ministry for Culture and Heritage

If we take BERL’s estimate of \$77.9 million for private funding in 2011 as representing the 34% of total funding that comes from corporate, trust and family sources, this would give an estimate of government funding for 2011 of around \$156 million. However, this estimate would be on the high side given that BERL’s research had a broader scope than our current research; that therefore suggests that the estimate of government support derived from the overall Input-Output calculation – \$140 million – is a plausible one (for 2006/07 at least).

<sup>9</sup> NZIER (2013): *Regional Government Expenditure: Estimates of Core Crown Spending by Region*. Report to MBIE and Treasury.

<sup>10</sup> *New Zealand Cultural Policy* (an unpublished paper).

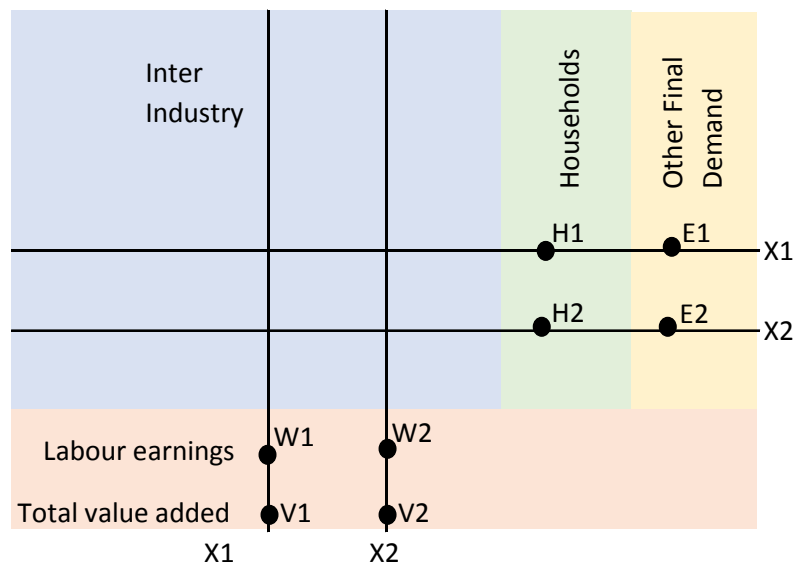
<sup>11</sup> BERL (2011): *Giving New Zealand: Philanthropic Funding 2011*. Report to Philanthropy New Zealand.



## 6. An overall picture

As discussed in Section 1, we use an Input-Output (IO) approach as described below to provide an internally consistent measure of an industry's sales and purchases.

**Schematic Input-Output table**



Here we assume that there are two arts-related industries, denoted as X1 and X2.

### Outputs:

'H' and 'E' on the right of the diagram represent sales of arts goods and services.

Along the rows are sales to households denoted by H1 and H2. In fact households buy commodities and services rather than industry output, but each commodity or service is produced by an industry or is imported.

Sales to other components of final demand include exports, investment and sales to government, denoted by E1 and E2.

### Inputs:

'W' and 'V' at the bottom of the diagram represent the costs of production, which, by definition, must equal the value of sales.

Wages and salaries paid in the two industries are denoted by W1 and W2.

Total value added, comprising wages and salaries, plus the return to capital (depreciation and operating surplus) and indirect taxes, is denoted by V1 and V2.

## Identifying appropriate industry groupings for IO calculations

The most recent set of IO tables published by Statistics New Zealand that can be used for the IO approach are for 2006/07 and they do not have industry groups that correspond closely to the arts. The closest match that we can obtain are subsets of four broad IO industry groupings, as shown in Table 8.

**Table 8: IO Industry mapping to arts-related industries**

<i>IO Industry grouping</i>	<i>Arts-related industry?</i>
<b>JJ111</b>	
Publishing (except Internet and Music Publishing)	
Newspaper publishing	
Magazine and other periodical publishing	
<b>Book publishing</b>	✓
Directory and mailing list publishing	
Other publishing (except software, music and internet)	
Software publishing	
<b>MN114</b>	
Veterinary services	
<b>Professional photographic services</b>	✓
Other professional, scientific and technical services nec <sup>12</sup> .	
<b>PP114</b>	
Sports and physical recreation instruction	
<b>Arts education</b>	✓
Adult, community and other education nec	
Educational support services	
<b>RS111</b>	
<b>Museum operation</b>	✓
Zoological and botanical gardens operation	
Nature reserves and conservation parks operation	
<b>Performing arts operation</b>	✓
<b>Creative artists, musicians, writers and performers</b>	✓
<b>Performing arts venue operation</b>	✓

In each case the four IO industry groupings (JJ111, MN114, PP114 and RS111) have wider coverage than would be desirable for the purposes of this current research. Starting with the IO data for these broader industry groupings we've attempted to obtain values that better fit our current research by using data set out in the earlier sections of this working paper on earnings, sales, value added, and household expenditure. Appendix E (see page 43) provides the detailed calculations.

To report our findings we define four arts-related industries:

1. Creative print (intended to be largely works of fiction)
2. Professional photography

<sup>12</sup> nec = not elsewhere classified.

3. Arts education (such as music, ballet and drama lessons)
4. Artistic activities (such as museums and performing arts)

## The results we obtained

Table 9 presents the results of our estimation. As an example of how to read the table, consider the industry ‘Artistic Activities’:

- Gross output<sup>13</sup> is \$426 million. Looking along the row, \$80m is purchased by other industries (such as advertising), \$147m is purchased by households, \$138m is purchased or funded by government, and \$60m is sold to foreign residents, including tourists temporarily in New Zealand.
- Looking down the column for Artistic Activities, \$202m of the total income of \$426m is spent on intermediate inputs such as materials, telecommunications, energy, and business services.
- This leaves \$224m as value added, of which \$215m is paid as wages and salaries and other compensation of labour such as ACC levies.
- A mere \$9m is available to cover any indirect taxes (likely to be small) and the return to capital, including the cost of depreciation and operating surplus.

