CALIFORNIA PRINTING INDUSTRY ECONOMIC & FISCAL CONTRIBUTION

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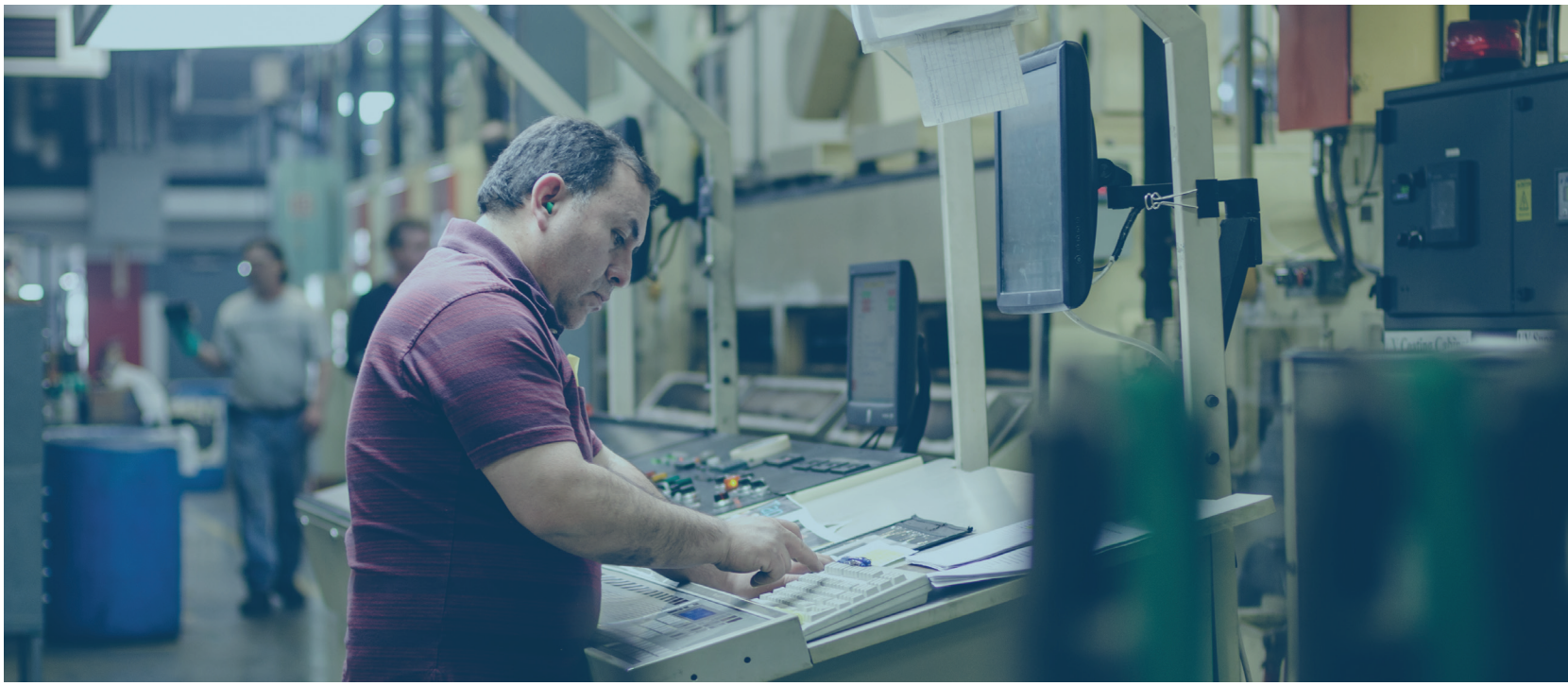
The Printing Industry in California contributes significant value to the California state economy and state and local governments in many ways. The industry generates and supports many jobs, economic output, and government programs. In total, the printing industry contributes over $17.7 billion in output, 93,600 jobs, $4.3 billion in labor income, and $257 million in state and local tax revenues.

