Boston’s Creative Economy

BRA/Research

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Defining the "Creative Economy"

- It is clear from current writing that there is as yet no generally accepted definition of the "Creative Economy."
- The term was first used by *Business Week* in August of 2000 in a special issue on the 21st Century Corporation - www.businessweek.com/2000/00_35/b3696002.htm
- John Howkins in his seminal book *The Creative Economy* (2001), describes an economy with fifteen "creative industry sectors" (see Appendix I).
- Richard Florida in *The Rise of the Creative Class*, defines the "Creative Economy" not in terms of industries but in terms of occupations and "creative classes" - (see Appendix II).
- The New England Council in its 2000 report, limits the "Creative Economy" strictly to artistic and cultural fields (see Appendix III).

- Our definition of the “Creative Economy” is very close to that of the New England Council and incorporates some, but not all, of the industries proposed by John Howkins and Florida.

- Our concept is at one time broader than that suggested by the New England Council. We include a broader range of industries. And our concept is narrower than that of either Howkins and Florida because our aim is to capture activities more closely connected to the artistic and cultural core.

- Our narrower definition eliminates industries such as business services, law, health care, etc., that are generally accepted as distinct industries.

- Our definition of the “Creative Economy” includes at the most aggregated level:

- ➲ **Written Media**
- ➲ **Film**
- ➲ **Broadcasting**
- ➲ **Crafts**
- ➲ **Performing Arts**
- ➲ **Visual Arts**
- ➲ **Architecture**
- ➲ **Photography**
- ➲ **Design**
- ➲ **Advertising**
- ➲ **Sound Recording & Music Publishing**
- ➲ **Museums & Art Galleries**
- ➲ **Libraries & Archives**
- ➲ **Culture Education**

Proposed Definition:

➲ The “Creative Economy” is defined, for the purpose of this research, broadly, as those activities which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation. We include:

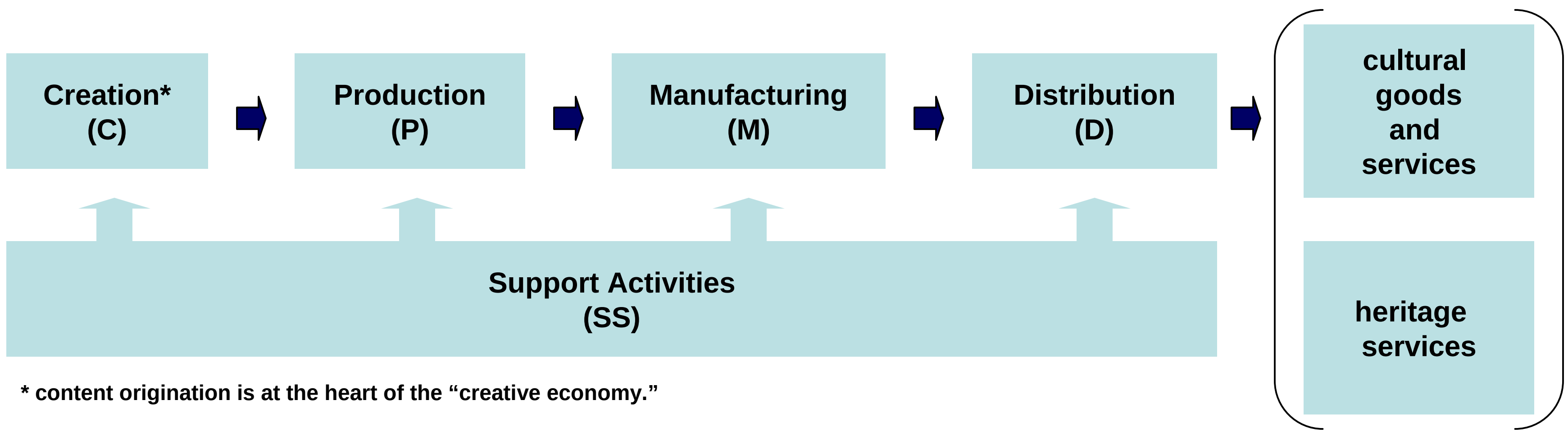
- ➲ any direct activity in which individual creativity and skill is brought to bear, and which is characterized by innovation and originality and leads to the creation of intellectual property in the form of copyright;

- any activity (upstream and downstream) which directly contributes to creative activities such that the product would not exist in the same form without it;

- the self-employed (writers, artists, etc.) because the creative industry encompasses many freelance workers.

- Drawing upon the analysis of production systems and production chains, the creative industry can be mapped according to the following "Creative Production Chain:"

Creative Production Chain



* content origination is at the heart of the "creative economy."

- The stages of the “Creative Production Chain,” outlined above, illustrate the point that to be consumed, a cultural good or service must first be created, produced, perhaps manufactured, and distributed to consumers.

- These “functional” categories provide a framework which can be used in the analysis of the “creative economy.”

- To make this definition researchable, it was necessary to derive a set of categories from the North American Industry Classification System (NAICS) codes.

- The NAICS is a structured indexing system, published by the U.S. Census Bureau, which provides a set of classifications of businesses by the type of economic activity in which they are engaged. The NAICS provides a widely-shared basis for classification of economic statistics and analysis (see Glossary).

Disaggregated Components of the "Creative Economy" Using Proposed Definition

NAICS codes	Creative Industries	Creative Chain
	Applied Arts	**(C) - creation**
54131	architectural services (C)	**(P) - production**
54132	landscaping architectural services (C)	**(M) - Manufacturing**
54141	interior design services (C)	**(D) - distribution**
54142	industrial design services (C)	**(SS) - Support industries**
54143	graphic design services (C)	
54149	other specialized design services (C)	
	Advertising	
54181	advertising agencies (P)	
54185	display advertising (P)	
54187	advertising material distribution services (D)	
54189	other services related to advertising (D)	
54183	media buying agencies (D)	
54184	media representatives (D)	
54186	direct mail advertising (P)	
	Performing Arts: Music, Theater and Dance	
71111	theater companies and dinner theater (P)	
71112	dance companies (P)	
71113	musical groups and artists (C)	
71119	other performing arts companies (P)	
45114	musical instrument and supplies stores (D)	
339992	musical instrument manufacturing (M)	
71131	promoters of entertainment events with facility (D)	
71132	promoters of entertainment events without facility (D)	
71141	agents and managers for artists, athletes, entertainers and other public figures (D)	

NAICS codes	Creative Industries
	Publishing and Printing
51111	newspaper publishers (P)
51112	periodical publishers (P)
51113	book publishers (P)
51119	other publishers (P)
323111	commercial gravure printing (M)
323113	commercial screen printing (M)
323114	quick printing (M)
323115	digital printing (M)
323119	other printing (M)
41442	book, periodical and newspaper wholesalers (D)
45121	book stores and news dealers (D)
	Broadcasting
51311	radio broadcasting (P)
51312	television broadcasting (P)
51321	cable networks (D)
51322	cable and other program distribution (D)
	Sound Recording and Music Publishing
51221	record production (P)
51222	integrated record production and distribution (P)
51224	sound recording studios (P)
33461	manufacturing and reproducing magnetic and optical media (M)
51223	music publishers - publishing and printing combined (M)
45122	pre-recorded tape, compact disc and record stores (D)

NAICS codes	Creative Industries
	Film, Video and Photography
51211	motion picture and video production (P)
51212	motion picture and video distribution (D)
51213	motion picture and video exhibition (D)
51219	post-production and other motion picture and video industries (m)
41445	video cassette wholesalers (D)
53223	video tape and disc rental (D)
54192	photographic services (C)
812921	photo finishing laboratories (except one hour) (P)
45392	art dealers (D)
44313	camera and photographic supplies stores (D)
325992	photographic film, paper, plate and chemical manufacturing (M)
339942	lead pencil and art good manufacturing (M)
	Heritage
71211	museums (P)
71212	heritage and historic sites (P)
71219	other heritage institutions (P)
71213	zoos and botanical gardens (P)
	Support
61161	fine arts schools (SS)
51412	libraries and archives (SS)
	Independent Artists
71151	independent artists, writers and performers (C)
51411	news syndicates (C)

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Creative industries contribute to economic vitality in many ways. They:

- create jobs and income;
- contribute to government revenues (local, state and federal);
- attract industry and skilled workers;
- encourage tourism and conventions;
- highlight a location’s history and traditions;
- enhance property values;
- serve as important anchors for downtown and neighborhood revitalization efforts;
- promote tolerance and diversity.

The “creative industries” economic contribution to the national economy is substantial:

> **“A LIVELY CULTURAL COMMUNITY AND A HEALTHY ECONOMY ARE LIKE AN EQUATION”**
> **(THE CREATIVE CITY, A WORKPRINT, APRIL 2001, TORONTO CULTURE)**

- In the U.S., copyright industries, which include film, video, music, publishing, etc. generate nearly $450 billion in annual revenues, roughly 5% of the U.S Gross Domestic Product. They contribute more than $79 billion in global sales.

- The number of people who work in these industries is estimated at 7.6 million, growing at a rate that has far outpaced job growth in many other economic sectors.

- The non-profit segment of the creative industries generates $36.8 billion in revenues, $25.2 billion in personal income and 1.3 million fulltime-equivalent jobs (1992).

- Data from the Bureau of Economic Analysis (BEA) show that consumers spent $10.2 billion (or $37.40 per capita) on admissions to performing arts and events in 1999 - $2 billion more than consumer spending on spectator sports.

➲ The Travel Industry Association of America (TIAA) reported that, in 2001, 65% of American adult travelers included a cultural, arts, heritage, or historic activity or event while on a trip of 50 miles or more - represents 92.7 million cultural travelers.

➲ Of those 29.6 million travelers who added time:

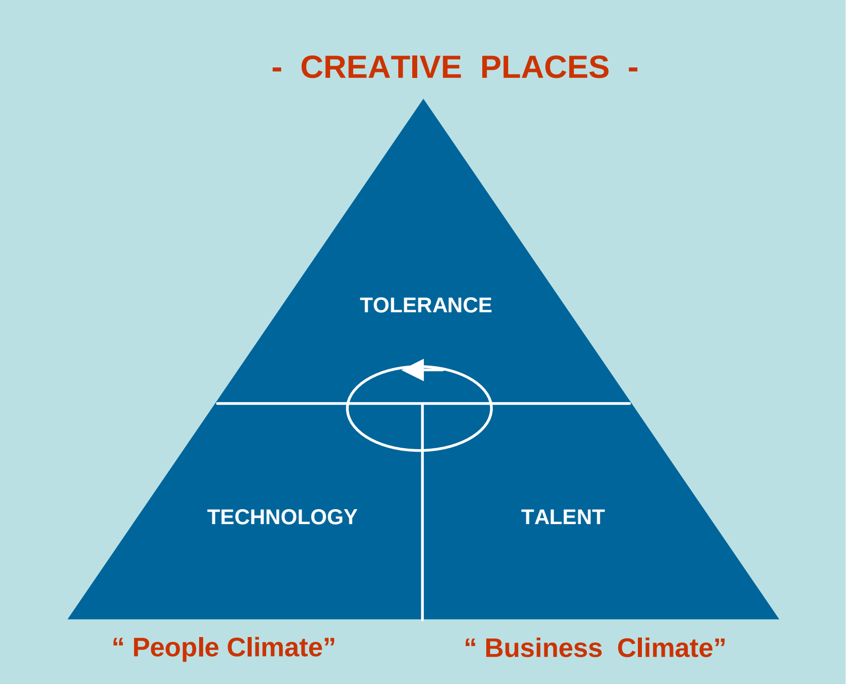
- **➲ 43% added part of one day**
- **➲ 31% added one extra night**
- **➲ 19% added two extra nights**
- **➲ 7% added three or more extra nights**

➲ In 2001, 29.6 million travelers lengthened their trips to attend arts, cultural, historic, or heritage activities - an increase from 29% in 1998 to 32% in 2001 of total cultural travelers in the U.S..

➲ These travelers are wealthier (with average annual incomes of $48,000 vs. $37,000 for all other travelers), better educated, and likely to spend more money than other kind of tourists.

The "creative industries" are also emerging as a potent force in the economic life of cities:

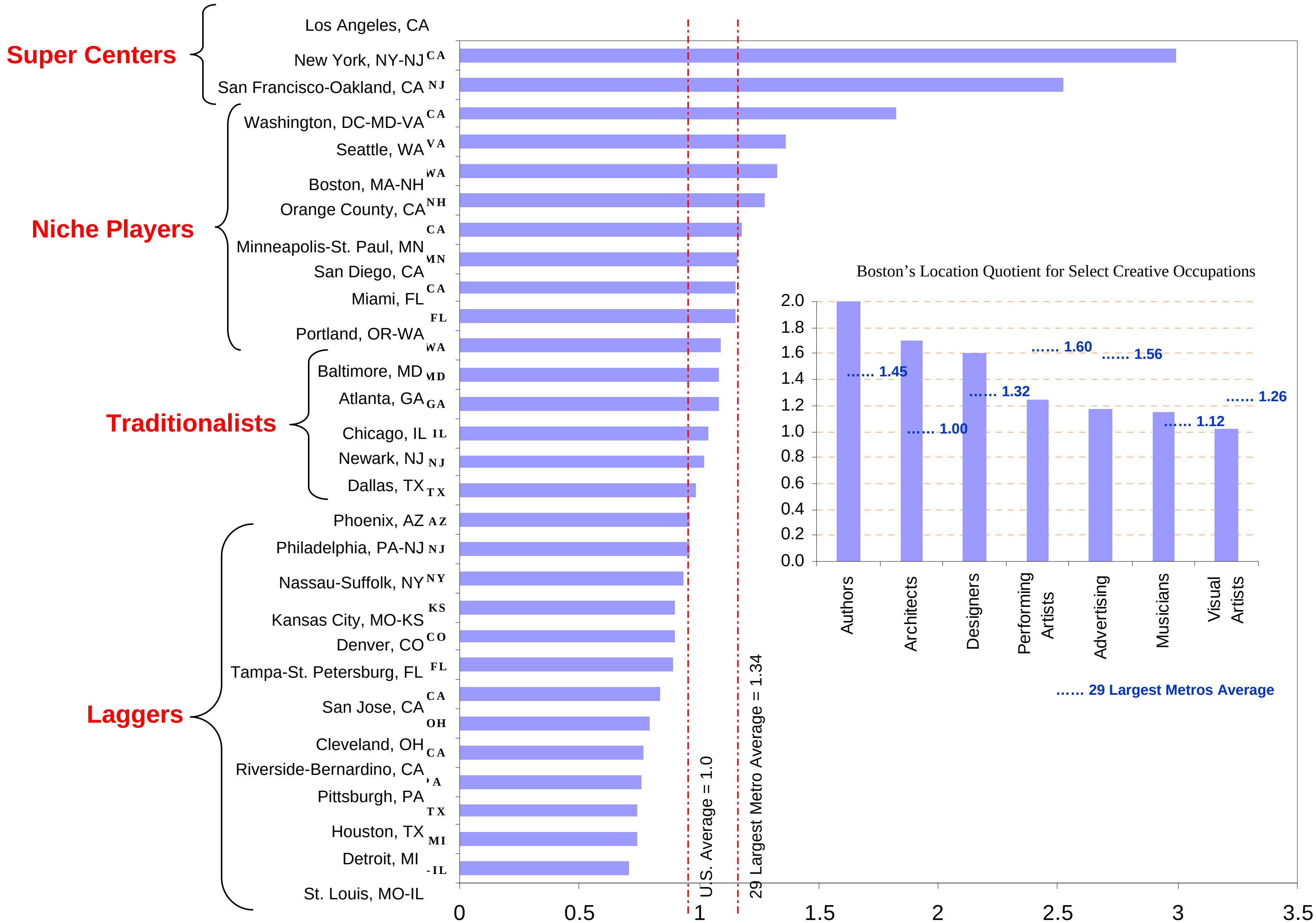
- Florida in ***The Rise of the Creative Class*** concludes that, in order to have a vibrant economy, it is not enough to be technologically savvy. A city must also be socially tolerant and culturally diverse thereby building an environment that can attract and retain the most important resource for a vibrant economy - creative people.