Given the margins of error in the estimates it would be best to say that the gross output (sales plus non-market activity) of arts-related industries amounted to about \$900 million in 2006/07. The largest contribution came from Artistic Activities, with \$426m. Total value added in arts-related industries is \$400m. Again the largest contribution came from Artistic Activities. It also pays more in wages and salaries (\$215m) than the rest of the industries combined.

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<sup>13</sup> Gross output refers to sales or turnover, including non-market transactions.

**Table 9: The arts in an Input-Output framework 2006/07 (\$m)**

	Creative print	Professional photography	Arts education	Artistic activities	All Industries	Households	Government	Exports	Total incl. nec <sup>14</sup>
Creative print					181	89		13	283
Professional photography					51	28	2	5	89
Arts education						62			62
Artistic activities					80	147	138	60	426
					309	333	140	78	864
Intermediate inputs	164	45	40	202					451
Value-added	123	44	21	224					412
- of which									
Wages & salaries	66	44	16	215					340
Other value-added	57	0	5	9					72
Gross output	287	89	62	426					864

New Zealand's total GDP in 2006/07 was close to \$169 billion, so arts-related industries accounted for about 0.24% of that total. This figure is notably lower than the arts-related employment share of about 0.56% (noted in Section 2 above), and it again illustrates relatively low returns to labour and capital in the arts-related industries. However, given the cautious definition of 'the arts' used by this research, it's likely that those GDP and employment percentages both understate the economic contribution of the arts.

## Towards a more accurate picture of the arts sector

Measuring the economic contribution of the arts more accurately would require more and better data, including an updating of the 2006/07 IO table to provide a more recent estimate. In particular, it would be very useful to have better information on donations, subscriptions and funding by local and central government, corporates and households.

Further, some idea of the time that New Zealanders spend on arts-related activities would provide a more complete picture of the role of the arts in society. The Time Use Survey published by Statistics New Zealand has very aggregated information on participation in the arts, but could serve as a useful reference point for a more detailed survey.

<sup>14</sup> nec = not elsewhere classified.

# References and glossary

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## References

### Impact studies

Americans for the Arts (2010), *Arts & Economic Prosperity IV Summary Report*

Australia Council (2014), *Arts in Daily Life: Australian Participation in the Arts*

Centre for Economics and Business Research (2013), *The Contribution of the Arts and Culture to the National Economy*. Report for Arts Council England and the National Museums Directors' Council

University of Western Sydney (2005), *Social Impacts of Participation in the Arts and Cultural Activities: Stage Two Report Evidence, Issues and Recommendations*. Commonwealth of Australia

### Literature reviews

Arts Council England (2004), *The Impact of the Arts: Some Research Evidence*

Carnwath, J & Brown, A (2014), *Understanding the Value and Impacts of Cultural Experiences: A Literature Review*. Arts Council England

Ruiz, J (2004), *A Literature Review of the Evidence Base for Culture, the Arts and Sport Policy*. Research and Economic Unit, Scottish Executive Education Department

Staricoff, R (2004), *Arts in Health: A Review of the Medical Literature*. Arts Council England research report 36.

## Glossary

Gross output	Sales or turnover, including non-market transactions.
Value added	Gross output less expenditure on intermediate inputs such as raw materials, energy and business services. It is therefore equal to the combined return to labour (wages and salaries) and capital (gross operating surplus including depreciation). There may also be an indirect tax or subsidy component.
GDP	Gross Domestic Product – the total value added (payments to labour, depreciation, profit and indirect taxes) across all industries, plus other indirect taxes not paid by industries; mostly GST that is paid by final consumption. Final consumption comprises consumption by households, by government and goods and services used for gross fixed capital formation or for net changes in inventory.
Non-market goods and services	Goods and services provided to consumers either free of charge or at a price that is significantly below production costs – museum activities, for example. In many cases there is some funding that is not linked to specific services. Examples are local government support for the New Zealand Festival (the biennial arts festival), or subscriptions used to augment ticket sales at concerts.

# Appendix A: Industry and occupation codes

ANZSIC <sup>15</sup>	Industry
<b>J541300</b>	<p><b>Book publishing</b></p> <p>This class consists of units mainly engaged in publishing (creating and disseminating) books including atlases, textbooks and travel guides.</p> <p><u>Primary activities</u></p> <ul style="list-style-type: none"> <li>• Atlas publishing (except internet)</li> <li>• Book publishing (except internet)</li> <li>• Encyclopaedia publishing (except internet)</li> <li>• Technical manual publishing (except internet)</li> <li>• Textbook publishing (except internet)</li> <li>• Travel guide book publishing (except internet)</li> </ul> <p><u>Exclusions/References</u></p> <p>Units mainly engaged in:</p> <ul style="list-style-type: none"> <li>• publishing books exclusively on the internet are included in Class 5700 Internet Publishing and Broadcasting;</li> <li>• publishing music books and sheet music are included in Class 5521 Music Publishing;</li> <li>• printing books without publishing are included in Class 1611 Printing; and</li> <li>• writing books without publishing are included in Class 9002 Creative Artists, Musicians, Writers and Performers.</li> </ul>
<b>M699100</b>	<p><b>Professional photographic services</b></p> <p>This class consists of units mainly engaged in providing still, video or computer photography services, including the video taping of special events such as weddings.</p> <p><u>Primary activities</u></p> <ul style="list-style-type: none"> <li>• Portrait photography service</li> <li>• Professional photography service</li> <li>• Street photography service</li> <li>• Studio photography service</li> <li>• Video filming of special events (e.g. birthdays, weddings)</li> <li>• Wedding photography service</li> </ul> <p><u>Exclusions/references</u></p> <p>Units mainly engaged in:</p> <ul style="list-style-type: none"> <li>• retailing photographic equipment or supplies are included in the appropriate classes of Division G Retail Trade;</li> <li>• providing aerial surveying services are included in Class 6922 Surveying and Mapping Services;</li> <li>• motion picture and video production are included in Class 5511 Motion Picture and Video Production; and</li> <li>• developing, printing or other processing of photographic film are included in Class 9532 Photographic Film Processing.</li> </ul>