Demonstrating the Importance of the Printing Industry to the California State and Local Governments

Commissioned by Printing Industries of California
Research conducted by the *Center for Print Economics and Market Research,* Printing Industries of America

Table of Contents



Executive Summary

The California Contribution Report was developed by Printing Industries of America's Center for Print Economic and Market Research based on data from the Bureau of Economic Analysis (BEA), Census Bureau, and the PIA model of the printing industry.

The year 2013 is used for the contribution analysis due to lags in collecting and reporting U.S. government data. We used the BEA RIMS I and RIMS II multipliers to determine Indirect and Induced economic impacts the printing industry has on the California economy.

In some cases we have included more recent data for on overall national industry trends. Also, the information contained in the Appendix is for 2012 since that is the last full year of printing industry data broken out for all states by Printing Industries of America.

In summary, the economic impact of the printing industry on the California economy is very significant.

In 2013 the printing industry directly contributed $8.13 billion in output, 44,732 jobs, and $1.89 billion in labor income to California's economy. After calculating backward linked supply chain effects or indirect economic contributions and household spending generated by labor income or induced economic contributions, these values increased significantly.

Total economic contributions for the California economy amounted to $17.73 billion in output, $8.52 billion in value-added (GDP), 93,638 jobs, and $4.25 billion in labor income*.

**May not add to totals because of rounding*

Backward-linked supply chain effects or indirect contributions accounted for 25.7% or $4.55 billion of total economic contribution, 22% of employment contribution or 20,572 jobs, and 27.3% of labor income contribution or $1.16 billion. Household spending generated by labor income or induced economic contributions accounted for $5.05 billion or 28.5% of total economic contribution, 30.3% of employment contribution or 28,333 jobs, and 28.4% of labor income contributions or $1.21 billion.

The printing industry in California generates $8.52 billion in value-added, or GDP, annually through its direct economic impact and indirect/induced effects or approximately 0.4% of the state's $2.2 trillion total economic output. Compared to the overall national figures, the California printing industry drives a slightly smaller percent of GDP than other states. The national average is 0.51% of GDP.

The printing industry has a strong relationship with other sectors of the economy in California, leading to significant multipliers.

For every additional $1 in output, the printing industry generates an additional $1.18 in backward-linked, non-printing industry spending and household spending.

Every additional job in the California printing industry supports an additional 1.1 non-print jobs due to inter-industry effects and additional household spending. The printing industry has a strong inter-industry relationship with other manufacturers—21.4% of print's inter-industry effect is with other manufacturing industries.

Introduction

The aim of this study is to establish the economic and fiscal significance of the printing industry to the California economy. We define importance as the total contribution to the regional economy in terms of shipments, employment, labor income, and value-add/GDP. We used the definition of an Economic Contribution Study from an article written for The Journal of Regional Analysis and Policy below:

"Contribution analysis is a descriptive analysis that simply tracks the gross economic activity of the given event, policy, or industry as the dollars cycle through the region's economy. The economic model is built to represent the structure and degree of interconnectedness in the regional economy with the output of each sector broken down and attributed to expenditures on intermediate inputs. The contribution analysis simply looks at the actual regional data and the current linkages that exist within the economy. The purpose of the analysis is to determine how much economic activity was associated with the industry. It is a "just the facts" type of analysis and is based on exploring the revealed preferences of how people spent their money. When related to an existing industry, a contribution analysis may provide evidence of how relatively large a sector is in the existing economy and how much economic activity is being cycled through the economy by a given industry."