- According to Florida, this explains why cities like Baltimore, St. Louis and Pittsburgh fail to grow despite their deep reservoirs of technology and the presence of world-class universities. Because they have not been sufficiently tolerant, creative talent leaves.

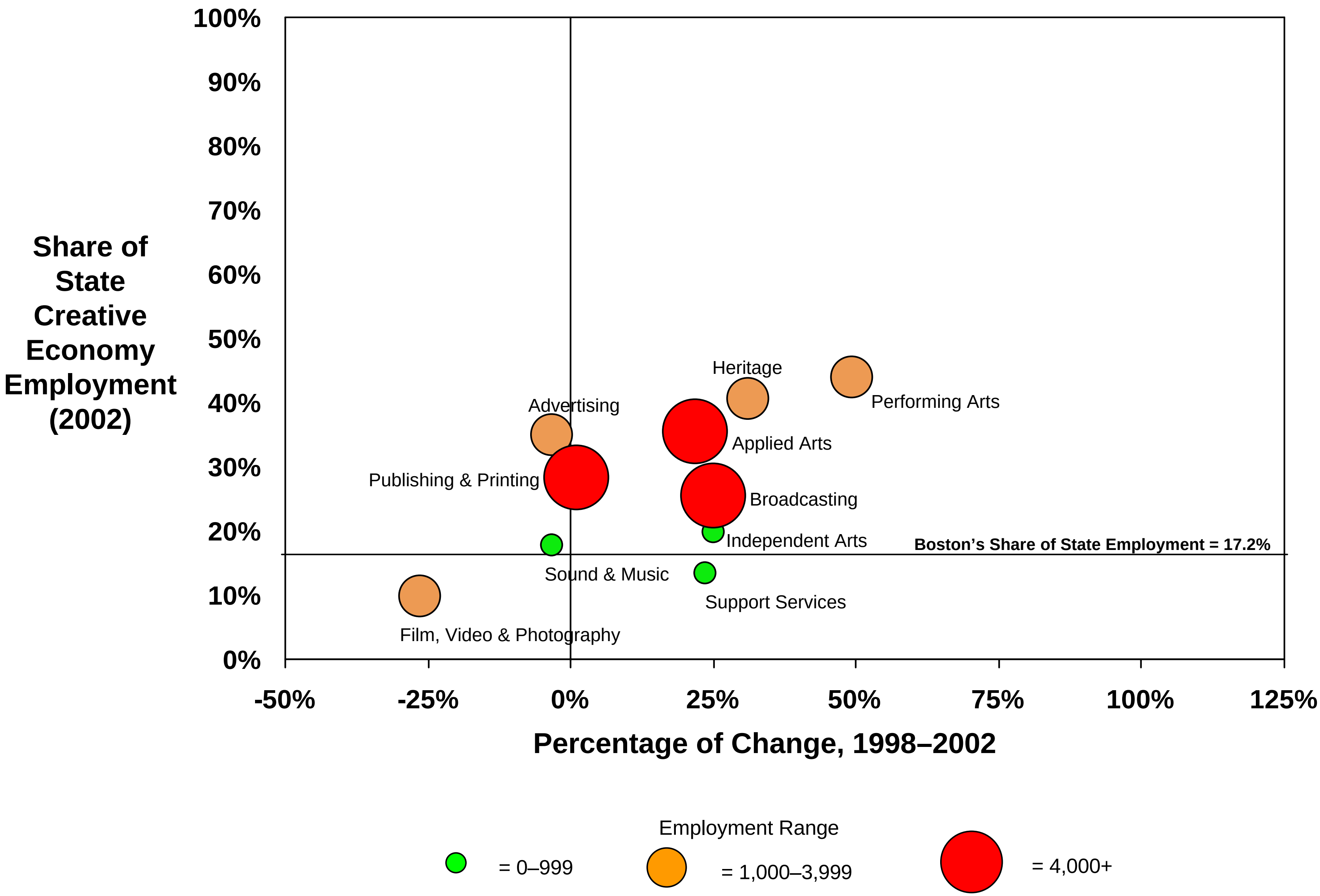
- It also explains why cities like Miami and New Orleans do not make the grade even though they are lifestyle Meccas - they lack a technology base.
- Successful cities like San Francisco, Boston, Austin and Seattle put all 3Ts together - they are truly creative cities.
- Boston has the right stuff: the brains and talent to compete, the know-how to patent and license its technology, the entrepreneurs who are willing to take risk and the kind of diverse and tolerant society that attracts and retains creative people.
- During the 1990s creative industries and artists gravitated towards three pre-eminent centers of creative activity: Los Angeles, New York and San Francisco. These gains were accompanied by notable specializations in eight other metros: Washington DC, Seattle, Boston, Minneapolis-St. Paul, Orange County, Miami, Portland and San Diego.

Artistic Concentrations for the 29 Largest U.S. Metro Areas by Employment, 2000



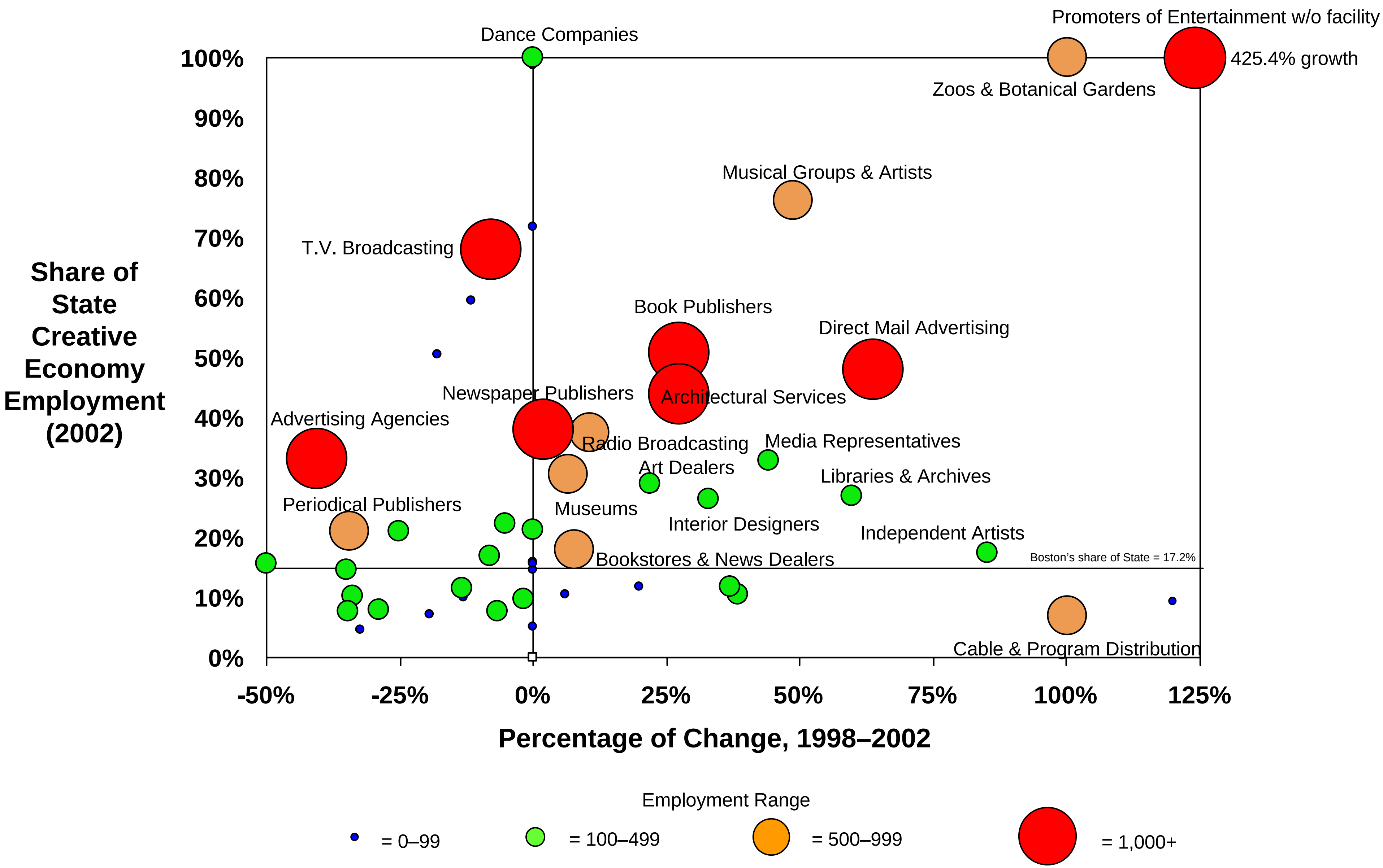
Source: Adapted from The Artistic Dividend Revisited, Ann Markusen et.all, March 2004

Boston's Specialization By Creative Industry Segments



Source: BRA/Research

Boston's Specialization By Creative Sub-industries



Note: Data points too large to fit on the graph are placed on the borders and the values are given as: (y-axis, x-axis).
Source: BRA/Research

- In 2002, Boston's creative industries added $10.7 billion to Boston's total economic output (7.8%) and $2.6 billion to personal income within the region as a whole.

Economic Impact of Boston's Creative Economy (2002)

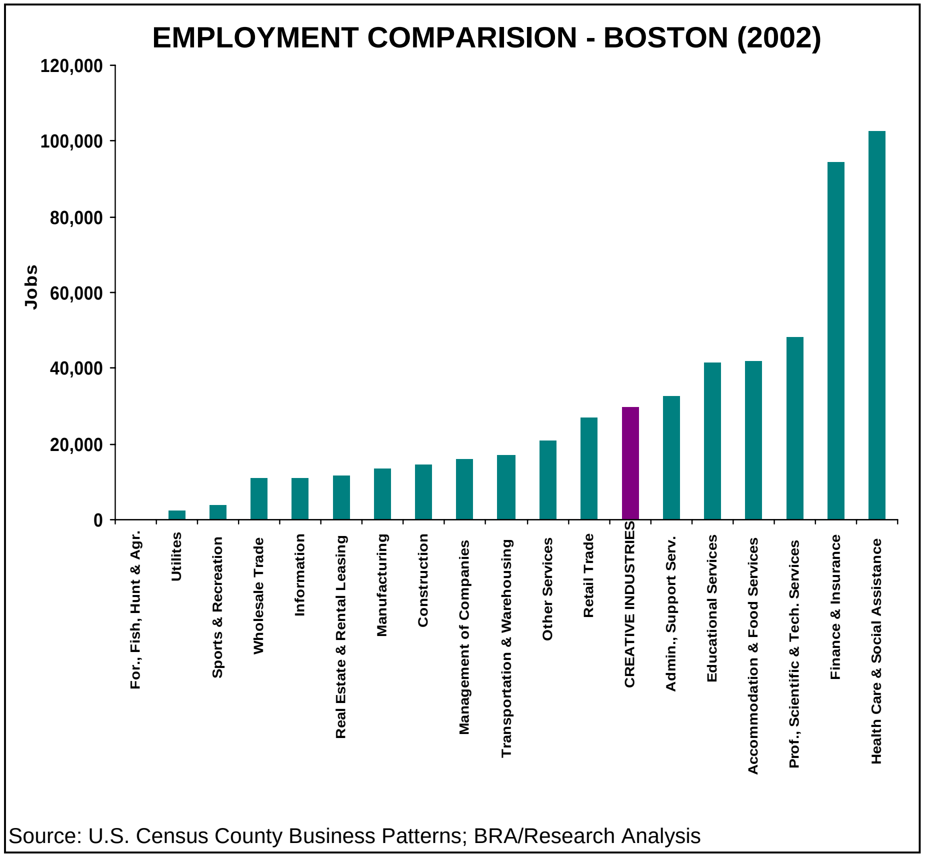
	CITY OF BOSTON	METRO AREA
Gross Regional Product	$6.5 billion	$7.6 billion
Total Jobs	47,020 jobs	60,800 jobs
• Direct	29,720 jobs	-
• Indirect	17,300 jobs	31,080 jobs
Personal Income	$1.1 billion	$2.6 billion
Output	$10.7 billion	$12.7 billion

Source: BRA/Research; REMI Simulation

- Creative employment in 2002 totaled 29,720 direct jobs excluding self-employment. This was 5.5% of Boston's total private sector employment. When self-employment is added, creative employment increased to 34,085.

- The creative economy supports an additional 17,300 jobs in other industries such as retail, business services, professional services, and food services. These spin-off jobs represent a regional employment multiplier of one, that is, for every direct job in the creative sector, one job is created elsewhere.

- In 2002, the Creative industries would have been the seventh largest industry in Boston ahead of industries such as Manufacturing, Wholesale Trade, Retail Trade and Construction. For a snapshot of the creative economy see Appendix V.
- Total income reached $1.9 billion in 2002 (payroll plus receipts of self-employed).



Source: U.S. Census County Business Patterns; BRA/Research Analysis

- Boston's creative industries grew by 11.3% between 1998 and 2002. This compares to 4.5% for the Massachusetts economy as a whole over the same period.
- Performing Arts and Heritage have grown most quickly (49.3% and 31.2% over the period 1998-2002). Broadcasting, Independent Arts, Support Services and Applied Arts also showed growth well above the average for the State economy and that of creative industries as a whole (25.1%, 25.0%, 23.6% and 21.9% respectively).