<sup>15</sup> For further information see: [www.stats.govt.nz/methods/classifications-and-standards/classification-related-stats-standards/industrial-classification.aspx](http://www.stats.govt.nz/methods/classifications-and-standards/classification-related-stats-standards/industrial-classification.aspx)

<b>P821200</b>	<p><b>Arts education</b></p> <p>This class consists of units mainly engaged in providing non-vocational instruction in the arts, including art, dance, drama and music.</p> <p><u>Primary activities</u></p> <ul style="list-style-type: none"> <li>• Acting and drama school operation</li> <li>• Dance and ballet school operation</li> <li>• Music school operation</li> <li>• Painting instruction</li> <li>• Performing arts school operation</li> <li>• Photography school operation</li> <li>• Sculpture instruction</li> </ul> <p><u>Exclusions/References</u></p> <p>Units mainly engaged in providing arts education leading to a tertiary qualification are included in the appropriate classes of Subdivision 81 Tertiary Education.</p>
<b>R891000</b>	<p><b>Museum operation</b></p> <p><u>Primary activities</u></p> <ul style="list-style-type: none"> <li>• Art gallery operation (except retail)</li> <li>• Art museum operation (except retail)</li> <li>• Historic or heritage place, site or house operation</li> <li>• Museum operation nec<sup>16</sup></li> <li>• Natural history and science museum operation</li> <li>• Social history museum</li> <li>• Transport and maritime museum operation</li> <li>• War memorial museum operation</li> </ul> <p><u>Exclusions/References</u></p> <p>Units mainly engaged in providing library services are included in Class 6010 Libraries and Archives; and operating retail art galleries are included in Class 4279 Other Store-Based Retailing nec.<sup>16</sup></p>
<b>R900100</b>	<p><b>Performing arts operation</b></p> <p><u>Primary activities</u></p> <ul style="list-style-type: none"> <li>• Circus operation</li> <li>• Dance and ballet company operation</li> <li>• Musical comedy company operation</li> <li>• Musical productions</li> <li>• Opera company operation</li> <li>• Orchestra operation</li> <li>• Performing arts operation nec<sup>16</sup></li> <li>• Theatre restaurant operation (mainly entertainment facility)</li> <li>• Theatrical company operation</li> </ul> <p><u>Exclusions/References</u></p> <p>Units mainly engaged in</p> <ul style="list-style-type: none"> <li>• creating original artistic or cultural works are included in Class 9002 Creative Artists, Musicians, Writers and Performers;</li> <li>• operating acting, drama, dance and ballet schools are included in Class 8212 Arts Education; and</li> <li>• operating venues for the presentation and rehearsal of performing arts are included in Class 9003 Performing Arts Venue Operation</li> </ul>
<b>R900200</b>	<b>Creative artists, musicians, writers and performers</b>

<sup>16</sup> nec = not elsewhere classified.

	<p><u>Primary activities</u></p> <ul style="list-style-type: none"> <li>• Artists</li> <li>• Cartooning</li> <li>• Choreography service</li> <li>• Composing (including musical composition)</li> <li>• Costume designing</li> <li>• Creative arts service</li> <li>• Journalistic service</li> <li>• Musicians</li> <li>• Playwriting or screenwriting</li> <li>• Producing or directing original artistic or cultural work</li> <li>• Sculpting</li> <li>• Set designing service</li> <li>• Speaking service (including radio and television announcing)</li> <li>• Theatre lighting design service</li> <li>• Writing (including poetry and comedy)</li> </ul> <p><u>Exclusions/References</u></p> <p>Units mainly engaged in</p> <ul style="list-style-type: none"> <li>• producing live theatrical or musical presentations or performances based on existing artistic and cultural works are included in Class 9001 Performing Arts Operation; and</li> <li>• operating casting agencies are included in Class 7211 Employment Placement and Recruitment Services</li> </ul>
<b>R900300</b>	<p><b>Performing arts venue operation</b></p> <p><u>Primary activities</u></p> <ul style="list-style-type: none"> <li>• Concert hall operation</li> <li>• Entertainment centre operation</li> <li>• Music bowl operation</li> <li>• Opera house operation</li> <li>• Performing arts venue operation nec<sup>17</sup></li> <li>• Playhouse operation</li> <li>• Theatre operation (except motion picture theatre)</li> </ul> <p><u>Exclusions/References</u></p> <p>Units mainly engaged in</p> <ul style="list-style-type: none"> <li>• operating motion picture theatres are included in Class 5513 Motion Picture Exhibition;</li> <li>• operating theatre restaurants mainly engaged in providing live theatrical productions with food and beverages are included in Class 9001 Performing Arts Operation; and</li> <li>• providing arts or sports event promotional services (without facilities) are included in Class 7299 Other Administrative Services nec.<sup>17</sup></li> </ul>

<sup>17</sup> nec = not elsewhere classified.