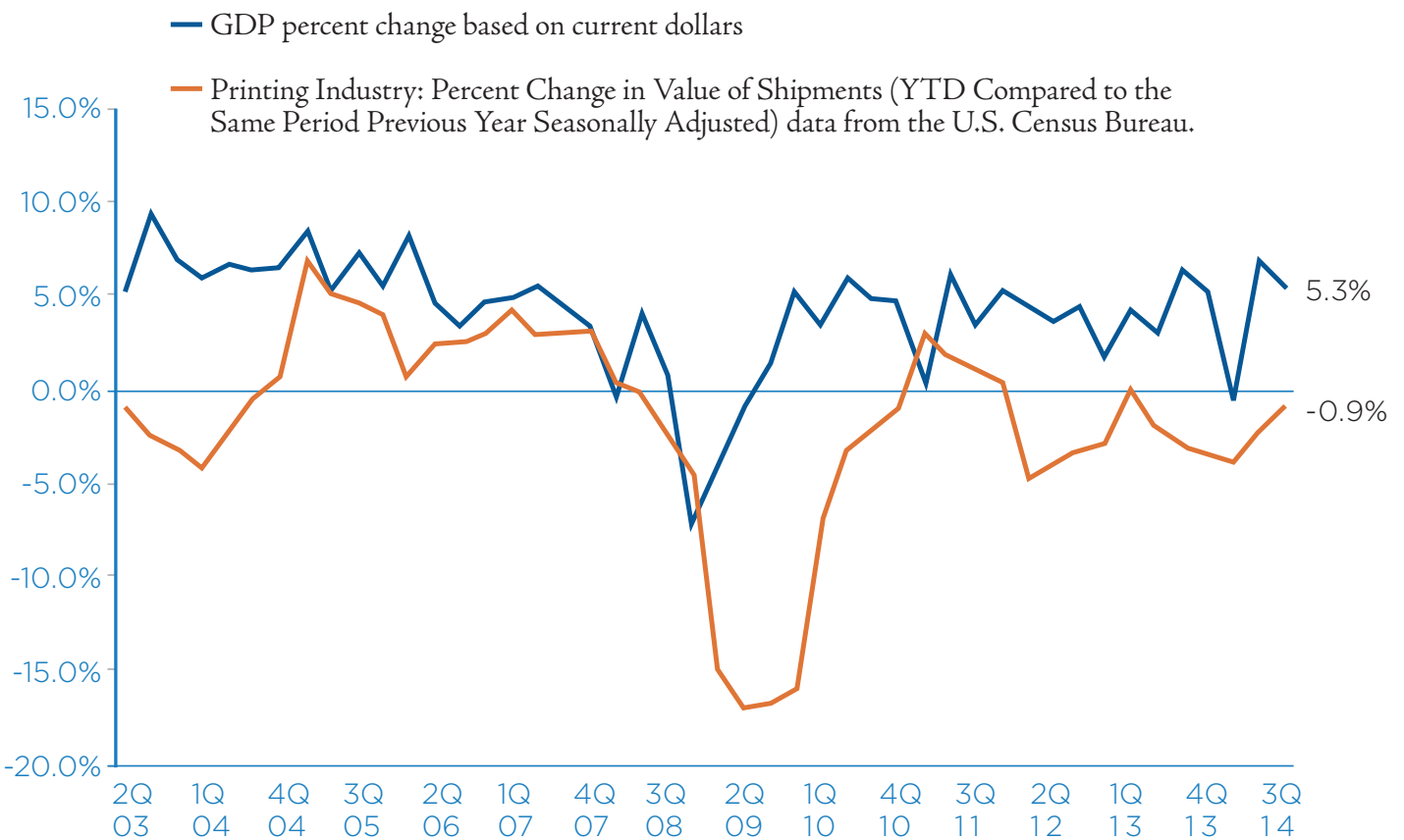
The results from our economic contribution study of the printing industry in the California economy will show the interconnectedness of the printing industry with the regional economy. We will be able to see how the industry in some states has a greater effect on the overall economy or more linkages than in other states.

We will also get a clear understanding of how much economic activity is being cycled through the California economy because of the printing industry and calculate how much economic activity was associated with the industry.

Current Industry Conditions

Generally, the printing industry consistently tracks with the overall economy. More specifically, print tends to decline earlier and more intensively in recessions and to lag in economic recoveries. However, it tends to do best in a mature recovery phase of the business cycle. At the present time this means that print is in a "sweet spot" with the economy entering a seventh year of recovery since the end of the Great Recession in June of 2009.