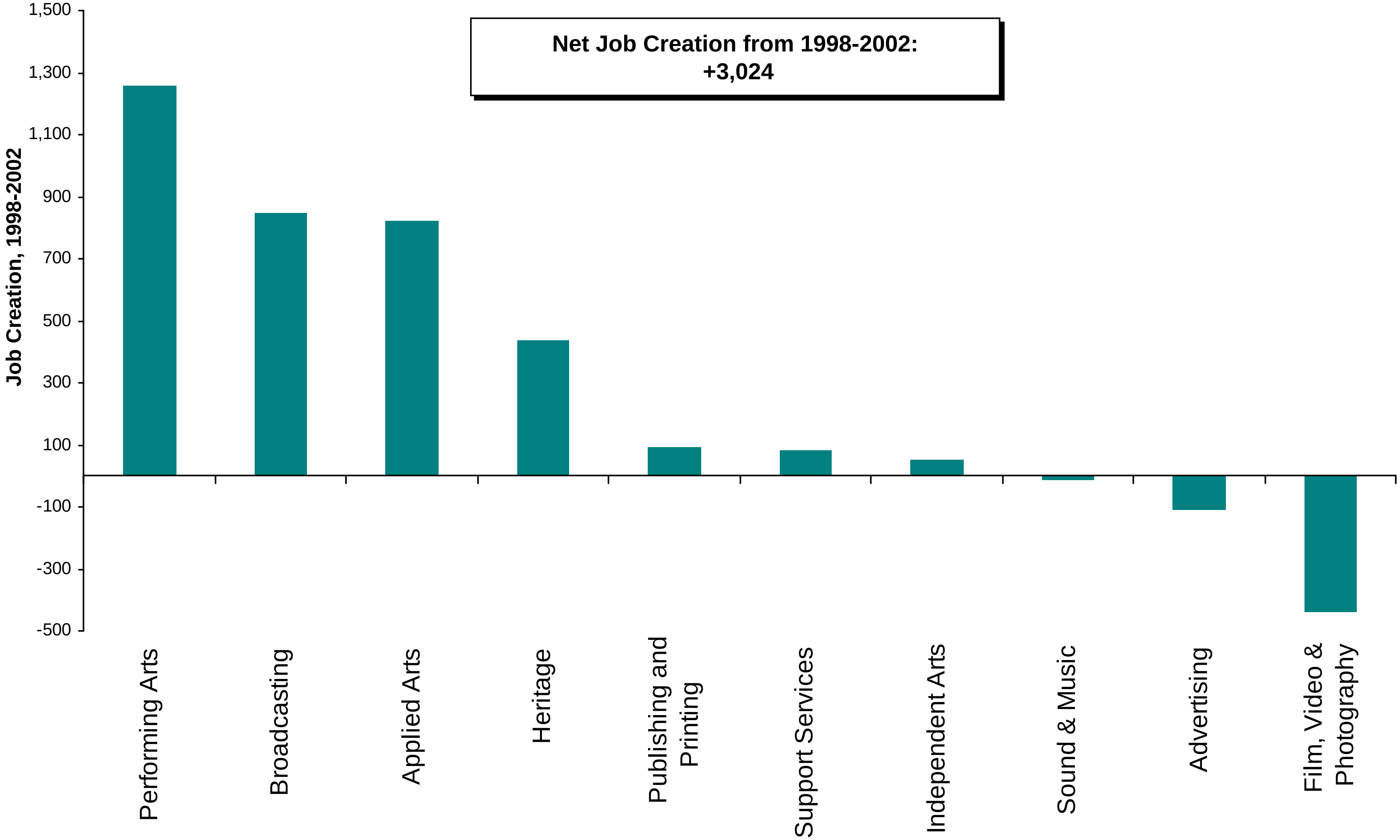
Creative Industries General Characteristics

Description	Establishments (2002)	Employment (2002)	Total Wages (2002)	Average Employees/ Establishments (2002)	Employment Growth (1998-2002)	Wage Growth (1998-2002)
Advertising	131	3,425	$293,126,036	26	-3.1%	16.6%
Applied Arts	383	4,578	$268,816,520	12	21.9%	14.6%
Broadcasting	51	4,215	$293,963,656	83	25.1%	16.2%
Heritage	33	1,839	$53,009,069	56	31.2%	20.6%
Independent Artists	34	250	$10,766,957	7	25.0%	-36.6%
Film, Video and Photography	213	1,230	$37,650,220	6	-26.3%	13.2%
Performing Arts	93	3,806	$174,749,368	41	49.3%	-8.0%
Publishing and Printing	253	9,465	$625,442,150	37	1.0%	39.1%
Sound Recording and Music	48	486	$10,882,265	10	-3.1%	24.8%
Support Services	36	425	$22,304,966	12	23.6%	141.2%
Total	**1,275**	**29,720**	**$1,790,711,207**	**23.3**	**11.3%**	**20.5%**
Self-employed	**4,365**	**4,365**	**$119,579,137**	-	-	-

Source: U.S. Census County Business Patterns; BRA/Research Analysis

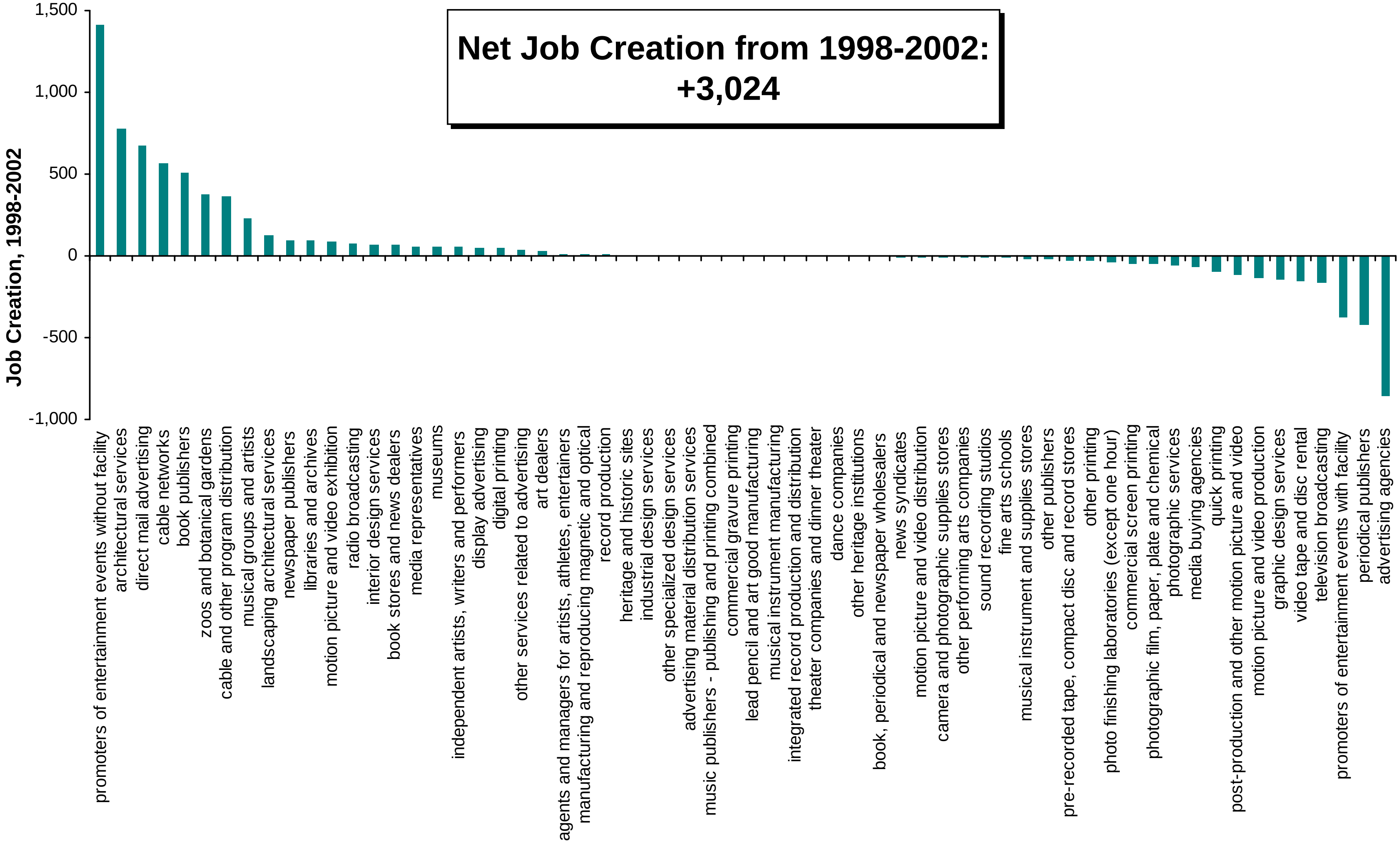
➲ Advertising; Film, Video and Photography; Sound Recording and Music lost employment over the period 1998-2002.

Boston Employment Growth and Decline by Creative Industry Segment (1998 to 2002)



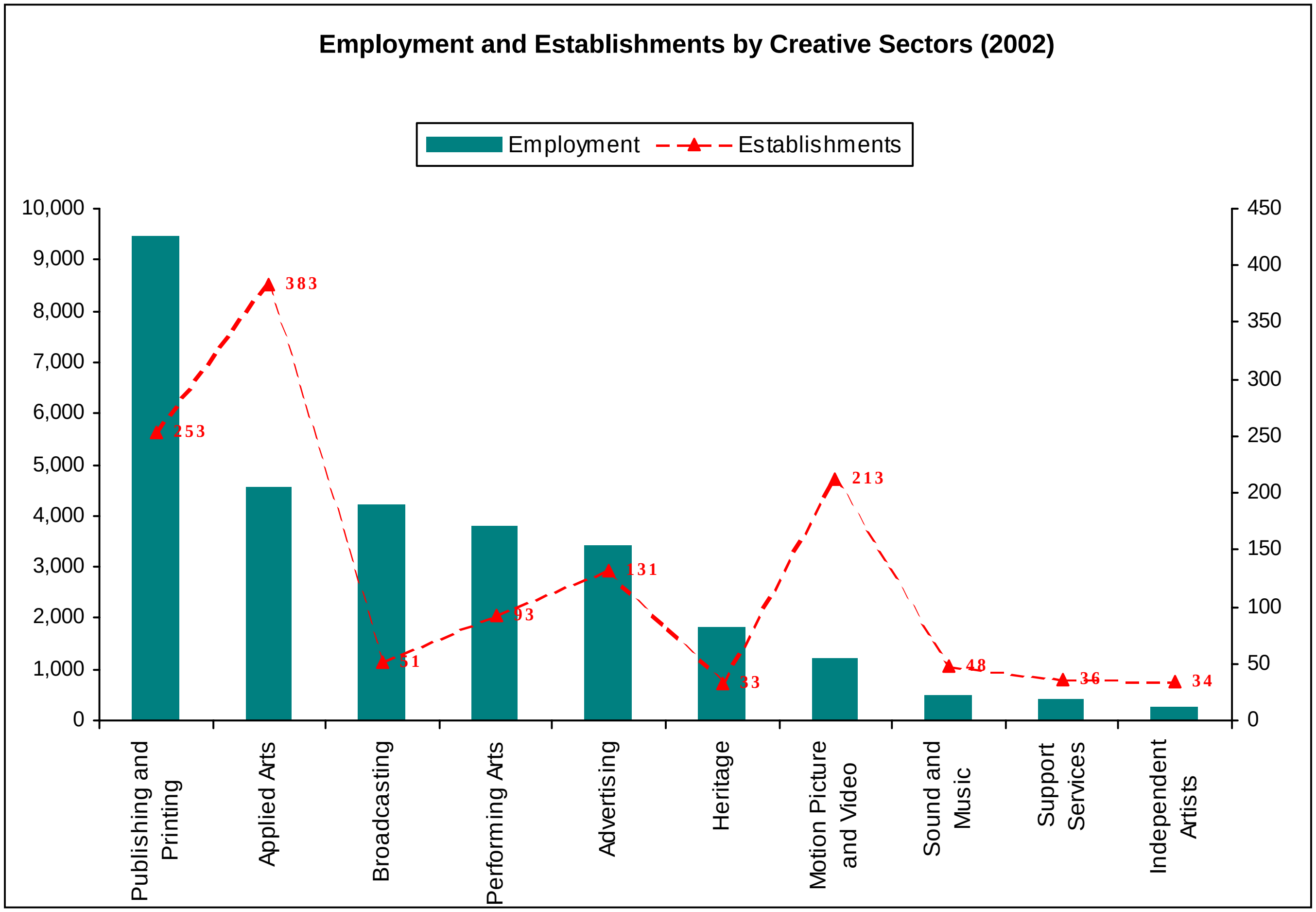
Source: U.S. Census County Business Patterns; BRA/Research Analysis

Boston Employment Growth and Decline by Creative Sub-industries (1998 to 2002)



Source: U.S. Census County Business Patterns; BRA/Research Analysis

- In 2002, there were 1,275 creative establishments in Boston (see Appendix IV for a synopsis).
- These establishments represented 16.9% of all creative enterprises in Massachusetts.



Source: U.S. Census County Business Patterns; BRA/Research Analysis

- The true proportion of enterprises in the creative industries is likely to be higher as certain industries within its sectors tend to be very small businesses. Non-employer establishments (self-employment) are not included on the graph above.

- Nearly 84% of these establishments belong to five sectors: Applied Arts (383 establishments), Publishing and Printing (253 establishments), Film, Video and Photography (213 establishments); Advertising (131 establishments) and Performing Arts (93 establishments).

- The creative industries tend to be heavily dominated by micro size businesses in most sectors (see Appendix IV).

- The “Creative Production Chain” of Boston’s creative industries is heavily concentrated in the production stage (55.8%) followed by distribution (21.7%) and creation (19.0%).

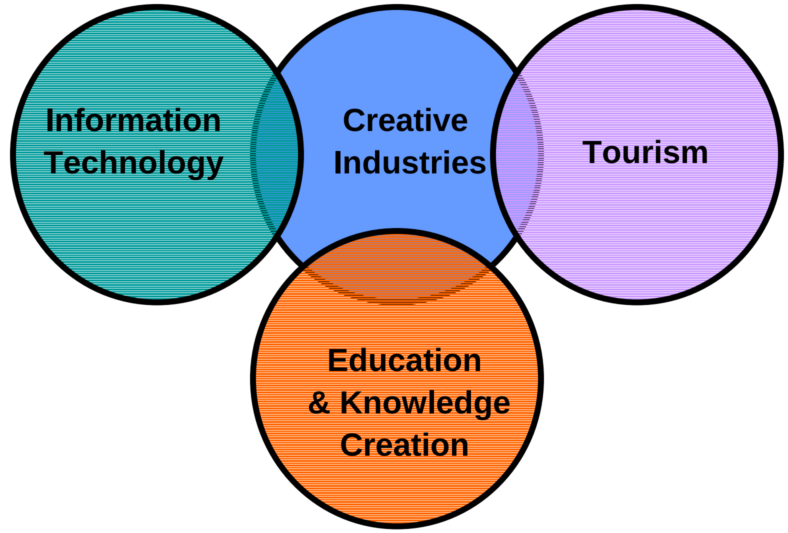
- Of these stages, production and manufacturing decreased during the period 1998-2002. During the same period, wages grew by 25.5% and 47.8% respectively, possibly indicating an increase in productivity.

Composition of Boston's "Creative Production Chain"

	Creation	Production	Manufacturing	Distribution	Support Industries
Share of Employment, 2002	19.0%	55.8%	2.1%	21.7%	1.43%
Employment Growth, 1998 to 2002	22.6%	1.2%	-30.0%	44.3%	23.6%
Average Wage, 2002	$58,123	$68,169	$49,477	$43,334	$52,521
Wage Growth, 1998 to 2002	4.5%	25.5%	47.8%	28.2%	141.2%
Number of NAICS Industries	10	21	11	18	2

Source: U.S. Census County Business Patterns, Massachusetts Department of Employment Training, BRA/Research Analysis

Linkages with Other Industries:



- Creative industries have primary linkages with other industries. There are mutually beneficial relationships between Creative Industries, Tourism, Education & Knowledge Creation, and Information Technology.
- Linkages between Creative Industries and Tourism are reciprocal. On the one hand, tourists provide a potential market for many creative industries (live performance, exhibitions, festivals, heritage, etc.) bringing money into Boston's creative economy. On the other hand, creative industries may be part of a package that attracts tourists in the first place.
- Linkages between Creative industries and Education and Knowledge Creation industries are varied. Creative industries themselves have educational segments. In Boston there are 8 schools devoted to art education and training. Emerson College is the largest with 4,000 students followed by Berklee College of Music (2,734), Massachusetts College of Art (2,328), School of the

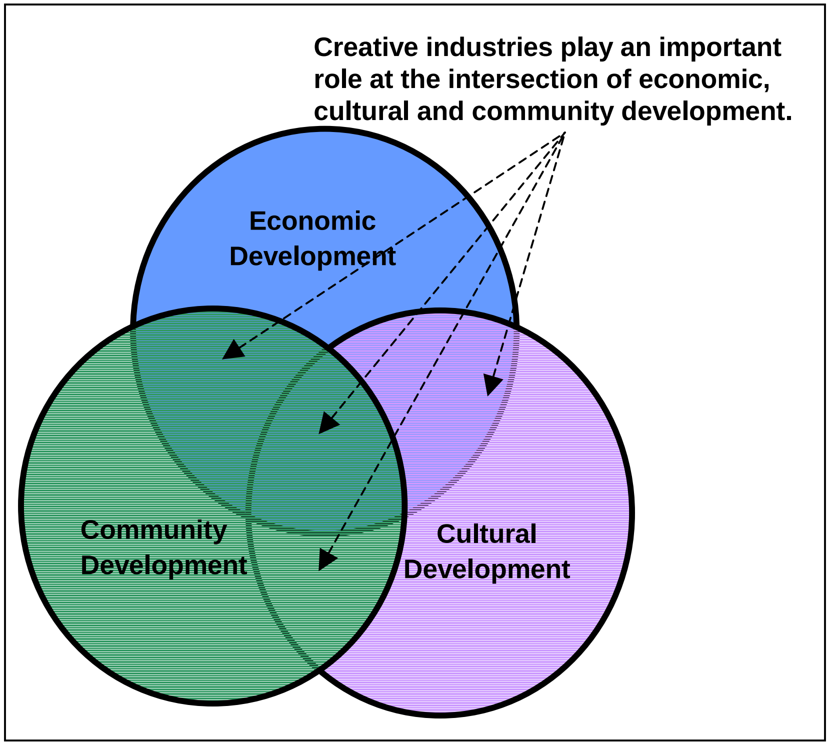
Museum of Fine Arts (1,756), New England Conservatory of Music (794), Boston Architectural Center (674), Art Institute of Boston (514) and Boston Conservatory (492).