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**ANZSCO Occupation**

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224212 Gallery or Museum Curator  
234911 Conservator  
211311 Photographer  
399915 Photographer's Assistant  
212211 Author  
211411 Painter (Visual Arts)  
211412 Potter or Ceramic Artist  
211413 Sculptor  
211499 Visual Arts and Crafts Professionals nec  
249211 Art Teacher (Private Tuition)  
211211 Composer  
211212 Music Director  
211213 Musician (Instrumental)  
211299 Music Professionals nec  
211113 Entertainer or Variety Artist  
211214 Singer  
249214 Music Teacher (Private Tuition)  
211112 Dancer or Choreographer  
249212 Dance Teacher (Private Tuition)  
211111 Actor  
211199 Actors, Dancers and Other Entertainers nec  
212111 Artistic Director  
212311 Art Director (Film, Television or Stage)  
212312 Director (Film, Television, Radio or Stage)  
212313 Director of Photography  
212315 Program Director (Television or Radio)  
212316 Stage Manager  
212317 Technical Director  
399515 Musical Instrument Maker or Repairer

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## Appendix B: Employment and earnings

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### Employment

Table B1 shows primary employment in arts-related industries over time (from Statistics New Zealand's Integrated Data Infrastructure (IDI) database).

Table B3 presents additional employment data that includes secondary employment and a split between self-employment and wage/salary employment. Note that this data has been compiled after recent revisions to the IDI, so the figures may differ from those in Table B1, which have been retained and shown here because of the additional industry disaggregation.

### Earnings

Table B2 shows earnings of employees and self-employed people in arts-related industries, imputing average earnings for employees to the self-employed. Dividing total earnings by employment gives an estimate of mean earnings in art-related industries.

**Table B1: Primary employment in the arts-related industries**

		2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
J541300	Book publishing	1,444	1,450	1,432	1,386	1,295	1,249	1,212	1,125
M699100	Professional photographic services	1,393	1,421	1,528	1,571	1,530	1,539	1,556	1,599
P821200	Arts Education	587	718	819	916	946	1,138	1,297	1,282
R891000	Museum Operation	2,223	2,247	2,329	2,359	2,413	2,475	2,385	2,417
R900100	Performing arts operation	1,534	1,623	1,791	1,803	1,706	1,747	1,670	1,685
R900200	Creative artists, musicians, writers and performers	2,251	2,343	2,495	2,578	2,664	2,791	2,913	3,059
R900300	Performing arts venue operation	843	803	926	932	986	1,060	1,231	1,260
Total		10,276	10,604	11,320	11,545	11,540	11,998	12,265	12,426

Source: Statistics New Zealand IDI, ANZSIC06 industrial classification, 2013 is estimated.

**Table B2: Earnings by industry**

		2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
		\$m	\$m	\$m	\$m	\$m	\$m	\$m
J541300	Book publishing	68.1	66.0	67.8	68.8	63.0	60.6	61.2
M699100	Professional photographic services	39.9	43.7	48.2	52.9	49.4	52.8	53.8
P821200	Arts Education	11.3	15.5	17.0	18.6	19.0	23.2	28.0
R891000	Museum Operation	77.3	79.8	88.5	96.2	105.0	101.4	102.1
R900100	Performing arts operation	45.1	49.1	55.8	57.7	59.3	59.6	61.6
R900200	Creative artists, musicians, writers and performers	53.8	61.4	72.4	78.0	81.3	83.3	91.4
R900300	Performing arts venue operation	<u>25.6</u>	<u>24.3</u>	<u>29.0</u>	<u>32.5</u>	<u>34.5</u>	<u>37.9</u>	<u>47.0</u>
Total		321.2	339.7	378.8	404.6	411.6	418.8	445.1
Mean annual earnings in arts-related industries		\$31,300	\$32,000	\$33,500	\$35,000	\$35,700	\$34,900	\$36,300

Source: Statistics New Zealand Integrated Data Infrastructure, Infometrics' estimates for J541300

**Table B3: Employment composition in selected arts-related industries**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>Museum Operation (R891)</b>													
Primary employment	1755	1731	1866	1914	2100	2157	2283	2316	2418	2469	2472	2487	2421
Secondary employment	426	438	480	465	414	411	429	417	486	483	483	522	570
Total employment	2181	2169	2346	2379	2514	2568	2712	2733	2904	2952	2955	3009	2991
Primary wage and salary employment	1680	1656	1764	1821	2001	2076	2181	2226	2307	2355	2358	2370	2322
Primary Self-employment	75	78	102	93	99	81	102	93	114	111	114	120	99
Secondary wage and salary employment	330	318	318	333	312	318	327	288	306	315	333	354	378
Secondary self-employment	96	120	162	132	105	96	102	132	177	168	150	168	195
<b>Creative &amp; Performing Arts Activities (R900)</b>													
Primary employment	4062	4044	4023	4107	4470	4593	4638	4875	5211	5229	5424	5610	5865
Secondary employment	3705	3549	3312	3390	3441	3555	3762	3843	4152	4305	4629	5160	5052
Total employment	7767	7593	7335	7497	7911	8148	8400	8718	9363	9534	10053	10770	10917
Primary wage and salary employment	1680	1683	1575	1584	1695	1854	1806	1878	2049	2064	1995	1974	2265
Primary Self-employment	2379	2361	2445	2520	2775	2739	2829	2997	3162	3165	3432	3639	3603
Secondary wage and salary employment	1026	834	690	705	777	714	717	711	855	876	834	840	876
Secondary self-employment	2682	2718	2619	2685	2664	2841	3045	3135	3297	3426	3792	4320	4179
<b>Book Publishing (J5413)</b>													
Primary employment	1467	1575	1674	1644	1518	1503	1608	1623	1587	1497	1326	1299	1317
Secondary employment	813	723	780	705	669	570	558	570	531	570	492	543	522
Total employment	2280	2298	2454	2349	2187	2073	2166	2193	2118	2067	1818	1842	1839
Primary wage and salary employment	1209	1299	1374	1350	1266	1242	1320	1311	1281	1194	1014	990	972
Primary Self-employment	255	276	297	291	255	261	291	312	306	303	312	309	342

