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PINELLAS COUNTY

ECONOMIC DEVELOPMENT

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ARTS AND THE ECONOMY

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The arts play an important role in the local economy not just as a source of entertainment, recreation, and inspiration, but as a business driver. This report analyzes the economic impact of creative arts and culture in Pinellas County's economy by looking at recent economic data at the industrial level supplied by Emsi for the year 2017. Emsi is a tool that synthesizes public and private information to create estimates of economic conditions and projections. Employment, exports, and gross regional product are examples of information that can be gleaned and analyzed from this data.

Determining what exactly is the arts industry is no mean feat and is bound to have some disagreement. The process is reminiscent of Marcel Duchamp's declaration that "it's art if I say so." Ultimately, the selection of industries defaulted to internal consistency and this analysis uses the same industrial definitions as the city of St. Petersburg's Grow Smarter Initiative as identified by the St. Petersburg Economic Development Department. Grow Smarter, a joint city and St. Petersburg Area Chamber of Commerce plan, is a shared economic development vision that looks to foster high wage and high skill industries. One part of the strategy is to facilitate "creative arts and design" along with other more traditional industries such as specialized manufacturing, financial services, and life sciences.

In total, 56 separate NAICS codes were used and encompass a broad set of fields such as graphic design, art schools, and book publishers. The intent was to cast a wide net over the arts economy and also includes industries media distribution such as radio stations along with certain creative fields such as advertising agencies and software development. One could make a case that the list is either too broad or too restrictive, and it is entirely possible to skirmish around the boundaries of what should be added or subtracted from this reckoning, but in broad strokes it generally covers the creative economy.

As a technical explanation, NAICS, the North American Industrial Code Industry Classification System, is a joint program between the United States, Mexico, and Canada that hierarchically classifies industries. Codes range from broad two digit categories (e.g. 71 – "arts, entertainment, and recreation") to specific six digit codes (711110 – "theater companies and dinner theaters"). Every company has a six digit code and codes are organized into families of related industries. NAICS is a top down approach and all employees in an organization, no matter their roles in the company, are placed under the same NAICS category. As an important note, the two digit NAICS code for arts and entertainment was not used as a blanket category because it includes many industries such as miniature golf courses, marinas, and racetracks that are very entertaining, but not necessarily artistic.

The broad numbers are that creative arts industries employ **16,498 workers** in Pinellas County at **1,880 different business locations**. This accounts for **3.6% of all workers and 5.8% of all businesses in Pinellas County**. There are, on average, 8.8 people working at each arts business compared with 14.1 employees county wide. The average earnings (the sum of wages, salaries, profits, benefits, and other compensation associated with each job) for each art employee is **$65,284** compared with the countywide average of $54,676. Earnings, being **almost 20% higher** in art industries compared to the rest of the local economy, is one the first hints as to the large impact the arts have on the local economy.

Creative Arts Industries with the Largest Employment

NAICS	Description	Business Locations	Jobs
541511	Custom Computer Programming Services	295	2,296
541512	Computer Systems Design Services	252	2,157
323111	Commercial Printing (except Screen & Books)	97	1,720
541330	Engineering Services	198	1,294
711510	Independent Artists, Writers, & Performers	82	833
511110	Newspaper Publishers	12	805
541310	Architectural Services	83	637
541430	Graphic Design Services	87	600
511210	Software Publishers	79	588
323113	Commercial Screen Printing	31	427

Arts Industries contribute over **$1.8 billion** to the local economy as part of the Gross Regional Product (GRP). GRP is a measure of all the economic activity that occurs within Pinellas County. Pinellas County in total has a GRP of $47.2B and NAICS industries account for $42.5B. For technical reasons[1], this analysis will treat the GRP from NAICS industries, $42.5B, as being the county's entire GRP. The arts industry, by this measure, makes up **4.3% of the county's GRP**. Even more impressively, the ratio of **%GRP divided by %Jobs works out to 1.2**. This figure is an important measure because a value greater than one illustrates an industry that has an above average impact on the overall economy. To put other broad industry categories into perspective:

%GRP vs % Jobs: Various Industries

NAICS	Industry	%GRP	%Jobs	(%GRP)/(%Jobs)
-	Grow Smarter Creative Arts	4.3%	3.6%	1.2
23	Construction	4.9%	5.6%	0.9
31-33	Manufacturing	11.2%	7.1%	1.6
44-45	Retail Trade	8.9%	12.2%	0.7
54	Professional, Scientific, & Technical Services	8.9%	7.4%	1.2
55	Management of Companies & Enterprises	4.8%	3.1%	1.5
72	Accommodation & Food Services	4.3%	10.5%	0.4

The total amount of local sales generated by creative arts industries was approximately $2.9B. There was almost $2.2B in sales made in the county and slightly more than $0.7B in export sales. The total demand for art industry goods and services, just in Pinellas County, was over $4.5B. This means Pinellas County imported almost $2.4B and had a trade deficit, exports minus imports, of $1.6B.