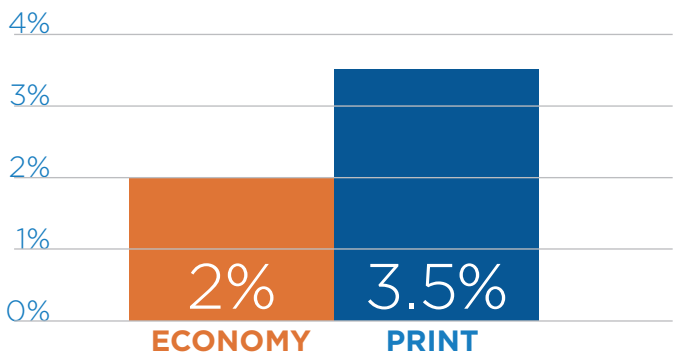
PERCENT CHANGE IN NOMINAL GDP VS. NOMINAL PRINT



The year 2015 was a very good year for the printing industry. The American economy is now in the 7th year of economic recovery. Although the recovery has been the weakest of all the post WW II upturns, it has been in a mature phase for some time now. As a result print has not only caught up with the economy but has now surpassed it in terms of growth. There is further evidence of print's current health. Based on a recent Institute of Supply Management Report on

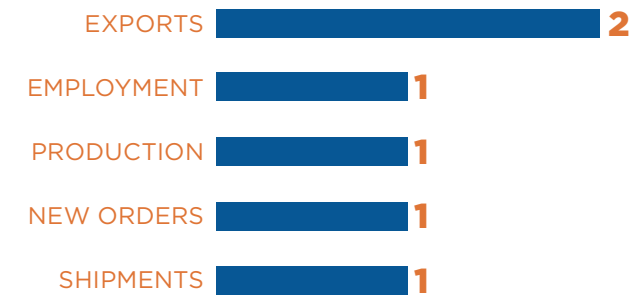
PRINT HITS THE SWEET SPOT YTD%

CHANGE 1ST 3 QTR'S 2015



Business, the printing industry continues to out-pace other manufacturing industries in key growth metrics. Of the 18 manufacturing industries covered in the ISM survey, the printing industry was ranked number one in four growth categories: Shipments, New Orders, Production and Employment. Additionally, print was ranked number two in export orders.

PRINT'S RANK OUT OF 18 MANUFACTURING INDUSTRIES



Not a bad performance for a supposedly "mature" industry. So why is print doing so well? The keys factors are:

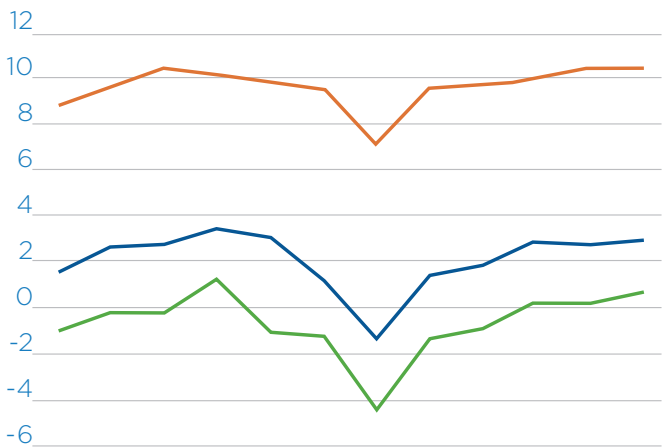
- First and foremost, the economy has been in the "sweet spot" for print, a mature recovery phase, for a long time now
- Print logistics, packaging and labels/wrappers, typically follow the economy and without competition from digital media, are providing sold baseline growth
- The long-term hollowing out of print from competition from digital media appears to be slowing as the "low hanging fruit" has been picked
- Print as a marketing and promotional media has proven its effectiveness and is showing solid growth.
- Even print's function as a communications media, long under assault from digital media is doing relatively better with printed books bouncing back

Printing industry profits have also improved over the last few years. Over the period from 2004 to 2015 printers participating in Printing Industries of America's Ratios study averaged 2.1 percent profit on sales. This year's 3 percent is not only more than one point above the average but also only the third year with profits on sales in the 3 percent or higher range. For profit leaders, the 2015 profit on sales rate of 10.3 percent ties last year with the highest rate over the last 12 years. On average, profit leaders earned 9 .5 over the last 12 years.

Profit challengers, printers in the bottom 75 percent of profitability, actually lost money in six of the last 12 years. Overall, they lost an average of .5 percent of sales 2004-2015. However, their profit rate of .6 percent this year was the highest ever for the 12 year period.