Secondary wage and salary employment	141	144	165	138	132	120	144	141	129	138	111	126	126
Secondary self-employment	672	579	621	570	534	450	414	429	402	432	381	417	399
<b>Professional Photographic Services (M6991)</b>													
Primary employment	1263	1248	1269	1266	1344	1425	1479	1527	1614	1641	1611	1671	1632
Secondary employment	546	549	582	600	621	642	771	831	711	810	711	756	765
Total employment	1809	1797	1851	1866	1965	2067	2250	2358	2325	2451	2322	2427	2397
Primary wage and salary employment	561	564	597	591	624	633	615	612	657	684	630	618	579
Primary Self-employment	699	681	672	675	723	792	864	915	957	960	981	1053	1053
Secondary wage and salary employment	204	231	213	222	240	252	243	252	225	255	222	216	204
Secondary self-employment	345	321	366	375	381	390	528	579	489	552	492	540	561
<b>Arts Education (P8212)</b>													
Primary employment	639	618	645	492	528	525	531	711	765	891	1005	1230	1272
Secondary employment	447	426	375	297	330	321	303	345	408	459	579	777	891
Total employment	1086	1044	1020	789	858	846	834	1056	1173	1350	1584	2007	2163
Primary wage and salary employment	417	423	447	291	315	300	270	387	408	495	462	486	492
Primary Self-employment	222	195	198	201	213	225	258	324	354	399	540	744	780
Secondary wage and salary employment	240	"	192	156	168	180	141	171	204	225	225	216	222
Secondary self-employment	207	204	183	138	162	141	165	174	210	231	360	558	672

Source: Statistics New Zealand IDI, ANZSIC06 industrial classification

# Appendix C: Production and sales

Tables C1 and C2 present estimates of sales and value added in arts-related industries.

**Table C1: Sales in Current Prices (\$m)**

ANZSIC06	Description	2007	2008	2009	2010	2011	2012
J541300	Book publishing	250	290	177	183	180	131
M699100	Professional photographic services	89	102	130	117	137	138
<b>Excluding funding from government, donations and subscriptions</b>							
P821200	Arts Education	20	24	19	19	25	31
R891000	Museum Operation	71	84	93	78	75	76
R90	Creative & Performing Arts Activities	324	407	360	390	396	436
<b>Including funding from government, donations and subscriptions</b>							
P821200	Arts Education	35	42	36	37	41	47
R891000	Museum Operation	102	163	186	169	158	177
R90	Creative & Performing Arts Activities	<u>324</u>	<u>407</u>	<u>373</u>	<u>407</u>	<u>403</u>	<u>444</u>
	Total	800	1004	902	913	919	937

**Table C2: Value Added in Current Prices (\$m)**

ANZSIC06	Description	2007	2008	2009	2010	2011	2012
J541300	Book publishing	123	128	79	79	85	66
M699100	Professional Photographic Services	44	45	62	54	56	64
<b>Excluding funding from government, donations and subscriptions</b>							
P821200	Arts Education	-2	-2	-1	-2	1	5
R891000	Museum Operation	8	-5	-1	-10	-11	-15
R90	Creative & Performing Arts Activities	127	142	119	146	113	119
<b>Including funding from government, donations and subscriptions</b>							
P821200	Arts Education	4	3	2	3	4	10
R891000	Museum Operation	68	101	102	102	102	114
R90	Creative & Performing Arts Activities	<u>156</u>	<u>177</u>	<u>144</u>	<u>176</u>	<u>137</u>	<u>160</u>
	Total	395	454	389	414	384	414

Source: Statistics New Zealand Annual Enterprise Survey.

In relation to the data in Tables C1 and C2, Statistics New Zealand warns that:

1. Data for 2011 and 2012 is provisional.
2. Because sample sizes and weights are designed at a higher level than for the detail shown, sample error at lower levels is not controlled for. Year-on-year data movements could be due to changing sample sizes.

## Appendix D: Household expenditure

Tables D1 and D2 show expenditure by households on goods and services that are broadly associated with the arts.

As well as goods and services that are included in our analysis, Tables D1 and D2 also include data for some other expenditure items that were omitted from other sections of this working paper because the data relevant to those sections wasn't available. The main examples of this are a number of commodities that were not included in the sales figures in Section 3, 'Sales and value added' – namely: non-arts-related forms of printed matter; raw materials and equipment (including musical instruments); CDs; and cinema admission.