[1]The total GRP, $47.2B, includes a vector that accounts for the "households" industry. At a theoretical level, homeownership is considered economic activity because homeowners "rent" their houses to themselves. By comparison, NAICS GRP is a value more associated with buying a selling products and services that matches closer to what people generally consider to be the economy.

Much of the trade deficit appears to be driven by Silicon Valley and Hollywood. Tech and media run gigantic trade deficits across most platforms. The reality of these deficits is there is very little that can be done to flip them into surpluses. The region can look to decrease the trade deficits associated with software and online publishing by promoting the local technology industry and seeking to improve the educational infrastructure, business incubation, etc. that may be able to increase sales and reduce the deficit, but the computer technology trade deficit is ultimately a result of large monopolies controlling much of the industry. Unless existing tech monopolies move their operations to the region, then there will always be net outflows of money from the region as consumers and businesses fork over money to companies such as Google, Microsoft, and Netflix that do not have local alternatives.

This is not to discourage the development of local tech, but only to understand its limitations. Online publishing in the county runs an overall trade deficit, but each employee working in the field generates, on average, $190,000 in export sales. The consumption pattern is that local companies creating online content are predominantly making their content for sales outside of the region as industry companies export $29M in services and content, but provide local consumers with only $7.6M in services. The tech economy creates services and products that are sold nationwide and internationally which presents an opportunity to bring money into the community even with the existing deficit.

Hollywood is the second side of the equation as cable television, broadcast television, and the film industry combined have over $460M in trade deficits. It seems possible to tinker around the edges and slightly increase the amount of filming in the region, but without massive tax incentives in place, it is unrealistic to expect major media filming to occur locally as the industry has an almost single minded obsession in chasing public subsidies. Similar to tech, there are also major media monopolies in that suck up money from the rest of the country. Tickets sales to Star Wars films and HBO subscription fees are examples of these regular monopolistic entertainment outflows.

Engineering and advertising however would seem to be companies that could grow well in the area. Pinellas County has a strong base of professional service firms including a large number of marketing companies that would seemingly pair well with advertising. Pinellas County's manufacturing base would suggest that there are a reasonably large number of engineers in the regions, so the relative paucity of engineering firms is concerning. Interestingly, the Tampa-St. Pete-Clearwater MSA has a relatively large concentration of engineering firms, but they tend to cluster on the other side of the bay.

Industries with Largest Trade Deficits

NAICS	Description	Exports	Imports	Trade Deficit
519130	Internet Publishing & Broadcasting & Web Search Portals	$28,795,449	$422,475,480	-$393,680,032
511210	Software Publishers	$63,519,360	$322,000,132	-$258,480,772
541330	Engineering Services	$29,649,051	$257,979,674	-$228,330,623
512110	Motion Picture & Video Production	$25,650,412	$245,962,146	-$220,311,734
515210	Cable & Other Subscription Programming	$17,809,777	$159,102,072	-$141,292,294
541810	Advertising Agencies	$30,906,198	$158,618,431	-$127,712,233
541512	Computer Systems Design Services	$25,050,626	$144,977,582	-$119,926,957
541511	Custom Computer Programming Services	$25,429,874	$136,094,768	-$110,664,893
515120	Television Broadcasting	$11,260,383	$114,489,808	-$103,229,425
511130	Book Publishers	$6,837,704	$61,157,973	-$54,320,269

Printing and publishing however are bright spots in regards to trade. Commercial printing, broken up into screen and non-screen types, account for over $160M in trade surpluses. The most archetypal arts industry, independent artists, has a trade surplus of over $20M while arts galleries have a surplus of almost $38M. Radio and newspaper organization also have moderately sized trade surpluses that with radio stations and networks together bringing in almost $48M and newspapers slightly over $41M. Design services such as graphic design, architecture, drafting services, and interior design all have small trade surpluses.