The worst year for all printers, profit leaders and profit challengers came at the tail- end of the *Great Recession*, 2010 as both industry sales and profitability were most impacted. This dramatically demonstrates the fact print does best in mature economic recoveries and does worst at the bottom of recessions.

PROFITS % OF SALES 2004-2015



	4	5	6	7	8	9	10	11	12	13	14	15
All Printers	1.7	2.5	2.7	3.4	3.1	1.5	-1.4	1.4	1.8	2.7	2.6	3.0
Leaders	8.7	9.4	10.3	10.1	9.7	9.4	7.0	9.5	9.6	9.9	10.3	10.3
Challengers	-0.6	0.2	0.2	1.2	-0.9	-1.1	-4.2	-1.3	-0.8	0.3	0.3	0.6

The Printing Industry Defined

Call it printing. Or call it graphic arts or graphic communications. Whatever you call it, you're referring to one of the largest industries in the United States in terms of not only employees but also annual shipments. Printing is typically referred to as a manufacturing industry, since it results in a final physical or manufactured product. However, over the last couple of decades, the industry has added a broad menu of various complementary services expanding the marketspace that "printers" occupy. In doing so, printers have increasingly become communications providers offering a variety of ancillary services such as:

- Mailing
- Fulfillment
- Inventory management
- Mailing list maintenance and database management
- Web based marketing services and integration with print
- Marketing consulting
- Graphic Design
- E-commerce services

At the same time, printers continue to print. In so doing, they utilize a variety of printing processes:

- Sheetfed Lithographic
- Heatset Web Lithographic
- Toner-Based Digital
- Production Inkjet
- Coldset Web Lithographic
- Flexographic
- Screen
- Letterpress

Even as the industry marketspace has expanded, the industry can still be described in terms of the products produced. Printing Industries of America categorizes these products by their intended function:

- Print intended to inform and communicate—magazines, periodicals, books, newspapers, etc.
- Print intended to market and promote—general commercial printing for direct marketing and promotional purposes.
- Print intended as a product logistical function—packaging and labels.

Even with this narrow focus, the printing industry has a very large economic footprint and is one of the most geographically dispersed manufacturing industries in the US. In fact, there are more NAICS 323 establishments in the U.S. than there are McDonalds outlets (14,350). There are also more NAICS 323 establishments in the U.S. than there are restaurants of the top four pizza outlets—Pizza Hut, Dominos, Little Caesars, and Papa Johns. This comparison holds for California also with more in state printing establishments than McDonald's outlets and leading-brand pizza outlets.

While much has been written about the impact of digital communications, print continues to have a major economic footprint. Of the three functions, only the inform and communicate function has been most severely impacted. The other two functions have continued to grow.

There are two print-related industrial sectors in the U.S. Census Bureau's NAISC (North American Industrial Classification System). The two industrial sectors are NAICS 323 Printing and Related Support Activities and NAICS 511 Print Related Media. What has traditionally been referred to as the printing industry encompasses many segments: general commercial printing, quick printing, digital imaging, magazine, newspaper, book and display graphics, financial and legal printing, screen printing, forms printing, label and tag printing, packaging, greeting card, and trade and finishing services. (These are encompassed by NAICS code group 323). This sector is used in this analysis.

The focus of this study is NAICS 323, Printing and Related Support Activities. Because of the very close business relationship between NAICS 323 and NAICS 511, Print Related Media, much of the impact between the two sectors is "internalized" within the two sectors. Therefore, by focusing on NAICS 323, the vast majority of the spillover impact is captured.

And, most importantly, the printing establishments are manufacturers rather than restaurants and therefore have greater induced economic spillover benefits due to more employment, materials, and equipment purchases and higher average wage and benefits.

Nationally, in 2014 (the most recent full-year of data) NAICS 323 Print and Related Support Activities had a very large economic footprint:

- Shipments of $84.6 Billion
- Establishments: 27,526
- Employment: 471,611

Study Goals, Process and Methodology

The aim of this study is to establish the economic importance of the printing industry to the California economy. We define importance as the total contribution to the regional economy in terms of shipments, employment, labor income, and value-add/GDP.