Some of those items – notably equipment such as musical instruments and artistic raw materials – probably deserve to be included in the sales and value added figures. However, they are almost impossible to extract from industry Input-Output data as they make up very small proportions of the relevant industries (such as Other Manufacturing) in which the items are made.

While one could also defend including that part of the value of CD purchases that is returned to the artist, this component is only a small proportion of the retail price. The same is true of cinema admissions. However, the same argument could of course also be made in relation to books, which **are** included in the sales figures.

As a result of the data limitations explained above, decisions on what to include and what to exclude in this research have been more arbitrary than they should ideally have been.

**Table D1: Household spending 2007**

Spending Category	(\$m)
09.4.02.2.1.01 Admission charges to art galleries, museums, painting exhibs	6.7
09.4.02.1.0.02 Admission charges to theatres, ballets, concerts, plays	62.5
09.4.02.4.1.99 Charges for other cultural services nec <sup>18</sup>	9.2
09.4.02.1.0.01 Admission charges to cinemas, contributions to cinema clubs	124.9
	203.3
09.5.01.0.0.05 Leisure books	12.6
09.5.03.0.0.03 Programmes for concerts, theatre and sporting fixtures	0.6
09.5.01.0.0.07 Children's books	15.7
09.5.01.0.0.08 Music books, sheet music	4.6
09.5.01.0.0.01 Second-hand books	7.0
09.5.01.0.0.99 Books nec <sup>18</sup>	7.0
09.5.01.0.0.00 Books nfd <sup>19</sup> , book clubs from Books nfd <sup>19</sup> , book vouchers	167.7
	215.2
09.1.03.0.0.05 Records	1.7
09.1.03.0.0.02 Compact discs	87.0
09.1.03.0.0.00 Stereo cassette tapes, tapes nfd <sup>19</sup>	2.7
	91.4

<sup>18</sup> nec = not elsewhere classified.

<sup>19</sup> nfd = not further defined.

09.4.01.0.1.01 Music lessons, singing lessons	28.5
09.4.01.0.1.02 Dancing lessons	19.0
09.4.01.0.1.04 Art courses, hobby classes	11.6
09.4.01.0.1.05 Speech lessons, drama lessons	<u>2.4</u>
	61.5
09.2.00.2.0.03 Stringed non-electrical instruments	10.9
09.2.00.2.0.04 Wind instruments	2.7
09.2.00.2.0.05 Percussion instruments	3.9
09.2.00.2.0.06 Electrical/electronic musical instruments	18.2
09.2.00.2.0.07 Accessories for musical instruments	6.6
09.2.00.2.0.01 Second-hand musical instruments	7.2
09.2.00.2.0.00 Musical instruments nfd <sup>20</sup>	2.6
09.4.02.4.1.02 Picture framing	9.9
09.1.01.1.0.22 Photographic cameras, camera attachments	39.2
09.1.01.1.0.98 Photographic and cinematographic equipment nec <sup>21</sup>	11.9
09.1.01.1.0.03 Second-hand photographic and cinematographic equipment	3.9
09.5.04.0.0.06 Artist's materials	29.6
09.3.01.0.0.11 Handcraft equipment	1.8
09.3.01.0.0.14 Materials for pottery and ceramics	0.9
09.3.01.0.0.15 Handcraft materials (for canework, leatherwork, embroidery)	9.0
09.1.01.1.0.11 Video cameras	<u>6.9</u>
	165.2
09.4.02.4.1.04 Photographers' fees	28.3
09.4.02.4.2.04 Subscriptions and donations to cultural societies	1.6
<b>Total</b>	<b>766.5</b>

Source: Statistics New Zealand, Household Expenditure Survey

**Table D2: Household spending 2010**

Spending Category	(\$m)
09.4.02.2.1.01 Admission charges to art galleries, museums, painting exhibs.	6.3
09.4.02.1.0.02 Admission charges to theatres, ballets, concerts, plays	85.7
09.4.02.4.1.99 Charges for other cultural services nec <sup>21</sup>	0.7
09.4.02.1.0.01 Admission charges to cinemas, contributions to cinema clubs	<u>128.8</u>
	221.5
09.5.01.0.0.05 Leisure books	11.6
09.5.03.0.0.03 Programmes for concerts, theatre and sporting fixtures	1.8
09.5.01.0.0.07 Children books	18.8
09.5.01.0.0.08 Music books, sheet music	3.1
09.5.01.0.0.10 Book and audio tape sets	3.1
09.5.01.0.0.01 Second-hand books	11.6

<sup>20</sup> nfd = not further defined.

<sup>21</sup> nec = not elsewhere classified.



09.5.01.0.0.99 Books nec <sup>22</sup>	32.2
09.5.03.0.0.99 Miscellaneous printed matter nec <sup>22</sup>	1.8
09.5.01.0.0.00 Books nfd <sup>23</sup> , book clubs from Books nfd <sup>23</sup> , book vouchers	<u>147.1</u>
	231.1
09.1.03.0.0.02 Compact discs	68.2
09.4.01.0.1.01 Music lessons, singing lessons	54
09.4.01.0.1.02 Dancing lessons	28.9
09.4.01.0.1.04 Art courses, hobby classes	13.1
09.4.01.0.1.05 Speech lessons, drama lessons	<u>3.8</u>
	99.8
09.2.00.2.0.03 Stringed non-electrical instruments	13.1
09.2.00.2.0.04 Wind instruments	2.5
09.2.00.2.0.05 Percussion instruments	5
09.2.00.2.0.06 Electrical/electronic musical instruments	22.6
09.2.00.2.0.07 Accessories for musical instruments	9.3
09.2.00.2.0.01 Second-hand musical instruments	8.2
05.1.01.0.0.05 Pottery nfd <sup>23</sup>	0.8
09.1.01.1.0.22 Photographic cameras, camera attachments	48.4
09.1.01.1.0.98 Photographic and cinematographic equipment nec <sup>22</sup>	2.7
09.1.01.1.0.03 Second-hand photographic and cinematographic equipment	2.3
09.5.04.0.0.06 Artistic materials	23.4
09.3.01.0.0.11 Handcraft equipment	4.6
09.3.01.0.0.15 Handcraft materials (for canework, leatherwork, embroidery)	19
09.1.01.1.0.11 Video cameras	<u>8.2</u>
	170.1
09.4.02.4.1.04 Photographers' fees	24.6
09.4.02.4.2.04 Subscriptions and donations to cultural societies	3.7
<b>Total</b>	<b>819.0</b>