Industries with largest Trade Surpluses

NAICS	Description	Exports	Imports	Trade Surplus
323111	Commercial Printing (except Screen and Books)	$184,992,812	$63,147,850	$121,844,963
323113	Commercial Screen Printing	$50,329,139	$8,436,820	$41,892,319
511110	Newspaper Publishers	$41,334,058	$6,571	$41,327,487
453920	Art Dealers	$37,755,117	$3,531	$37,751,586
515112	Radio Stations	$38,340,952	$7,129,432	$31,211,520
711510	Independent Artists, Writers, & Performers	$24,481,951	$4,222,534	$20,259,417
541310	Architectural Services	$17,030,000	$102,300	$16,927,700
515111	Radio Networks	$17,394,115	$726,176	$16,667,939
541430	Graphic Design Services	$9,359,948	$528,557	$8,831,391
541340	Drafting Services	$2,782,888	$162,011	$2,620,876

GRP

The industries with the largest impact on the GRP are custom computer programming and computer systems design services. Together these two industries employ almost 4,500 workers (~1% of the entire workforce) and contribute over $550M to the GRP. Software publishing, engineering services, and commercial printing are the next three largest contributors to the GRP as each is north of $130M. Surprisingly, independent artists have a larger impact on the GRP than the newspaper industry does.

Creative Industries with Largest GRP

NAICS	Description	2017 Jobs	2017 GRP
541511	Custom Computer Programming Services	2,296	$277,271,193
541512	Computer Systems Design Services	2,157	$274,886,759
511210	Software Publishers	588	$137,540,795
541330	Engineering Services	1,294	$133,015,828
323111	Commercial Printing (except Screen and Books)	1,720	$131,502,171
711510	Independent Artists, Writers, and Performers	833	$87,355,878
511110	Newspaper Publishers	805	$71,324,872
541810	Advertising Agencies	420	$66,641,471
541310	Architectural Services	637	$58,304,613
515120	Television Broadcasting	255	$56,620,561

GRP/Job is another way of looking about which industries are having the greatest impact on the local economy at a more individual level. The drawback of this measure is that it tends to show the most pronounced impact on industries with relatively small employment footprints. Media publication and distribution leads the way with some of the largest impacts per job in the local economy which is somewhat surprising considering the large trade deficits these industries also run. Software publishing however has large employment and GRP/Job figures that further evidence it to be an important industry for the economy. Glassware manufacturing also represents an important opportunity as the industry has a large impact on the economy per job and seems able to integrate nicely with existing community assets. The Morean Arts Center, Imagine Museum, and Chihuly Collection are all institutions that should be able to integrate and enjoy a symbiotic relationship with glassware manufacturing.

Industries with Greatest GRP/Job

NAICS	Description	Jobs	GRP	GRP/Job
512230	Music Publishers	11	$4,359,031	$399,755
512240	Sound Recording Studios	18	$6,845,546	$379,753
515210	Cable & Other Subscription Programming	109	$38,204,963	$351,486
511130	Book Publishers	89	$23,291,553	$262,350
512290	Other Sound Recording Industries	12	$3,123,707	$261,849
511210	Software Publishers	588	$137,540,795	$233,808
512191	Teleproduction & Other Postproduction Services	16	$3,623,054	$231,746
515120	Television Broadcasting	255	$56,620,561	$221,706
519110	News Syndicates	5	$987,592	$211,982
327212	Other Pressed & Blown Glass & Glassware Manufacturing	6	$1,147,763	$207,338

Location Quotients

The weighted average location quotient (LQ) for all of the arts industries in Pinellas County is **1.14** compared with the national economy. Location quotient is a measure of how concentrated industries are in a region compared with a reference area. A value larger than 1 means employment is relatively high in a region compared with a reference area. Imagine that 10% of the workers in Clay Town make pottery while in the national economy only 5% of the workers makes pottery. Clay Town's pottery industry would have a location quotient of 2 because 10%/5% = 2. Pinellas County's location quotient, 1.14, for the arts industries means that employment is 14% higher in creative arts industries compared with the United States as a whole. LQ can also be used this way to determine the jobs in the economy that are over the expected number of jobs in the economy that would exist if every industry has an LQ equal to 1. On the whole, in Pinellas there are 2,026 more jobs in the arts and culture industries than would be expected in an economy this size because:

Industry Jobs – (Industry Jobs)/(LQ) = Above Average Jobs

16,498 – (16,498/1.14) = 2,206

Industries with Greatest LQ

NAICS	Description	LQ	Jobs	Expected "Average Employment"	Jobs Above Average
453920	Art Dealers	6.07	423	70	353
512250	Record Production & Distribution	3.35	74	22	52
515111	Radio Networks	2.17	119	55	64
323113	Commercial Screen Printing	1.86	427	230	197
323111	Commercial Printing (except Screen and Books)	1.77	1720	972	748
541430	Graphic Design Services	1.57	600	383	217
511110	Newspaper Publishers	1.56	805	515	290
541921	Photography Studios, Portrait	1.47	251	171	80
541410	Interior Design Services	1.37	389	283	106
519190	All Other Information Services	1.37	78	57	21

LQ is highly related to export sales because highly concentrated industries tend to send their products and services outside of the community. The commercial printing industries best illustrate this trend as they has substantially high location quotients and are also the largest exporting industries in the county. These industries best thought of as existing strengths in the creative economy because the already exist in large numbers. The flip side of high LQ industries is to look at the lowest LQ industries in the county. These are industries that are a weakness in the region and require goods and services to be imported.

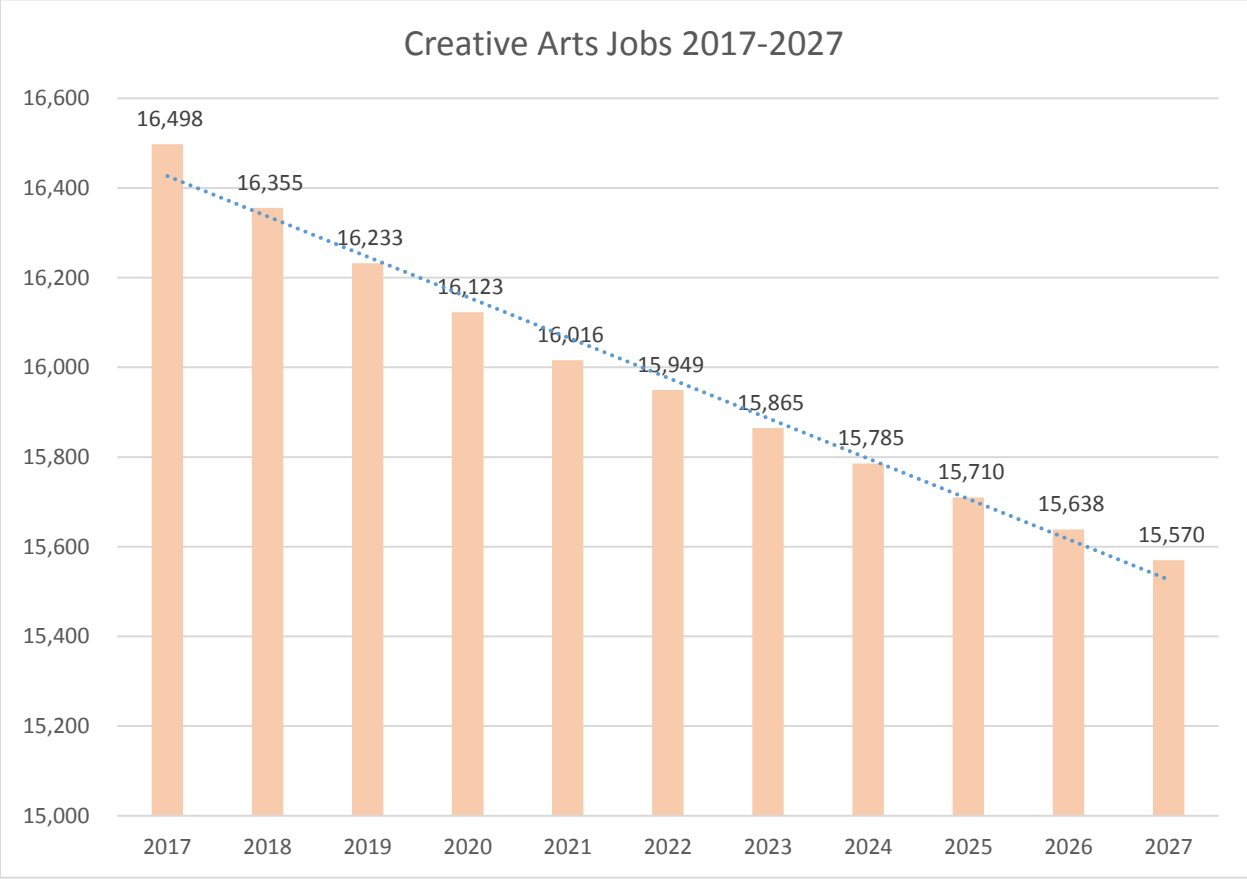
Industries (Jobs >1) with Lowest LQ

NAICS	Description	LQ	Jobs	Expected "Average Employment"	Jobs Below Average
327212	Other Pressed & Blown Glass & Glassware Manufacturing	0.13	6	44	38
519110	News Syndicates	0.13	5	35	30
511191	Greeting Card Publishers	0.21	3	14	11
512191	Teleproduction & Other Postproduction Services	0.22	16	70	55
519130	Internet Publishing & Broadcasting & Web Search Portals	0.23	151	659	507
711190	Other Performing Arts Companies	0.24	6	25	19
512110	Motion Picture & Video Production	0.26	228	866	637
323120	Support Activities for Printing	0.31	23	74	51
541420	Industrial Design Services	0.40	28	71	43
711320	Promoters of Performing Arts, Sports, & Similar Events without Facilities	0.44	59	132	74

Projections

A concerning trend is that employment in the creative arts sector is projected to decline in the coming years. The largest reasons for this change appears to be because of the decline in commercial printing (-775) and newspaper publishers (-530). What makes this trend especially troubling is that those are two of the largest exporting industries in the county. The story however is not entirely one of doom and gloom. For one, creative arts industries are projected to higher average earnings because of growth in higher earning industries. Average earnings, in 2017 dollars, are projected to increase by $675 per job or approximately 1%.

	2017	2022	2027
Jobs	16,498	15,949	15,570
Numerical Change		-549	-928
% Change		-3.3%	-5.6%



Industries with Largest Job Gains

NAICS	Description	2017 Jobs	2027 Jobs	Job Change	% Change	Average Earnings