The results from our economic and fiscal contribution study will show the interconnectedness of the printing industry with the California economy. We will gain a clear understanding of how much economic activity is being cycled through the California economy due to printing industry. We will also calculate how much economic activity was associated with the printing industry.

The study process includes the California Print Industry Fiscal contributions as well as Federal, State, and Local tax contributions. We estimated these fiscal contributions using data from the PIA Ratios financial benchmarking database, Fiscal Year 2013 Analytical Perspectives Budget of the U.S. government from the OMB, and the Tax Foundation. See Appendix for definitions.

The Economic Contribution Model

Direct Contribution
+ Indirect Contribution
+ Induced Contribution

Total Economic Contribution

Study Findings on Economic Contributions

In 2013 the printing industry directly contributed $8.13 billion in output, 44,732 jobs, and $1.89 billion in labor income to California's economy. After calculating backward-linked supply chain effects or indirect economic contributions and household spending generated by labor income or induced economic contributions, these values increased significantly. Total economic contributions for the California economy amounted to $17.73 billion in output, $8.52 billion in value-added (GDP), 93,638 jobs, and $4.25 billion in labor income.

Backward-linked supply chain effects or indirect contributions accounted for 25.7% or $4.55 billion of total economic contribution, 22% of employment contribution or 20,572 jobs, and 27.3% of labor income contribution or $1.16 billion. Household spending generated by labor income or induced economic contributions accounted for $5.05 billion or 28.5% of total economic contribution, 30.3% of employment contribution or 28,333 jobs, and 28.4% of labor income contributions or $1.21 billion.

The printing industry in California generates $8.52 billion in value-added, or GDP, annually through its direct economic impact and indirect/induced effects or approximately 0.4% of the state's $2.2 trillion total economic output. Compared to the overall national figures, the California printing industry drives a slightly smaller percent of GDP than other states. The national average is 0.51% of GDP.

The printing industry has a strong relationship with other sectors of the economy in California, leading to significant multipliers. For every additional $1 in output, the printing industry generates an additional $1.18 in backward-linked, non-printing industry spending and household spending. To break that down further, every additional $1 of output generated by the printing industry leads to an additional $0.609 in backward-linked industries and $0.576 in additional household spending. In California, the backward-linked industries the printing industry has the strongest relationship with include manufacturing; professional, scientific, and technical services; wholesale trade; real estate and rental and leasing; administrative and waste management services; and finance and insurance. The industries most affected by induced household spending generated by the printing industry include real estate and rental and leasing; health care and social assistance; finance and insurance; manufacturing; and retail trade *(Figure 2)*.

Every additional job in the California printing industry supports an additional 1.1 non-print jobs due to inter-industry effects and additional household spending. The

PRINTING INDUSTRY ECONOMIC CONTRIBUTION IN CALIFORNIA

	Direct Contribution	Indirect Contribution	Induced Contribution	Total Economic Contribution*
Output ($1000s)	$8,125,570.20	$4,553,569.50	$5,053,292.10	**$17,732,431.70**
Employment	44,732	20,572	28,333	**93,638**
Labor Income ($1000s)	$1,885,432.30	$1,159,540.90	$1,208,373.60	**$4,253,346.8**
Value-Added or GDP ($1000s)	$3,819,018.00	$1,717,745.50	$2,987,772,10	**$8,524,535.60**

Figure 1. *Source: RIMS II multipliers and Census Bureau County Business Patterns Database*

**Totals may not add up because of rounding*

printing industry has a strong inter-industry relationship with other manufacturers—21.4% of print's inter-industry effect is with other manufacturing industries. Since, on average, manufacturing pays higher average salaries than the service sector, the labor income per additional job is high. For each job directly supported by the printing industry in California, the average labor income per job is $42,149, and the indirect labor income per job is $56,364. Induced employment contributions are based on additional household spending cycling through the economy. The sectors of the California economy that are most affected by the induced employment contribution include health care and social assistance; food services and drinking places; wholesale trade; financial and insurance; and transportation and warehousing. Each job directly generated by the printing industry results in 0.63 being supported through induced employment contributions. The average labor income for these jobs is $42,649 in California. The industries that are most interconnected to the printing industry through the combination of indirect and induced employment contribution include manufacturing; health care and social assistance; retail trade; administrative and waste management services; and real estate and rental and leasing *(Figure 3)*.