Source: Statistics New Zealand, Household Expenditure Survey

Expenditure on books and printed matter in 2010 was between \$84m and \$231m, depending on how the item 'Books nfd' ('Books not further defined') is allocated. Household spending on all printed matter (including newspapers, textbooks and so on) in 2010, amounted to \$455.0m – adding the \$223.8m from Table D3 to the \$231.1m in Table D2. Assuming a pro-rata split of Books nfd implies that about 27.3% of 'Books nfd' is spending on arts-related literature. This means that households spent a total of about \$147m on arts related literature.

**Table D3: Spending on other printed matter in 2010**

Spending Category	(\$m)
09.5.02.0.0.01 Newspapers	139.1
09.5.02.0.0.99 Other periodicals from Other magazines and periodicals	3.3
09.5.01.0.0.04 Instruction books	15.0

<sup>22</sup> nec = not elsewhere classified

<sup>23</sup> nfd = not further defined

09.5.01.0.0.06 Religious books	1.8
09.5.03.0.0.01 Calendars	15.7
09.5.03.0.0.02 Maps	1.6
09.5.01.0.0.09 Textbooks	47.4
	223.8

Table D4 shows which items of expenditure have been suppressed by Statistics New Zealand because of the small sample sizes.

**Table D4: Suppressed categories for 2007**

Spending Category
<b>2007</b>
09.5.01.0.0.10 Book and audio tape sets
09.5.03.0.0.99 Miscellaneous printed matter nec <sup>24</sup>
09.2.00.2.0.02 Pianos
09.2.00.2.0.99 Musical instruments nec <sup>24</sup>
05.1.01.0.0.05 Pottery nfd <sup>25</sup>
09.1.01.1.0.23 Slide racks, darkroom equipment and supplies
09.1.01.1.0.01 Photographic and cinematographic equipment nfd <sup>25</sup>
<b>2010</b>
09.2.00.2.0.02 Pianos
09.2.00.2.0.99 Musical instruments nec <sup>24</sup>
09.2.00.2.0.00 Musical instruments nfd <sup>25</sup>
09.1.03.0.0.05 Records
09.1.03.0.0.00 Stereo cassette tapes, tapes nfd <sup>25</sup>
09.4.02.4.1.02 Picture framing
09.1.01.1.0.23 Slide racks, darkroom equipment and supplies
09.1.01.1.0.01 Photographic and cinematographic equipment nfd <sup>25</sup>
09.3.01.0.0.14 Materials for pottery and ceramics

<sup>24</sup> nec = not elsewhere classified.

<sup>25</sup> nfd = not further defined.

## Appendix E: Input-Output table 2006/07

The purpose of this appendix is to combine the financial information presented above into an internally consistent framework using the 2006/07 Input-Output (IO) tables, which reconcile each industry's sales and purchases. Unfortunately there is no industry identified in the IO tables that corresponds closely to the arts: the closest matches we can obtain are shown in Table E1.

**Table E1: IO industry mapping to arts-related industries**

ANZSIC		IO industry	Arts-related industries
J54	Publishing (except Internet and Music Publishing)	JJ111	
J541100	Newspaper publishing	JJ111	
J541200	Magazine and other periodical publishing	JJ111	
J541300	<b>Book publishing</b>	JJ111	✓
J541400	Directory and mailing list publishing	JJ111	
J541900	Other publishing (except software, music and internet)	JJ111	
J542000	Software publishing	JJ111	
M697000	Veterinary services	MN114	
M699100	<b>Professional photographic services</b>	MN114	✓
M699900	Other professional, scientific and technical services nec <sup>26</sup>	MN114	
P821100	Sports and physical recreation instruction	PP114	
P821200	<b>Arts education</b>	PP114	✓
P821900	Adult, community and other education nec <sup>26</sup>	PP114	
P822000	Educational support services	PP114	
R891000	<b>Museum operation</b>	RS111	✓
R892100	Zoological and botanical gardens operation	RS111	
R892200	Nature reserves and conservation parks operation	RS111	
R900100	<b>Performing arts operation</b>	RS111	✓
R900200	<b>Creative artists, musicians, writers and performers</b>	RS111	✓
R900300	<b>Performing arts venue operation</b>	RS111	✓

In each case the IO industries (JJ111, MN114, PP114 and RS111) have wider coverage than is desirable for this research. The base data for these broader industries is shown in the top half of Table E3. In the bottom half of the table we attempt to adjust the IO values to obtain a

<sup>26</sup> nec = not elsewhere classified.

better match to the arts, using the data from the earlier sections and appendices in this report on earnings, sales and household expenditure.