541512	Computer Systems Design Services	2,157	2,432	275	13%	$92,601
511210	Software Publishers	588	852	264	45%	$87,298
541430	Graphic Design Services	600	766	167	28%	$37,938
453920	Art Dealers	423	530	108	25%	$39,708
515112	Radio Stations	265	325	59	22%	$76,303
541310	Architectural Services	637	695	58	9%	$75,933
712130	Zoos & Botanical Gardens	85	132	48	56%	$49,376
541490	Other Specialized Design Services	83	123	41	49%	$35,774
519190	All Other Information Services	78	114	35	45%	$41,220
711130	Musical Groups & Artists	139	173	34	25%	$44,161

Industries with Largest Job Losses

NAICS	Description	2017 Jobs	2027 Jobs	Job Change	% Change	Average Earnings
323111	Commercial Printing (except Screen & Books)	1,720	945	-775	-45%	$52,320
511110	Newspaper Publishers	805	276	-530	-66%	$56,836
541330	Engineering Services	1,294	1,064	-230	-18%	$82,622
511120	Periodical Publishers	249	104	-145	-58%	$65,692
541810	Advertising Agencies	420	302	-118	-28%	$64,589
515120	Television Broadcasting	255	175	-80	-31%	$84,755
541511	Custom Computer Programming Services	2,296	2,225	-70	-3%	$85,748
332323	Ornamental & Architectural Metal Work Manufacturing	76	15	-61	-80%	$51,572
511130	Book Publishers	89	30	-59	-66%	$50,163
712110	Museums	145	108	-37	-26%	$38,106

The caveat with projections like these is that they can only project data while using the assumption trends will continue following the same pattern as the recent past. If an industry lost jobs in the years prior to 2017, then Emsi's model will project job losses into the future. A drawback is that is that these types of projections are incapable of taking into account events that will change the future trends. For example, the decline in museum employment, because the data is slightly dated, does not account for the recent opening of the James Museum and cannot model the Museum of the American Arts and Crafts Movement's future opening, so museum employment will likely increase even though Emsi says otherwise. Likewise unforeseen technological or macroeconomic changes cannot be accounted for. The projection and the extrapolation of trends, as a strength and weakness, relies on the assumption that the future will conform to same patterns as the past. The most extreme projections both positive and negative, newspaper publishers along with zoos and botanical gardens, will likely have more muted outcomes in 2027 than what is shown here.

The importance of employment projections is not about the actual numbers and whether they are right or wrong. Statistical models are always wrong, but a good model is still useful. Direction, how much and how fast, is much more important than the destination to consider. What makes projections useful as tools is for asking better questions. What are the trends, challenges, and likely outcomes that could appear on the horizon? How should people prepare for these possible changes and what are possible interventions that could make the future different than what the model predicts?