- In 2000, college enrollment in art colleges and universities totaled 13,366 (10% of total enrollment).

- The interaction of Creative Industries and Information Technology is also varied, from digital media to web design.

Creative Industries at the Intersection of Economic, Cultural, and Community Development:

- Finally, the history of creative development is rich with linkages between culture and place making, community building and economic development:



- Arts and culture are often about crossing boundaries, because creativity is about seeing things in new ways. They nurture the process of cross cultural understanding and integration.

- The arts have always been a pathway to further civic engagement. As communities grow and demographics shift, creative and cultural activities can be used to find and express shared hopes and values.

- Research shows that disadvantaged neighborhoods with higher cultural participation are four times more likely than average to have low delinquency rates.

- Communication through the arts and other creative activities gives immigrants a direct way to reclaim and assert their status as respected accomplished adults.

- Creative industries contribute to an improved quality of life with consequent impact on local economies.

- ➲ Creative activities generate new and productive uses for neighborhood facilities and underutilized or abandoned spaces.

- ➲ A vibrant creative economy further helps the business community and economic development efforts by providing a pool of talent to draw upon for special design, organizational and marketing efforts.

- ➲ The Creative Economy can have a catalyzing role in downtown and neighborhood development and revitalization efforts:

  - ➲Attract additional people and businesses to downtown core;

  - ➲Reverse the migration to malls in the outskirts of town;

  - ➲Create a more vital “lived in” downtown that doesn’t shut down at the end of the work day;

  - ➲Create productive new uses for neighborhood facilities and under-utilized or abandoned spaces.

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Appendix I: Core Industries of the “Creative Economy” as defined by John Howkins

- R&D
- Publishing
- Software
- TV and Radio
- Design
- Music
- Film
- Toys and Games
- Advertising
- Architecture
- Performing Arts
- Crafts
- Video Games
- Fashion
- Art

Appendix II: Richard Florida’s Definition of “Classes”

Creative Class
- Computer and mathematical occupations
- Architecture and engineering occupations
- Life, physical, and social science occupations
- Education, training, and library occupations
- Arts, design, entertainment, sports, and media occupations
- Management occupations
- Business and financial operations occupations
- Legal occupations
- Healthcare practitioners and technical occupations
- High-end sales and sales management

Working Class
- Construction and extraction occupations
- Installation, maintenance, and repair occupations
- Production occupations
- Transportation and material moving occupations

Service Class
- Health care support occupations
- Food preparation and food service-related occupations
- Building and ground cleaning and maintenance occupations
- Personal care and service occupations
- Low-end sales and related occupations
- Office and administrative support occupations
- Community and social services occupations
- Protective service occupations

Agriculture
- Farming, fishing, and forestry occupations

Appendix II: Richard Florida’s Definition of “Classes” (cont.)

Key Highlights

38 Million people are in the “creative class;”

more than 55% of the United States GDP is produced by the “creative class;”

the “creative class” consists of more than 30% of the Unites States workforce;

driven force behind the “creative class” is economic; people adding value through their creativity;

economic growth occurs in places where creative people of all types live. Matching of people and jobs is done by geographic place rather than through corporations. “City Air makes Men Free” (Stadluft Macht Frei);

instead of people moving to jobs, companies move to places where there is a large pool of skilled and talented workers;

three characteristics of the “creative class:” need for flexibility, prevalence of change, importance of speed;

three values of the “creative class:” Individuality, Meritocracy, Diversity and Openness.

Service Class: 55 Million people (45%) of the United States workforce are in the services class. Providing answers to the demands of the creative class. Typically low-wage and low autonomy occupations.

Working Class: 33 million people (25%) of the United States workforce are in the working class. Declining sharply, due in part to a shift from the industrial economy, and social and demographic changes.

Appendix III: The New England Council's Definition of the "Creative Economy"

➲Applied Arts

Architectural Services
Interior Design Services
Industrial Design Services
Graphic Design Services
Other Specialized Design Services
Advertising Agencies
Display Advertising
Photographic Services - Commercial

➲Performing Arts: Music, Theater, Dance

Theater Companies and Dinner Theaters - Commercial
Dance Companies - Commercial
Musical Groups and Artists - Commercial
Other Performing Arts Companies - Commercial
Musical Instrument and Supplies Stores - Commercial
Musical Instrument Manufacturing - Commercial
Promoters of Performing Arts - Commercial
[1]*Nonprofit performing arts*

➲Visual Arts

Art Dealers - Commercial
[1]*Nonprofit Visual Arts*
Camera and Photographic Supplies Stores - Commercial
Agents and Managers for Artists - Commercial
Photographic Film, Paper, Plate and Chemical Manufacturing - Commercial
Lead Pencil and Art Good Manufacturing - Commercial
Art Print Gravure Printing - Commercial

➲Literary Arts

Book Publishers - Commercial
[1]*Libraries and Humanities - Nonprofit*

➲Media

Cable and Other Program Distribution
[1]*Nonprofit Media*
Motion Picture and Sound Recording Industry - Commercial
Prerecorded Compact Disc, Tape and Record Reproducing - Commercial

➲Heritage

Museums - Taxable
[1]*Nonprofit Ethnic, Historic, Museums*
Historical Sites - Taxable

➲Support

Fine Arts Schools
[1] *Nonprofit Support and Education*

➲Independent Artists

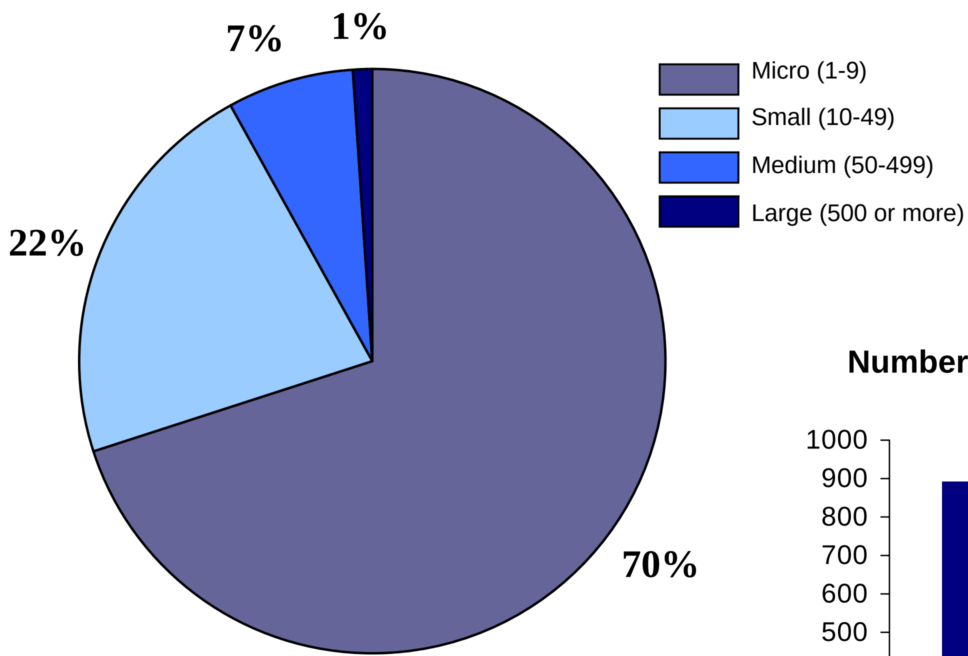
Independent Artists, Writers and Performers - Incorporated
[1] *Independent Artists, Writers and Performers - Unincorporated*

[1] Nonprofit data by product line was compiled by Greg Wassall of Northeastern University and based upon a survey of non-profit arts and cultural institutions in 1996. (from: The Creative Economy Initiative by the New England Council)

The New England Council uses the 1997 US Economic Census, the Current Population

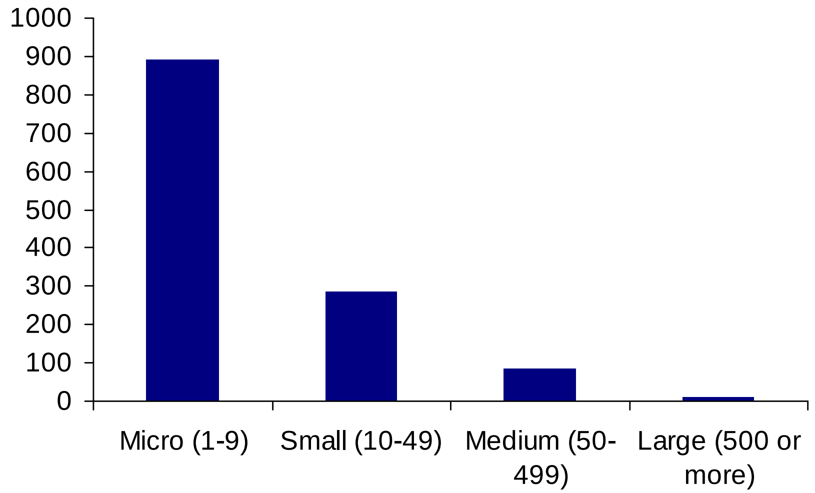
Appendix IV: Establishments by Employment-Size Class by Industry for Boston.

CREATIVE INDUSTRIES (2002)



Share of Establishments by Employment-size Class

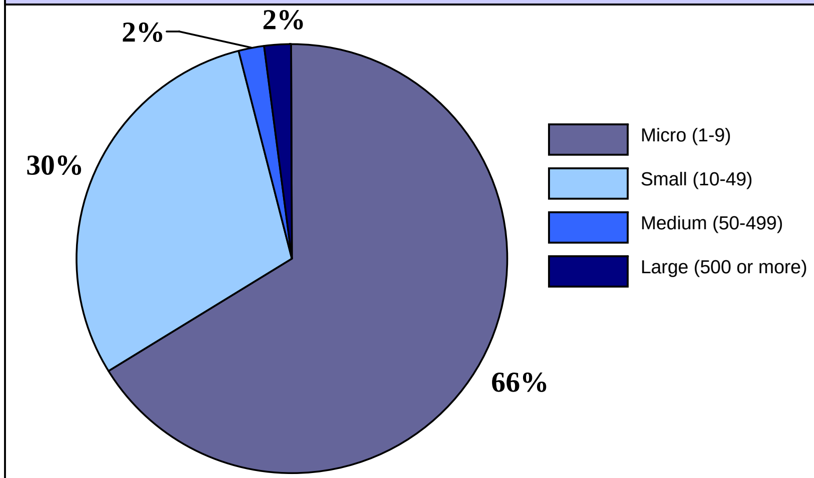
Number of Establishments by Employment-size Class

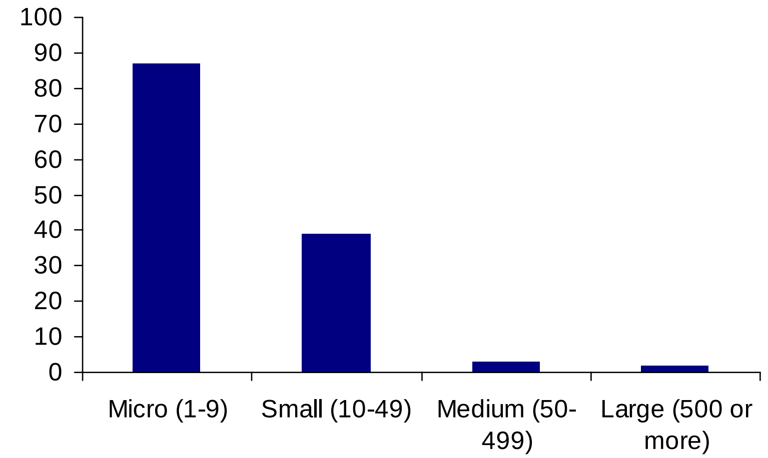


Source: U.S. Census County Business Patterns; DET; ABI; and BRA/Research Analysis

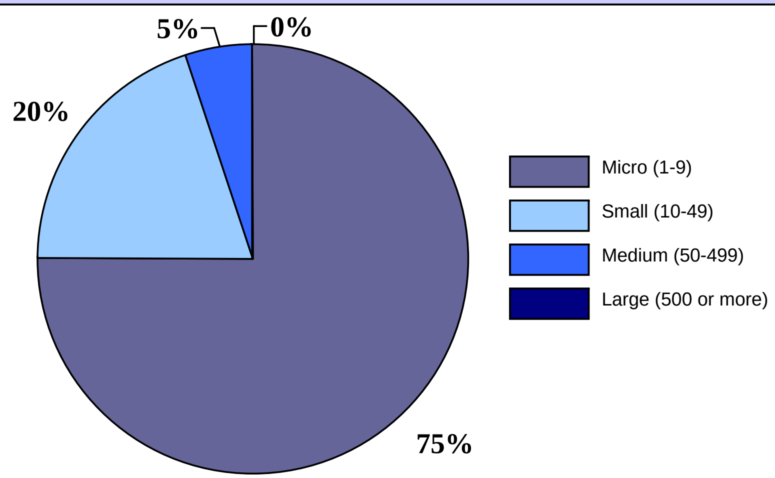
Appendix IV: Establishments by Employment-Size Class by Industry for Boston (cont.)