## Gross output and value added

The figures on earnings in Table B3 (see Appendix B) should be reliable and we therefore take them as given. However, comparing earnings with the figures for value added in Table C2 (see Appendix C) implies a negative return to capital in Arts Education. Given issues around the reliability of value-added measurement, particularly in this industry (as discussed above), we adopt a different strategy for the Arts Education industry – see below.

Tables B3 and C2 also indicate approximately zero return to capital in Professional Photographic Services. With some reservations we do not adjust this figure: this industry is likely to be less susceptible to measurement issues, as it has a negligible level of non-market activity.

For Arts Education we assume that all output is sold to the household sector, so that the \$61.5m in Table D1 (see Appendix D) represents, approximately, the industry's gross output.

Table E2 shows estimates of gross output for the four arts-related industries. The corresponding sales figures from Table C1 are also shown.

**Table E2: Gross output and sales**

	Estimated Gross Output	Sales Table C1	Comment
	(\$m)	(\$m)	
Creative Print	287	250	Reasonable match, definition issues.
Professional Photographic Services	89	89	
Arts Education	62	35	Sales figure is probably low.
Artistic Activities	<u>426</u>	<u>426</u>	
	864	800	

### Creative Print

The row for Publishing (J111) is scaled by the proportion of all printed matter accounted for by books and other printed materials ( $a/[a+b]$ ). This implies that households spent \$99m in 2006/07 on arts-related print products.

In Appendix D, household spending on arts-related literature in 2007 is estimated to be about \$147m.

This spending would include retail and wholesale trade margins, so would be higher than sales of Book Publishing (J5413) to households. According to the IO tables the total trade margin on books and other printed material is about 35% of the purchaser's price, so sales by Book Publishing to households are estimated at \$96m in 2006/07, which is a good match to the above \$99m. The \$96m appears in the lower part of Table D2 as the preferred estimate.

Sales to other industries and exports are estimated pro-rata from the difference between total gross output and sales to households. Sales to other industries include sales to schools.

**Table E3: From IO industries to arts-related industries**

	Industries	Publishing (except internet & music)	Veterinary, Photographic & other services	Adult, community & other education	Heritage & artistic activities	All Industries	House- holds	Govern- ment	Exports	Total including nes
JJ111	Publishing (except internet & music)					1544	172		112	1839
MN114	Veterinary, photo & other services					425	88	15	42	590
PP114	Adult, community and other education					448	221	169	157	1007
RS111	Heritage and artistic activities					145	373	251	108	880
						2137	766	420	377	3726
	Intermediate inputs	1050	214	509	449					2222
	Value-added	789	376	498	431					2094
	of which wages & salaries	429	199	362	296					1286
	Gross output	1839	590	1007	880					3726
	<u>Commodities</u>									
A	Books and other printed material					530	392		229	844
B	Newspapers and journals					<u>391</u>	<u>291</u>		<u>41</u>	<u>593</u>
						921	683		270	1437
	<b>Adjusted for over-coverage</b>									
Subsets of:										
JJ111	Creative print					178	96		13	287
MN114	Professional photography					51	28	2	5	89
PP114	Arts education						62			62
RS111	Artistic activities					80	147	138	60	426
						309	333	140	78	864
	Intermediate inputs	164	45	40	202					451
	Value-added	123	44	21	224					412
	of which wages & salaries	66	44	16	215					340
	Gross output	287	89	62	426					864

## Professional Photographic Services

In the IO table Professional Photographic Services are combined with veterinary and other professional, scientific and technical services not elsewhere classified. The gross output of this industry in 2006/07 was \$590m.

As noted above we assume that gross output equals sales of \$89m as recorded in Table C1. Household spending is \$28.3m from Table D1.

Sales to other industries and exports are estimated pro-rata to IO industry MN114 from the difference between total gross output and sales to households.

## Arts Education

As noted above, spending by households of \$61.5m is assumed to account for all sales by the industry. However, we may be missing some non-market sales to the education industry that are paid for by government.

## Artistic Activities

If the \$426m of gross output of Artistic Services was allocated in the same proportions as the sales of the broader IO industry RS111, spending by households would be \$180m. However, in Table C1 the total of the three arts-related admission charge categories (that is, excluding cinema charges) is only \$78.4m.

While such a pro-rata allocation may not be entirely accurate, as the mix of services provided by IO industry RS111 will vary across consumers, the difference is much too large for that to be the whole explanation. We therefore adopt a different approach.

The IO tables reveal that over 40% of the industry's output is non-market, which, in the case of households, suggests significant funding through donations and subscriptions. Expenditure by households on subscriptions and donations to cultural societies as recorded by the Household Expenditure Survey was \$1.6m in 2007 and \$3.7m in 2010 (Tables D1 and D2). This category of donations seems unlikely to capture all non-market support of the arts by households

Corporate donations and subscriptions to Artistic Services are also probable, as well as government sponsorship. So, if we assume a pro-rata allocation of the non-market services, this almost doubles the \$78.4m to \$146.8m.

Interestingly for 2010 (Table D2) the value of spending by households on Artistic Services is rather higher at \$92.7m, compared to \$78.4m for 2007. The difference could be partly due to the New Zealand Festival (the biennial arts festival) occurring in 2010 and not in 2007.

Sales of Artistic Services to exports corresponds largely to consumption by tourists. The estimate in Table D2 of \$59.5m is less than reported in Statistics NZ's Tourism Satellite Account for 2009/10 of \$86m for the wider industry RS111, which makes sense. However, revenue earned by New Zealand artists performing abroad would also be included here.