The California economy generated over $2.1 trillion in Gross Domestic Product (GDP) in 2013 or approximately 13.3% of total U.S. output. The largest industries in terms of percent of GDP in California are real estate and rental and leasing (15.9%); manufacturing (11.1%); professional,

INDUSTRIES MOST INTERCONNECTED WITH THE PRINTING INDUSTRY IN CALIFORNIA

Percent of Indirect and Induced **Output** Generated by Print Economic Activity

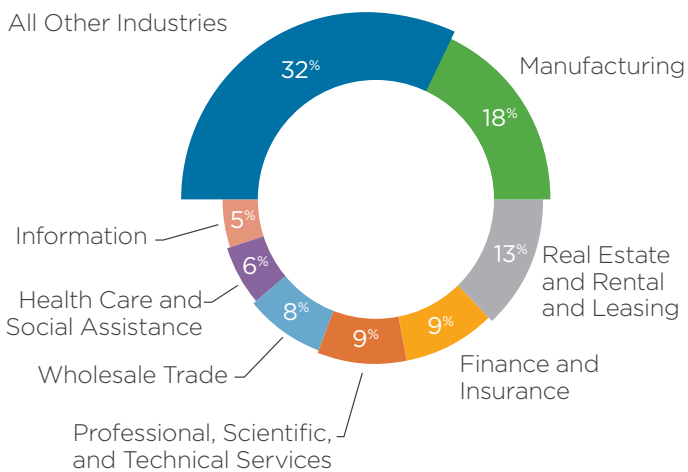


Figure 2.

Percent of Indirect and Induced **Employment** Generated by Print Economic Activity

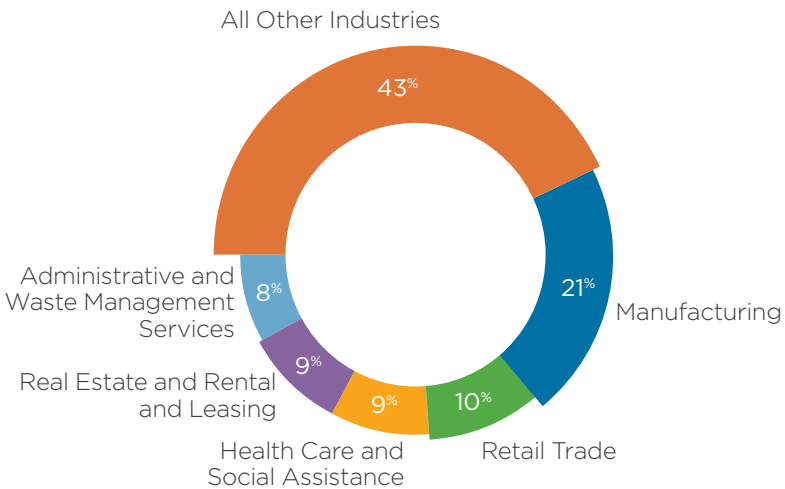


Figure 3.

scientific, and technical services (8.3%); information (8.0%); and health care and social assistance (6.2%). We do not include government in the list above (12.4% of output) because it is considered a final use of GDP in the input-output models. Real GDP in California increased by 4.1% in 2013. The industries that are driving the most growth in 2013 include real estate and rental and leasing (increased 4.2% adding 0.7% to total California output or 16.4% share of growth); information (increased 7.8% adding 0.6% to total output or 14.5% share of growth); and manufacturing (increased 4.3% adding 0.5% to total output or 11.4% share of growth). The two industries growing at the fastest rate in 2013 are management of companies and enterprises (12.5%) and agriculture, forestry, fishing, and hunting (10.2%). In 2013 two industries in California were in decline, professional, scientific, and technical services (–0.6%) and mining (–9.1%). The size of the industry in the region has an effect on the indirect and induced impact the printing