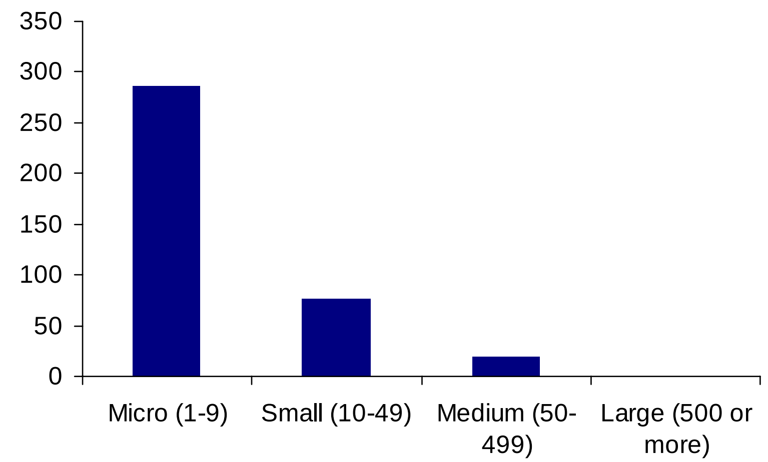
ADVERTISING (2002)





APPLIED ARTS (2002)

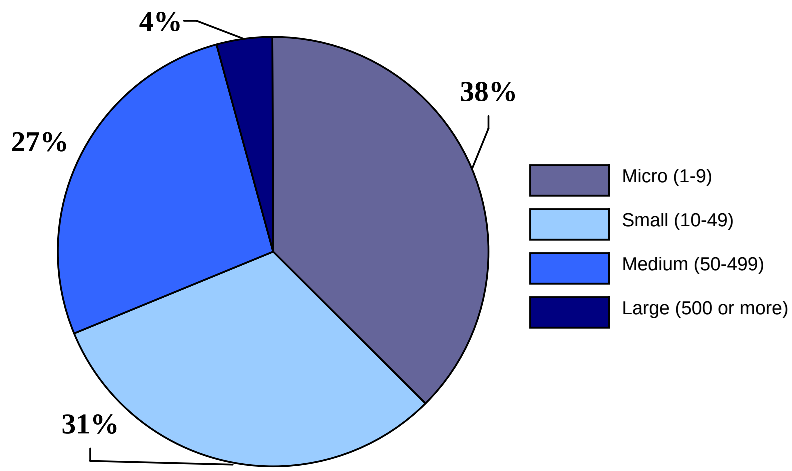


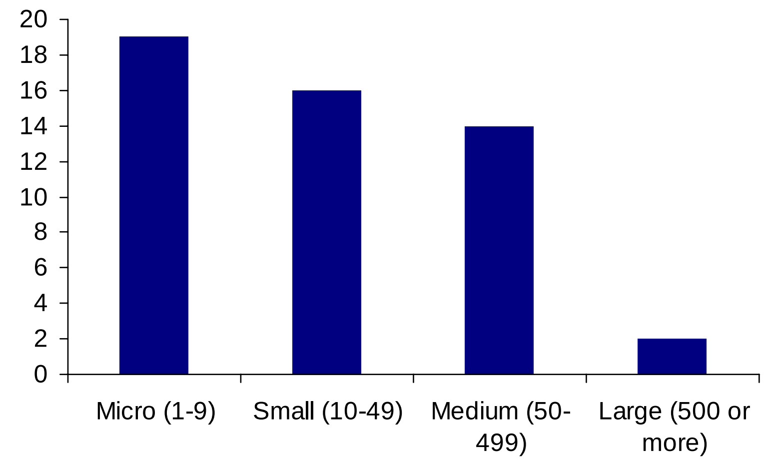


Source: U.S. Census County Business Patterns; DET; ABI; and BRA/Research Analysis

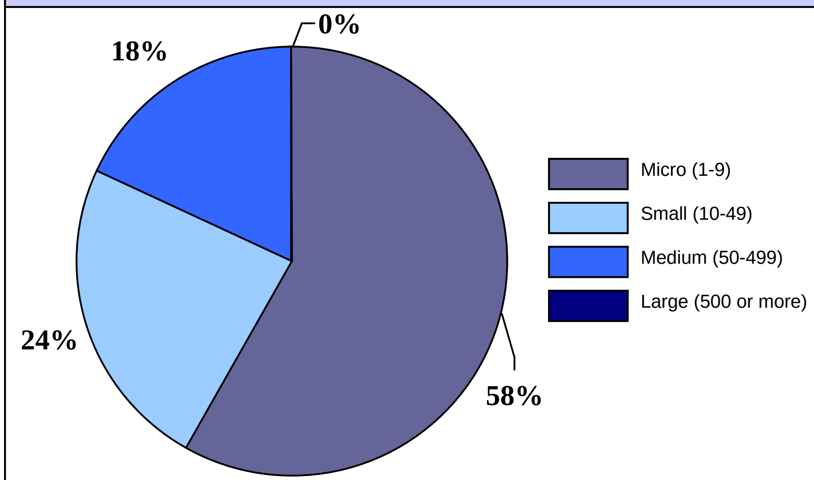
Appendix IV: Establishments by Employment-Size Class by Industry for Boston (cont.)

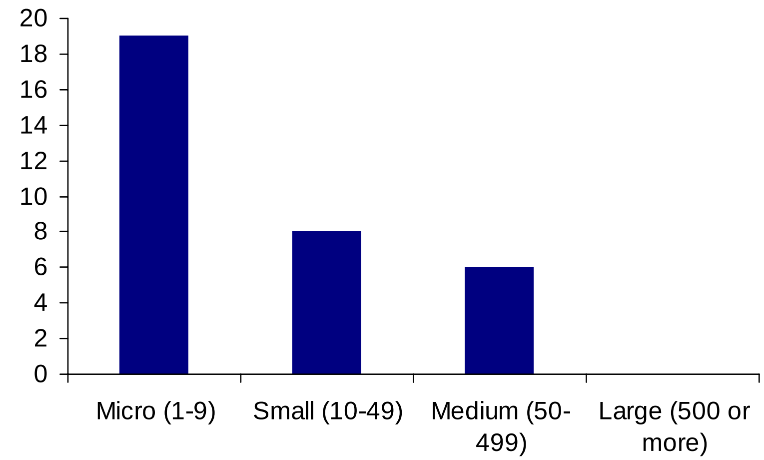
BROADCASTING (2002)





HERITAGE (2002)

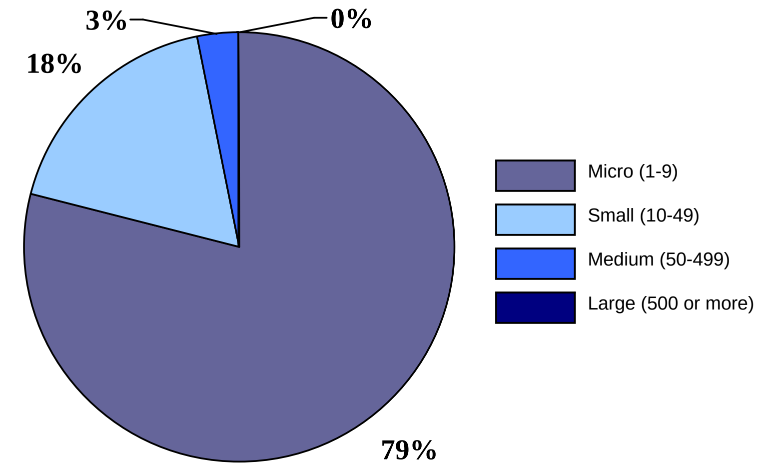


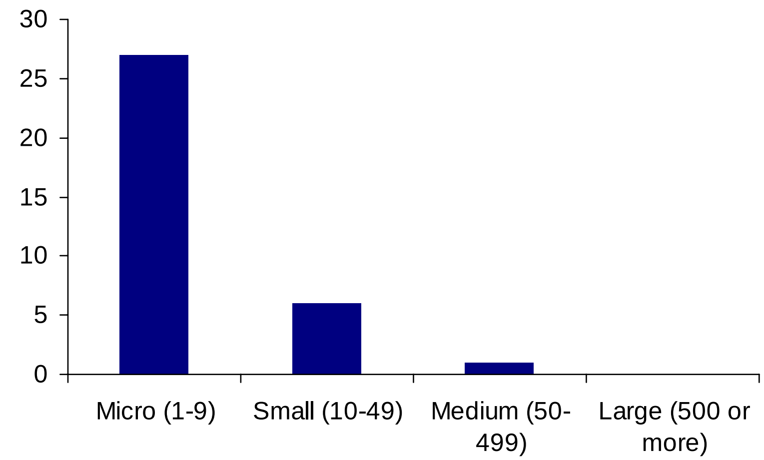


Source: U.S. Census County Business Patterns; DET; ABI; and BRA/Research Analysis

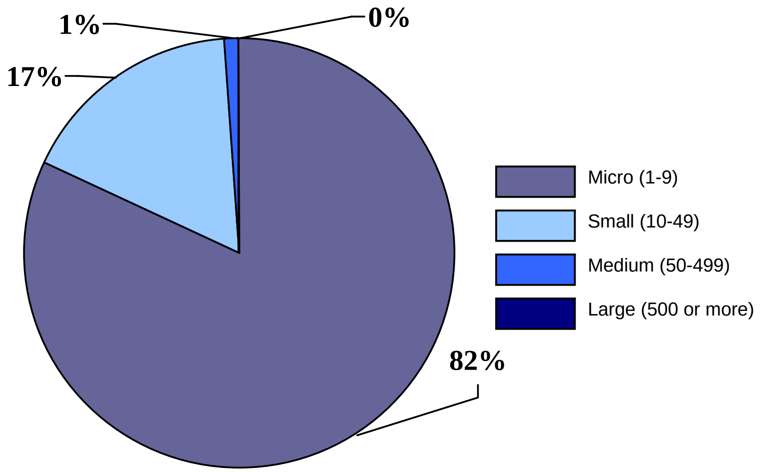
Appendix IV: Establishments by Employment-Size Class by Industry for Boston (cont.)

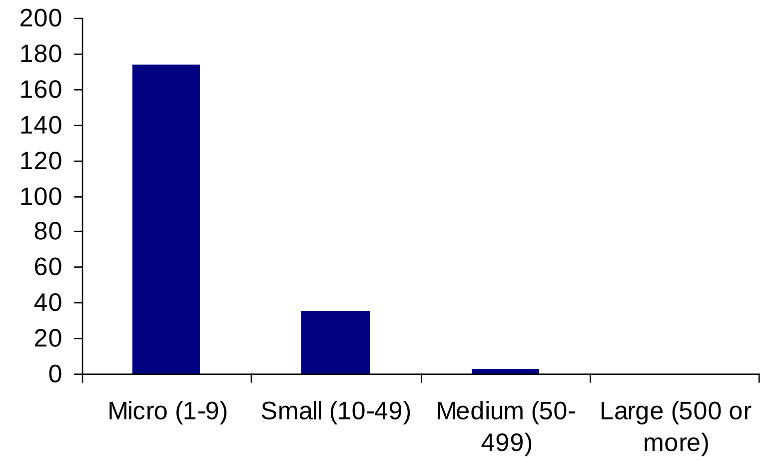
INDEPENDENT ARTS (2002)





FILM, VIDEO & PHOTOGRAPHY (2002)

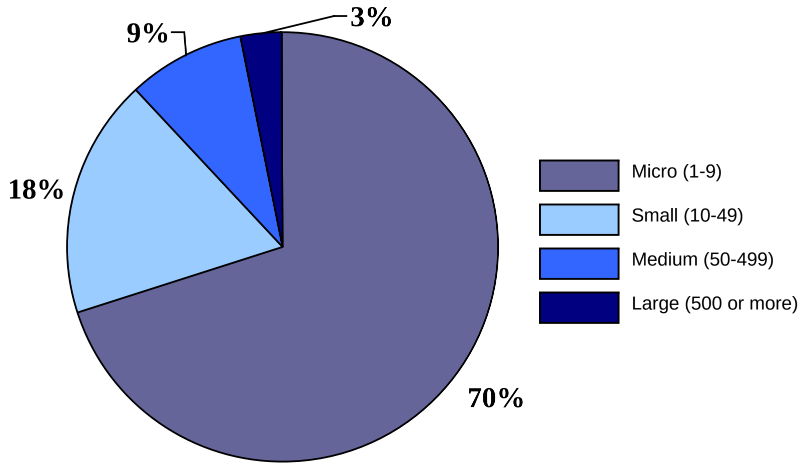


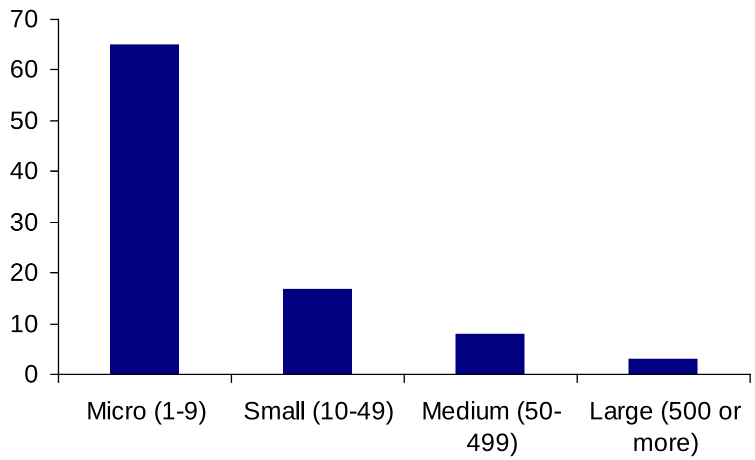


Source: U.S. Census County Business Patterns; DET; ABI; and BRA/Research Analysis

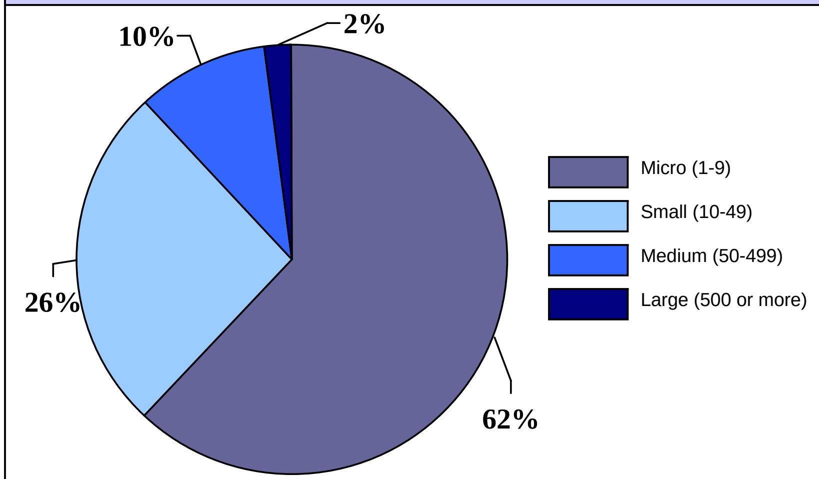
Appendix IV: Establishments by Employment-Size Class by Industry for Boston (cont.)

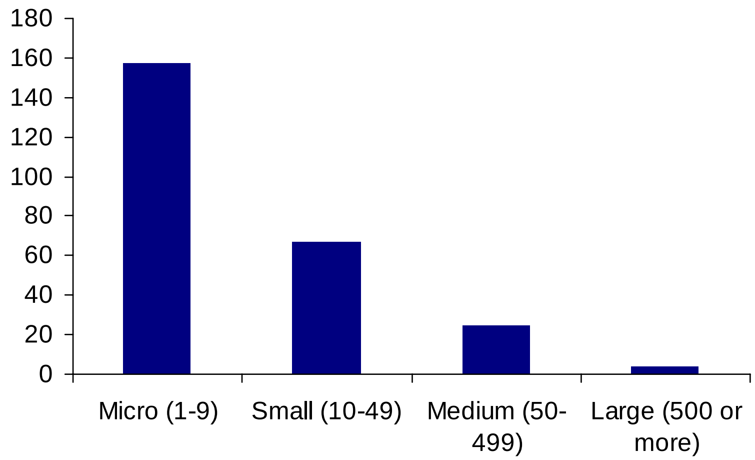
PERFORMING ARTS (2002)





PUBLISHING AND PRINTING (2002)

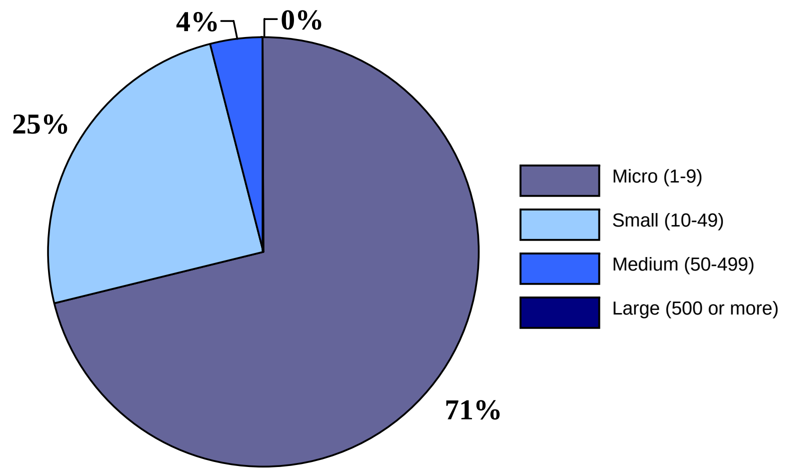


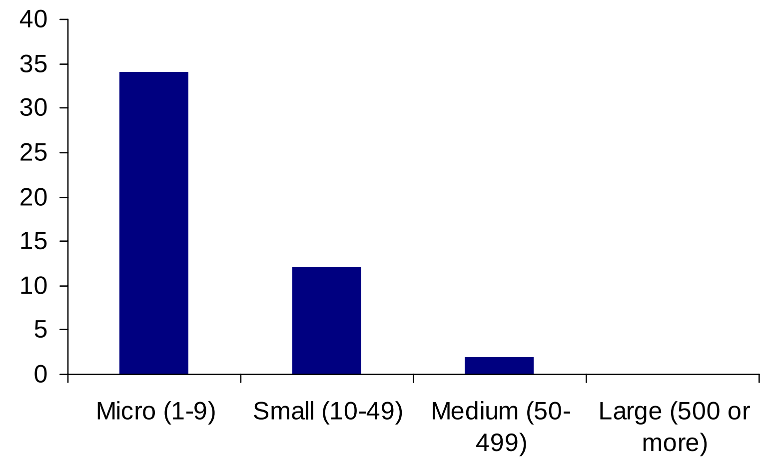


Source: U.S. Census County Business Patterns; DET; ABI; and BRA/Research Analysis

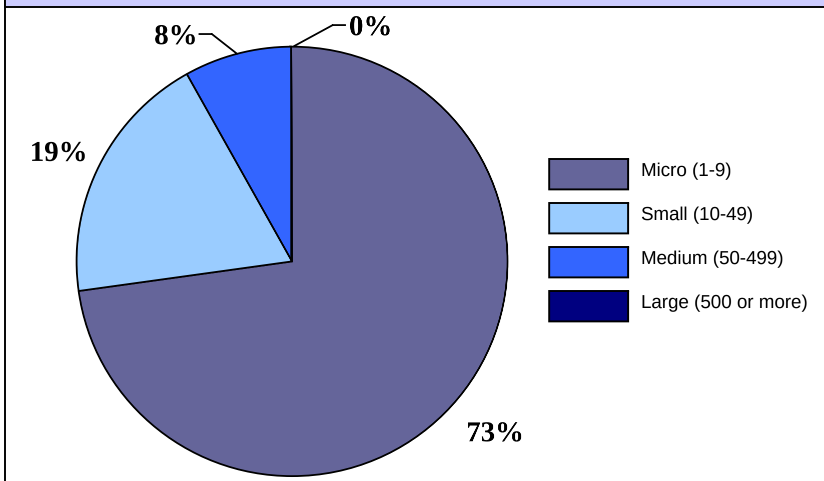
Appendix IV: Establishments by Employment-Size Class by Industry for Boston (cont.)

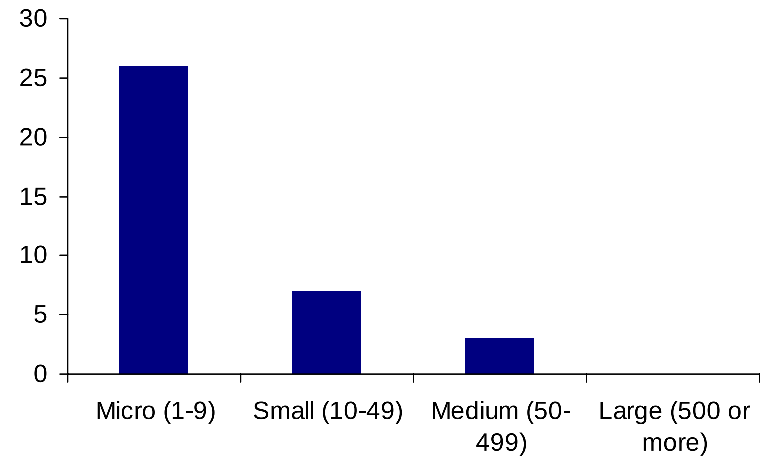
SOUND AND RECORDING (2002)





SUPPORT SERVICES (2002)





Source: U.S. Census County Business Patterns; DET; ABI; and BRA/Research Analysis

Appendix V: Boston's Creative Economy "Snapshot"

ADVERTISING SNAPSHOT (2002)

Employment	**3,425**
Employment Growth (1998-2002)	**-3.1%**
Number of Establishments	**131**
Average Wages	**$85,578**
Wage Growth	**16.6%**
Boston's State Location Quotient[1]	**2.02**

[1] Location Quotient (LQ) measures Boston's share of employment compared to the State average. An LQ of 1 means that Boston's share is equal to the State's.

TOP 10 EMPLOYERS

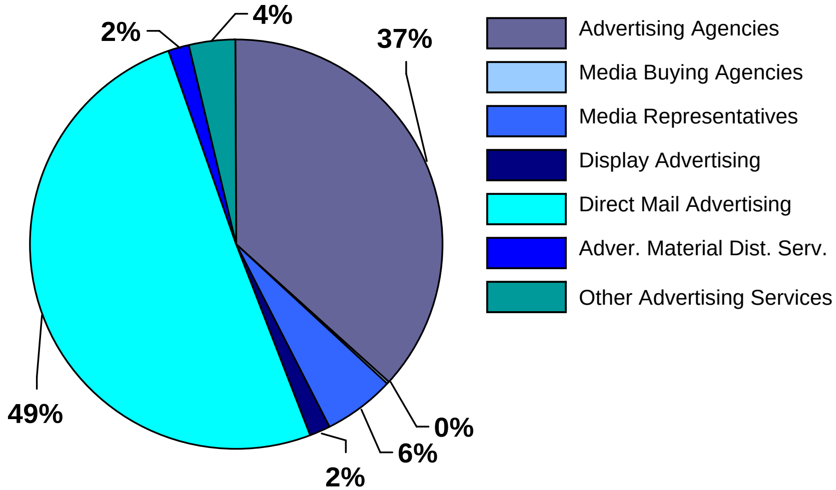
Advertising represents **11.5%** of Boston's total creative industry employment.

The Employee to Establishment Ratio for Advertising is **26:1**

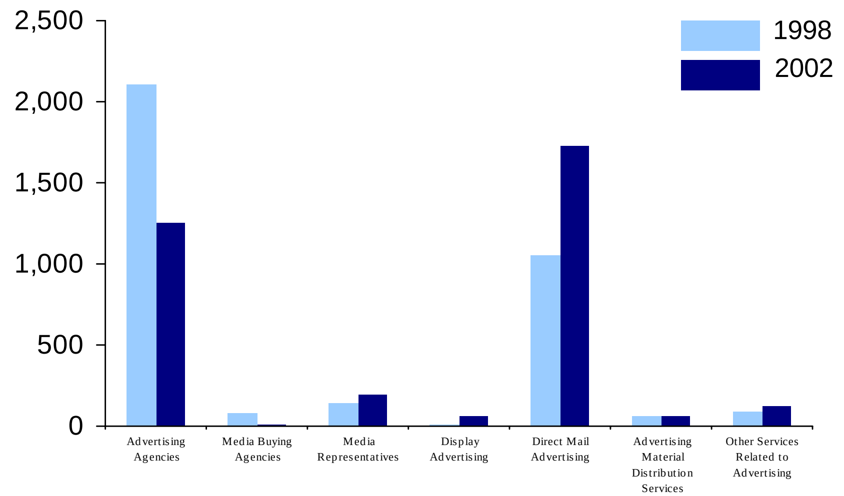
Top 10 Employers:

- Allied Advertising Agency
- Arnold Integrated Solutions
- Clarke Communications Group
- Connelly Partners
- Gearon Hoffman Inc.
- Hill, Holliday, Connors, Cosmopulos
- Irma S. Mann Strategic Marketing Inc.
- Kelly Habib John Integrated Marketing
- Lehman Millet Inc.
- Modernista

SUB-INDUSTRY COMPOSITION BY EMPLOYMENT



CHANGE IN EMPLOYMENT (1998-2002)



Source: U.S. Census County Business Patterns; DET; ABI; Boston Business Journal 2004 Book of Lists; and BRA/Research Analysis

Appendix V: Boston's Creative Economy "Snapshot" (cont.)

APPLIED ARTS SNAPSHOT (2002)

Employment	**4,578**
Employment Growth (1998-2002)	**21.9%**
Number of Establishments	**383**
Average Wages	**$58,716**
Wage Growth	**14.6%**
Boston's State Location Quotient[1]	**2.06**

[1] Location Quotient (LQ) measures Boston's share of employment compared to the State average. An LQ of 1 means that Boston's share is equal to the State's.

TOP 10 EMPLOYERS

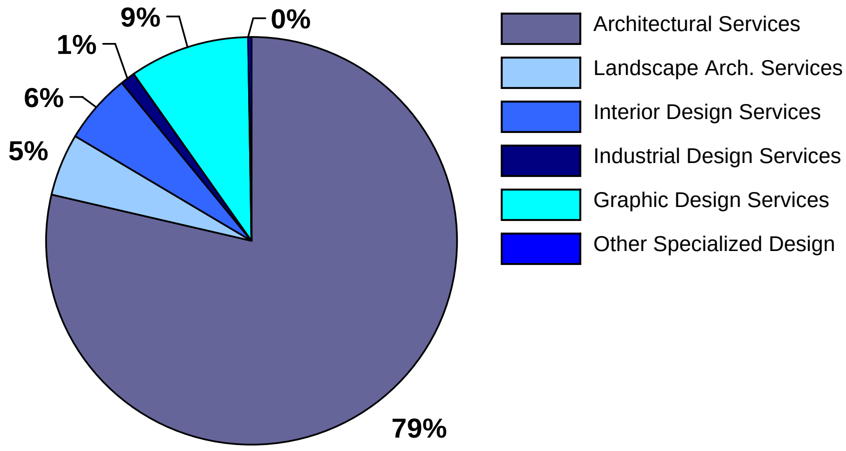
Applied Arts represents **15.4%** of Boston's total creative industry employment.

The Employee to Establishment Ratio for Applied Arts is **12:1**

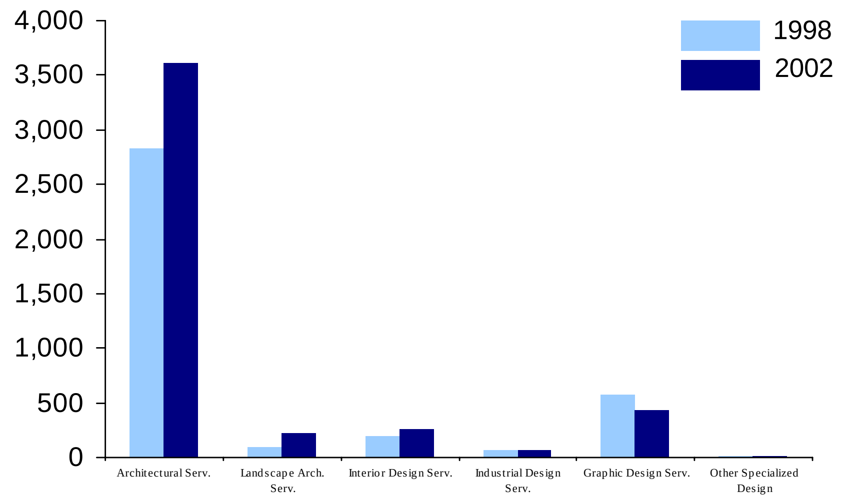
Top 10 Employers:

CBT Childs Bertman Tseckares
CID Associates Incorporated
Elkus Manfredi Architects
George BH Macomber Co.
Goody Clancy & Associates Inc.
Jacobs Engineering
Payette Associates Inc.
Shepley Bulfinch Richardson
Spire Printing SVC
Bergmeyer Associates

SUB-INDUSTRY COMPOSITION BY EMPLOYMENT



CHANGE IN EMPLOYMENT (1998-2002)



Source: U.S. Census County Business Patterns; DET; ABI; Boston Business Journal 2004 Book of Lists; and BRA/Research Analysis

Appendix V: Boston's Creative Economy "Snapshot" (cont.)

BROADCASTING SNAPSHOT (2002)

Employment	**4,215**
Employment Growth (1998-2002)	**25.1%**
Number of Establishments	**51**
Average Wages	**$69,740**
Wage Growth	**16.2%**
Boston's State Location Quotient[1]	**1.48**

[1] Location Quotient (LQ) measures Boston's share of employment compared to the State average. An LQ of 1 means that Boston's share is equal to the State's.

TOP 10 EMPLOYERS

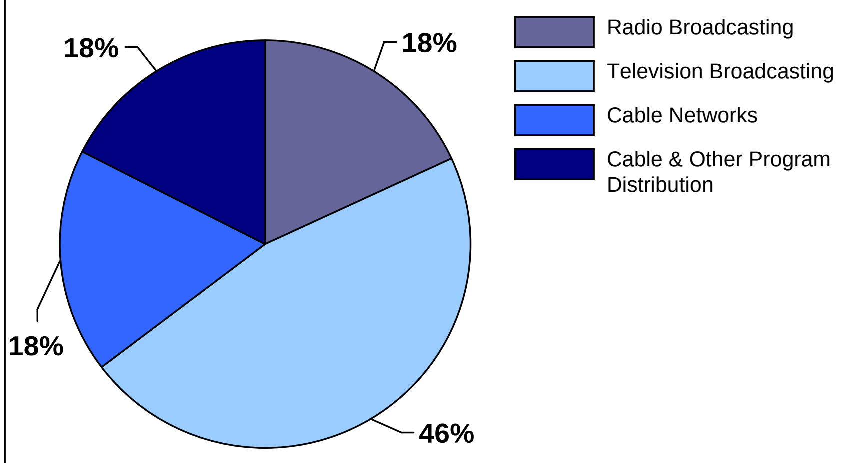
Broadcasting represents **14.2%** of Boston's total creative industry employment.

The Employee to Establishment Ratio for Broadcasting is **83:1**

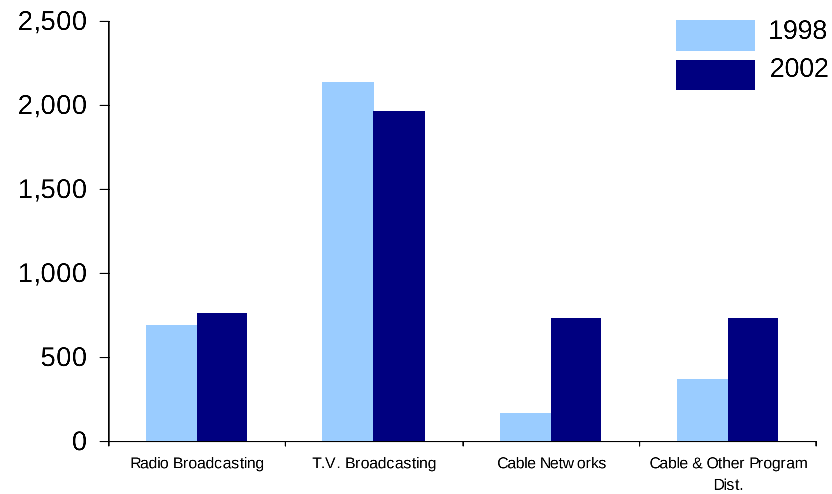
Top 10 Employers:

AT&T Broadband	WBZ
Entercom	WGBX
Greater Boston Radio Group	WHDH
Hemisphere Broadcasting	WLVI
WBUR	WQSX

SUB-INDUSTRY COMPOSITION BY EMPLOYMENT



CHANGE IN EMPLOYMENT (1998-2002)



Source: U.S. Census County Business Patterns; DET; ABI; Boston Business Journal 2004 Book of Lists; and BRA/Research Analysis

Appendix V: Boston's Creative Economy "Snapshot" (cont.)

HERITAGE SNAPSHOT (2002)

Employment	**1,839**
Employment Growth (1998-2002)	**31.2%**
Number of Establishments	**33**
Average Wages	**$28,825**
Wage Growth	**20.6%**
Boston's State Location Quotient[1]	**2.35**

[1] Location Quotient (LQ) measures Boston's share of employment compared to the State average. An LQ of 1 means that Boston's share is equal to the State's.

TOP 10 EMPLOYERS

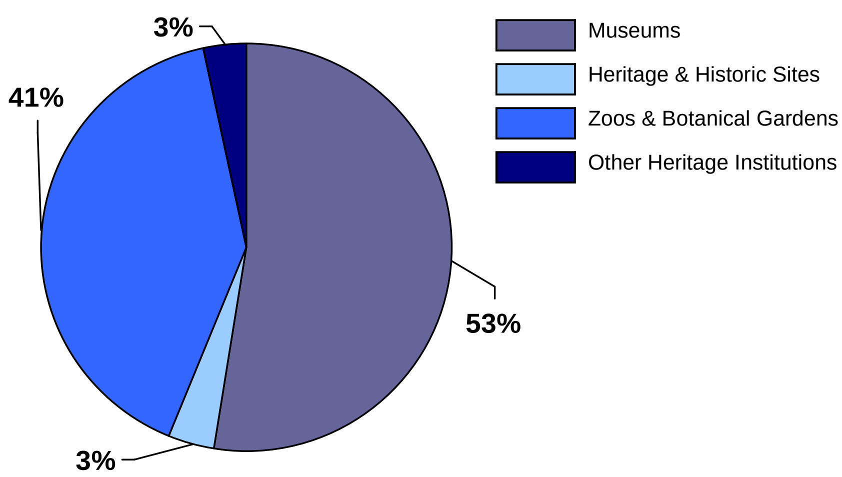
Heritage represents **6.2%** of Boston's total creative industry employment.

The Employee to Establishment Ratio for Heritage is **56:1**

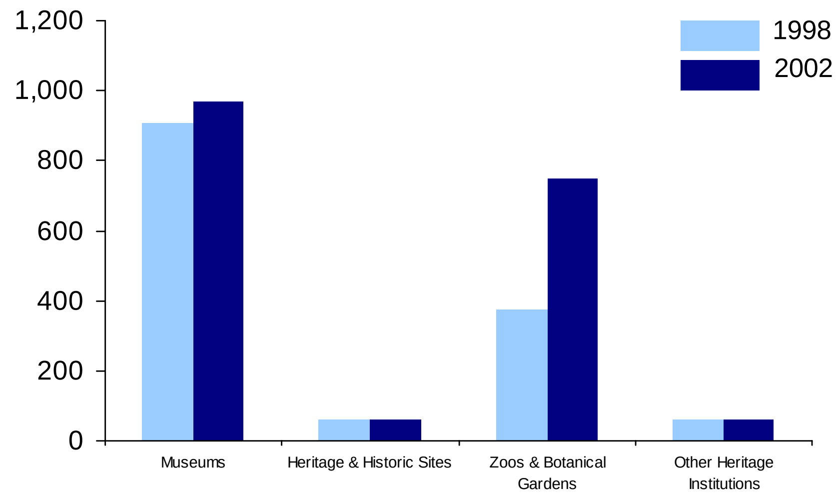
Top 10 Employers:

Franklin Park Zoo	Museum of Science, Boston
Isabella Stewart Gardner Museum	New England Aquarium
JFK Library and Museum	Old State House Museum
Museum of Afro-American Hist.	The Children's Museum
Museum of Fine Arts, Boston	USS Constitution Museum

SUB-INDUSTRY COMPOSITION BY EMPLOYMENT



CHANGE IN EMPLOYMENT (1998-2002)



Source: U.S. Census County Business Patterns; DET; ABI; Boston Business Journal 2004 Book of Lists; and BRA/Research Analysis

Appendix V: Boston's Creative Economy "Snapshot" (cont.)

INDEPENDENT ARTS SNAPSHOT (2002)

Employment	**250**
Employment Growth (1998-2002)	**25.0%**
Number of Establishments	**34**
Average Wages	**$43,007**
Wage Growth	**-36.6%**
Boston's State Location Quotient[1]	**1.15**

[1] Location Quotient (LQ) measures Boston's share of employment compared to the State average. An LQ of 1 means that Boston's share is equal to the State's.

TOP 10 EMPLOYERS

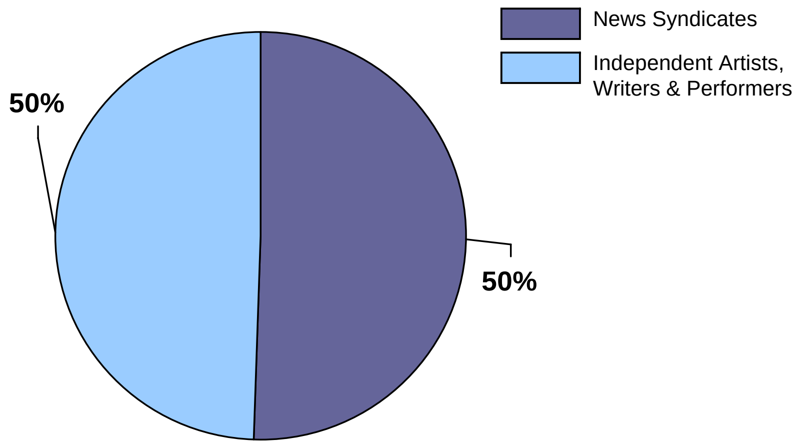
Independent Arts represents **0.8%** of Boston's total creative industry employment..

The Employee to Establishment Ratio for Independent Arts is **7:1**

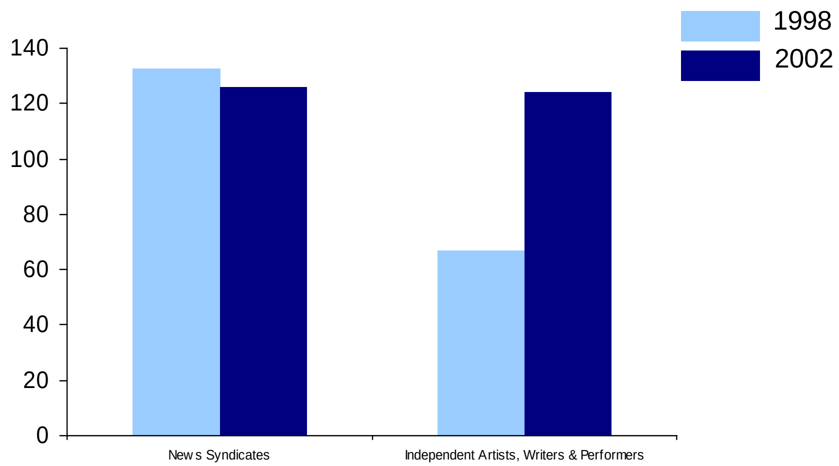
Top 10 Employers:

Associated Press	D.J. Chris Fiore Inc.
Blackside Inc.	Finish Limited
Boston Bureau Productions	Liberty Book II
Business Wire	P.R. Newswire Association Inc.
Concannon Group	Rich Inc.

SUB-INDUSTRY COMPOSITION BY EMPLOYMENT



CHANGE IN EMPLOYMENT (1998-2002)



Source: U.S. Census County Business Patterns; DET; ABI; Boston Business Journal 2004 Book of Lists; and BRA/Research Analysis

Appendix V: Boston's Creative Economy "Snapshot" (cont.)

FILM, VIDEO & PHOTOGRAPHY SNAPSHOT (2002)

Employment	**1,230**
Employment Growth (1998-2002)	**-26.3%**
Number of Establishments	**213**
Average Wages	**$30,606**
Wage Growth	**13.2%**
Boston's State Location Quotient[1]	**0.56**

[1] Location Quotient (LQ) measures Boston's share of employment compared to the State average. An LQ of 1 means that Boston's share is equal to the State's.

TOP 10 EMPLOYERS

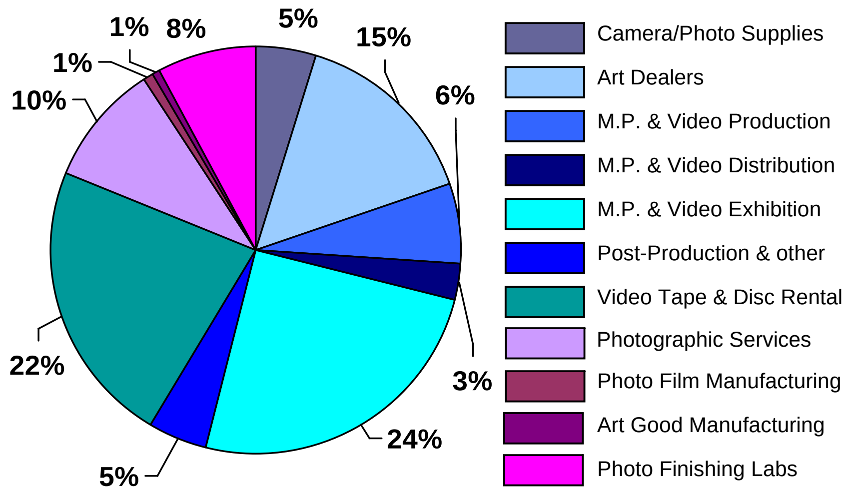
Film, Video & Photography represents **4.1%** of Boston's total creative industry employment.

The Employee to Establishment Ratio for Film, Video & Photography is **6:1**

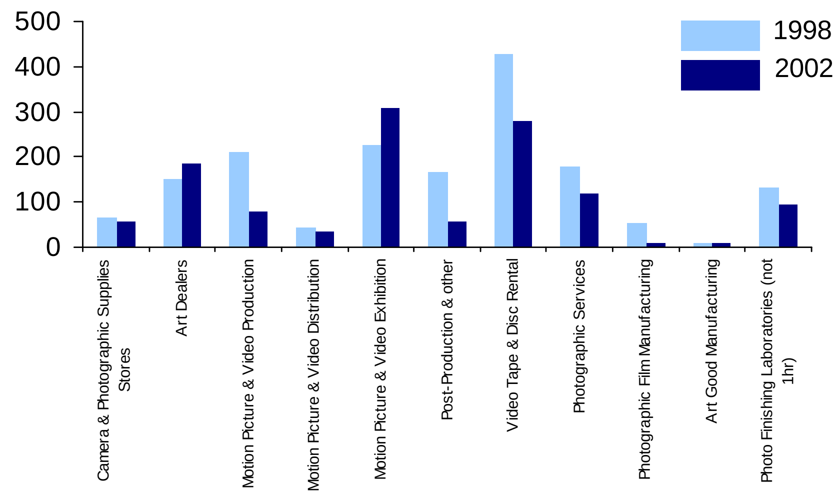
Top 10 Employers:

Blockbuster Video	Hoyts Cinemas
Boston Corporate Art	Hub Video
Boston Photo Imaging	Light Sources
Cabot Corporation	Rendon Group
E. Philip Levine Inc.	WGBH Production SVC

SUB-INDUSTRY COMPOSITION BY EMPLOYMENT



CHANGE IN EMPLOYMENT (1998-2002)



Source: U.S. Census County Business Patterns; DET; ABI; Boston Business Journal 2004 Book of Lists; and BRA/Research Analysis

Appendix V: Boston's Creative Economy "Snapshot" (cont.)

PERFORMING ARTS SNAPSHOT (2002)

Employment	**3,806**
Employment Growth (1998-2002)	**49.3%**
Number of Establishments	**93**
Average Wages	**$45,909**
Wage Growth	**-8.0%**
Boston's State Location Quotient[1]	**2.55**

[1] Location Quotient (LQ) measures Boston's share of employment compared to the State average. An LQ of 1 means that Boston's share is equal to the State's.

TOP 10 EMPLOYERS

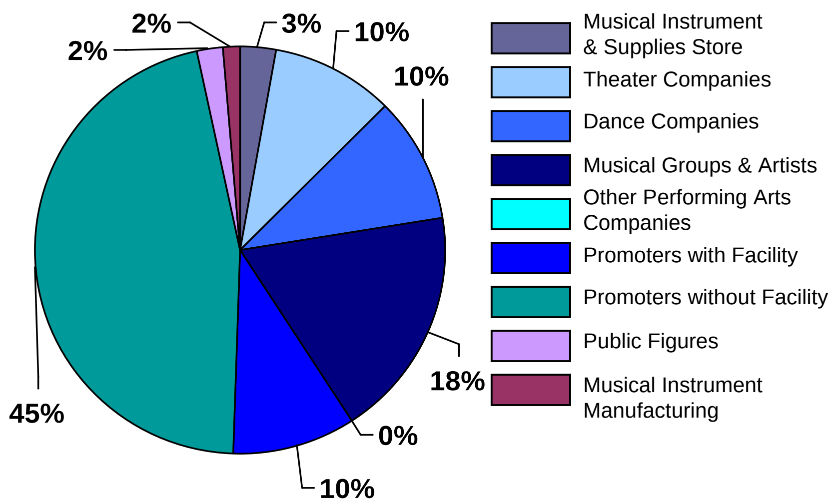
Performing Arts represents **12.8%** of Boston's total creative industry employment.

The Employee to Establishment Ratio for Performing Arts is **41:1**

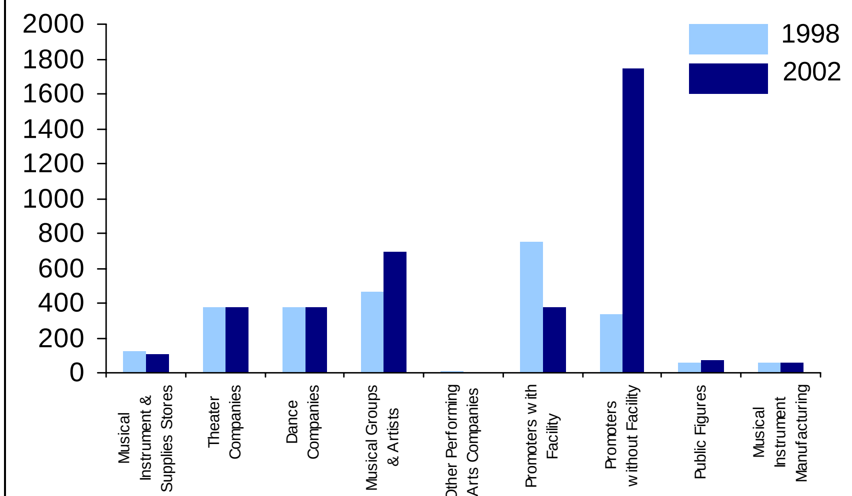
Top 10 Employers:

Aramark	Boston Symphony Orchestra Inc.
Blue Man Group	Broadway in Boston
Boston Ballet Co.	Huntington Theatre Co. Inc.
Boston Concessions at the Wang	NBG Corporation
Boston Music Co.	Shear Madness Box Office

SUB-INDUSTRY COMPOSITION BY EMPLOYMENT



CHANGE IN EMPLOYMENT (1998-2002)



Source: U.S. Census County Business Patterns; DET; ABI; Boston Business Journal 2004 Book of Lists; and BRA/Research Analysis

Appendix V: Boston's Creative Economy "Snapshot" (cont.)

PUBLISHING & PRINTING SNAPSHOT (2002)

Employment	**9,465**
Employment Growth (1998-2002)	**1.0%**
Number of Establishments	**253**
Average Wages	**$66,078**
Wage Growth	**39.1%**
Boston's State Location Quotient[1]	**1.64**

[1] Location Quotient (LQ) measures Boston's share of employment compared to the State average. An LQ of 1 means that Boston's share is equal to the State's.

TOP 10 EMPLOYERS

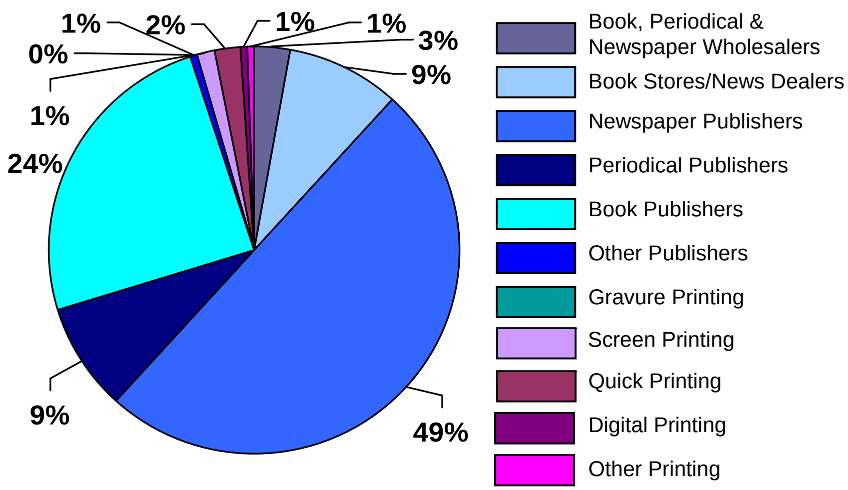
Publishing & Printing represents **31.8%** of Boston's total creative industry employment..

The Employee to Establishment Ratio for Publishing & Printing is **37:1**

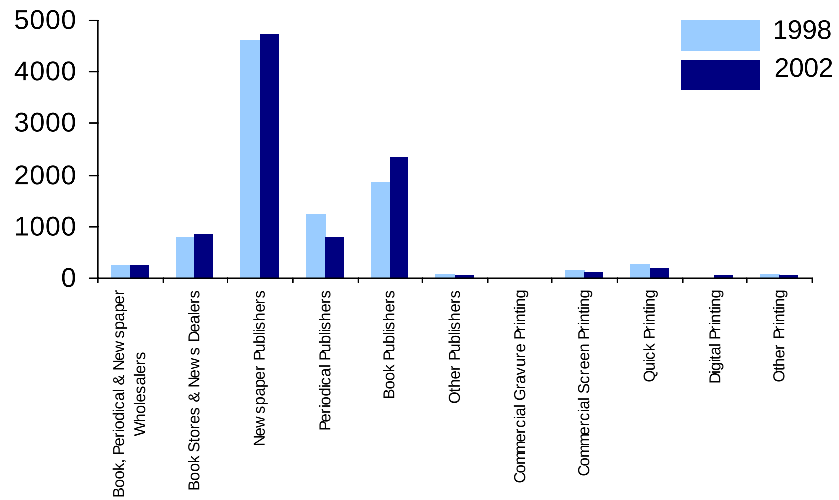
Top 10 Employers:

Acme Bookbinding Company	Houghton Mifflin Co.
AOLTWBG	INC Magazine
Boston Globe	Pearson Custom Publishing
Boston Herald	Phoenix Media Communications
Course Technology Inc.	Time Warner Trade Publishing

SUB-INDUSTRY COMPOSITION BY EMPLOYMENT



CHANGE IN EMPLOYMENT (1998-2002)



Source: U.S. Census County Business Patterns; DET; ABI; Boston Business Journal 2004 Book of Lists; and BRA/Research Analysis

Appendix V: Boston's Creative Economy "Snapshot" (cont.)

SOUND & RECORDING SNAPSHOT (2002)

Employment	**486**
Employment Growth (1998-2002)	**-3.1%**
Number of Establishments	**48**
Average Wages	**$22,384**
Wage Growth	**24.8%**
Boston's State Location Quotient[1]	**1.04**

[1] Location Quotient (LQ) measures Boston's share of employment compared to the State average. An LQ of 1 means that Boston's share is equal to the State's.

TOP 10 EMPLOYERS

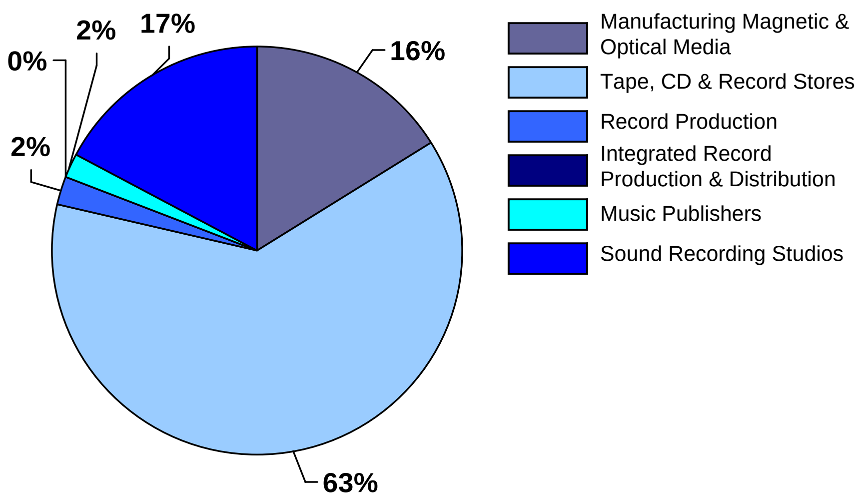
Sound & Recording represents **1.6%** of Boston's total creative industry employment.

The Employee to Establishment Ratio for Sound & Recording is **10:1**

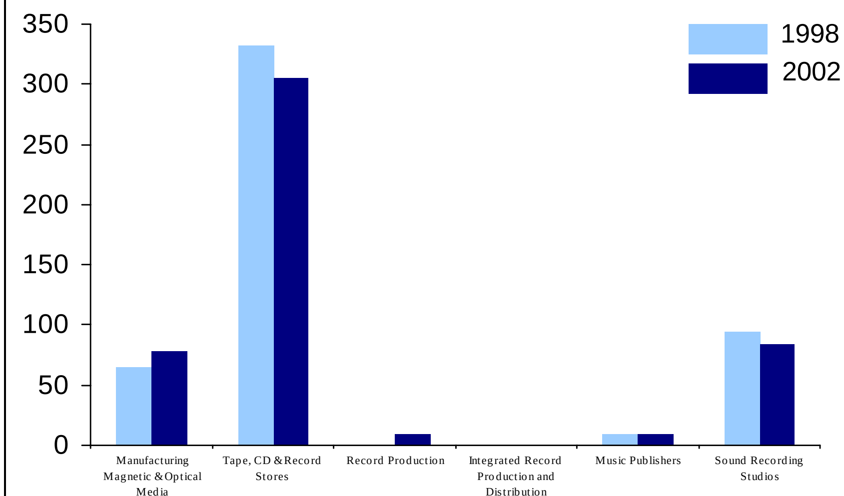
Top 10 Employers:

- Adaptive Networks Inc.
- Bristol Recording Studios
- Fantastic Transcripts
- Newbury Comics
- Offtech
- Scully Signal Co.
- Strawberries
- Tape Transcription Center
- Video Express
- Video Transfer Inc.

SUB-INDUSTRY COMPOSITION BY EMPLOYMENT



CHANGE IN EMPLOYMENT (1998-2002)



Source: U.S. Census County Business Patterns; DET; ABI; Boston Business Journal 2004 Book of Lists; and BRA/Research Analysis

Appendix V: Boston's Creative Economy "Snapshot" (cont.)

SUPPORT SERVICES SNAPSHOT (2002)

Employment	**425**
Employment Growth (1998-2002)	**23.6%**
Number of Establishments	**36**
Average Wages	**$52,521**
Wage Growth	**141.2%**
Boston's State Location Quotient[1]	**0.77**

[1] Location Quotient (LQ) measures Boston's share of employment compared to the State average. An LQ of 1 means that Boston's share is equal to the State's.

TOP 10 EMPLOYERS

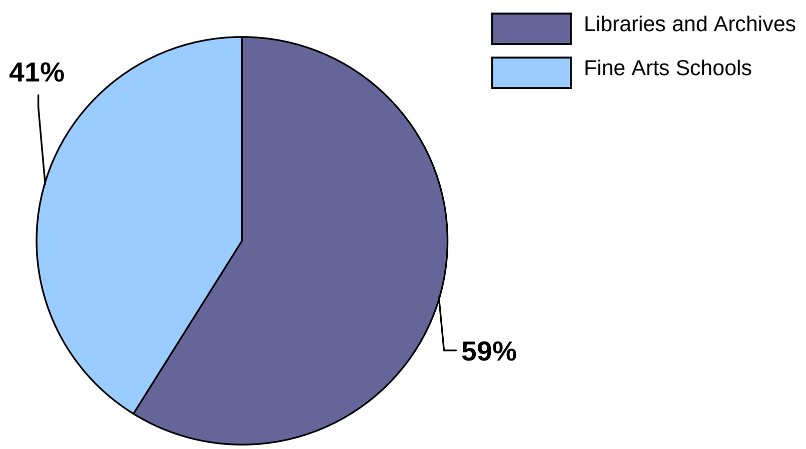
Support Services represents **1.4%** of Boston's total creative industry employment..

The Employee to Establishment Ratio for Support Services is **12:1**

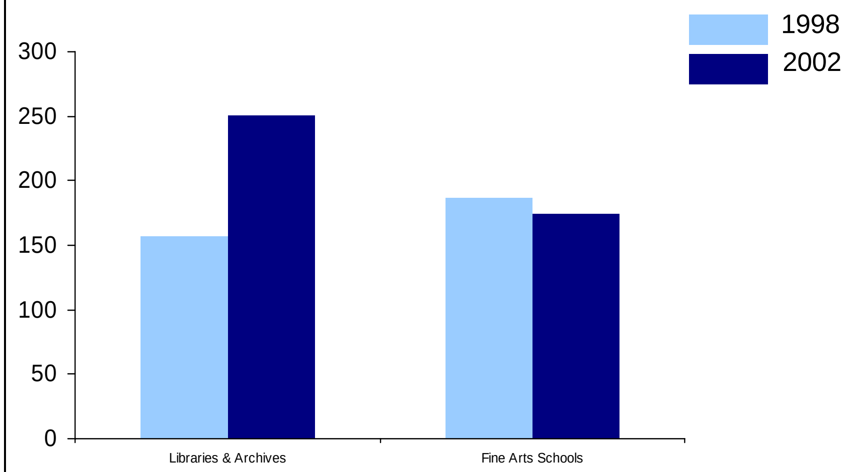
Top 10 Employers:

Baker Library
Boston Athenaeum
Boston Public Library
Community Music Center of Bos.
Mugar Memorial Library
New England Conservatory-Music
School of the Museum of Fine Arts
Snell Library
Social Law Library
Thomas P. O'Neil Jr. Library

SUB-INDUSTRY COMPOSITION BY EMPLOYMENT



CHANGE IN EMPLOYMENT (1998-2002)



Source: U.S. Census County Business Patterns; DET; ABI; Boston Business Journal 2004 Book of Lists; and BRA/Research Analysis

Appendix VI: Technical Note

➲ The primary data for this report are derived from a variety of sources:

➲ Creative activity is calculated as part of existing national accounting schemes, using established industrial classifications;

➲ Employment data, payroll, establishments and growth calculations are derived from the U.S. Census Bureau’s County Business Patterns 1998 and 2002, using the North American Industry Classification System (NAICS);

➲ The County Business Patterns only lists payroll jobs. Data on self-employment within the “creative economy” are from the U.S. Census Bureau’s Nonemployer Statistics for 1998 and 2002;

➲ Information on larger employers comes from the American Business International (ABI) database;

➲ Data on Boston’s Colleges and Universities are from “Connection: Facts 2000,” New England Board of Higher Education;

Appendix VI: Technical Note (cont.)

- ➲ Estimates of the size of the non-profit arts industry nationwide are from "Jobs, Arts and the Economy," published by Americans for the Arts, Washington D.C., 1994;

- ➲ Impact estimates were generated using the REMI model - a regionalized version of the U.S. National Input-Output Model. In order to derive multipliers for Boston's Creative Economy, a special run was performed by the BRA/Research team;

- ➲ Between them, these sources offer the ability to draw a quite detailed picture of the "Creative Economy" in statistical terms;

➲ Finally, current research publications, specialized reports, policy papers and academic studies related to the "creative economy" were reviewed;

Table of Contents:

Glossary:

➲ ***Creativity*** - The process by which ideas are generated, connected and transformed into things that are valued;

➲ ***Cultural and Heritage Tourism*** - There are as many definitions of cultural and heritage tourism as there are reports on the subject. The most generally accepted definition uses the term as follows: Cultural and Heritage Tourism occurs when participation in a cultural or heritage activity is a significant factor for travelling;

➲***Location Quotient (LQ)*** - The location coefficient measure employment concentration or specialization. It compares employment share (for a specific occupation or industry) in a place with their share in the national economy, MSA, etc.. The location coefficient will be less than one if a particular industry or occupation is under represented, and greater than one if they are over-represented;

Glossary (I):

➲ ***Non-employer*** - A non-employer business is defined by the U.S. Census bureau as one that has no paid employees, has annual business receipts of $1,000 or more and is subject to federal income taxes. Most non-employers are self-employed individuals operating very small unincorporated businesses, which may or may not be the owner's principal source of income;

➲***North American Industry Classification System (NAICS)*** - The North American Industry Classification System was developed by representatives from the United States, Canada, and Mexico, and replaced each country's separate classification systems with one uniform system for classifying industries - http://www.census.gov/epcd/www/naics.html

Glossary (II):

➲ ***Number of Establishments*** - Generally, an establishment is a single physical location where business is conducted or services or industrial operations are performed. However, for non-employers we count each distinct business income tax return filed by a non-employer business as an establishment. A non-employer business may operate from its owner's home address or from a separate physical location. Most geography codes are derived from the business owner's mailing address, which may not be the same as the physical location of the business;