GROSS DOMESTIC PRODUCT BY INDUSTRY IN CALIFORNIA

(millions of current dollars)

Industry	GDP (millions of current dollars)		Percent change 2012 to 2013	Share of Growth	Contribution to Change in Output	Percent Share of State Output	
	2012	2013				2012	2013
Real Estate and Rental and Leasing	338,591	352,965	4.2%	16.4%	0.7%	15.9%	15.9%
Manufacturing	234,655	244,629	4.3%	11.4%	0.5%	11.0%	11.1%
Professional, Scientific, and Technical Services	185,576	184,520	-0.6%	-1.2%	0.0%	8.7%	8.3%
Information	163,411	176,168	7.8%	14.5%	0.6%	7.7%	8.0%
Health Care and Social Assistance	131,066	138,248	5.5%	8.2%	0.3%	6.2%	6.2%
Wholesale Trade	123,156	129,600	5.2%	7.3%	0.3%	5.8%	5.9%
Retail Trade	123,119	129,298	5.0%	7.0%	0.3%	5.8%	5.8%
Finance and Insurance	106,476	112,932	6.1%	7.3%	0.3%	5.0%	5.1%
Construction	66,291	71,074	7.2%	5.4%	0.2%	3.1%	3.2%
Administrative and Waste Management Services	64,597	67,228	4.1%	3.0%	0.1%	3.0%	3.0%
Accommodation and Food Services	53,785	56,750	5.5%	3.4%	0.1%	2.5%	2.6%
Transportation and Warehousing	47,710	50,537	5.9%	3.2%	0.1%	2.2%	2.3%
Other Services, Except Government	45,826	47,649	4.0%	2.1%	0.1%	2.2%	2.2%
Agriculture, Forestry, Fishing, and Hunting	33,885	37,345	10.2%	3.9%	0.2%	1.6%	1.7%
Management of Companies and Enterprises	30,416	34,209	12.5%	4.3%	0.2%	1.4%	1.5%
Arts, Entertainment, and Recreation	27,382	28,607	4.5%	1.4%	0.1%	1.3%	1.3%
Utilities	25,810	27,754	7.5%	2.2%	0.1%	1.2%	1.3%
Mining	28,755	26,143	-9.1%	-3.0%	-0.1%	1.4%	1.2%
Educational Services	21,707	22,101	1.8%	0.4%	0.0%	1.0%	1.0%
Government	272,920	275,233	0.8%	2.6%	0.1%	12.8%	12.4%
All Industry Total	**2,125,134**	**2,12,990**	**4.1%**	**100.0%**	**4.1%**	**100.0%**	**100.0%**

Figure 4.

industry has on the regional economy. In other words, on average, the larger the industry, the more interconnected it is with various industries within a region.

For example, real estate, rental, and leasing accounts for 15.9% of total economic output in California—the largest industry. Over 9.0% of the printing industry's indirect and induced contributions to the regional economy are circulated through the real estate industry. The five largest industries in California account for over 50.0% of printing industry indirect and induced contribution to the regional economy. The top two industries, real estate (16.0% of total economic output and 13.0% of print indirect and induced output) and manufacturing (11.0% of total economic output and 18.0% of print indirect and induced output), account for over 31.0% of prints contribution to California. The finance and insurance industries in CA only accounts for 5.0% of total economic output but 9.0% of print indirect and induced output. See the figure below for the complete list of industry output as a percent of total regional output compared to indirect and induced printing industry economic contributions by industries *(Figure 5)*.

Study Findings on Fiscal Contributions

Federal, state, and local tax revenues generated by the California printing industry totaled over $917 million. The printing industry added $3.82 billion in direct value-added output to California's gross domestic product, and 24% of this output was collected by the federal, state, and local governments in taxes. The main source of federal tax revenues was individual income taxes (47%) and social security taxes (33%). Almost 7% of California's printing industry revenues or $257 million were collected to help fund the state and local governments. Property taxes (40%)

SIZE OF CALIFORNIA INDUSTRIES COMPARED TO INDUSTRIES' INDIRECT AND INDUCED RELATIONSHIP WITH THE PRINTING INDUSTRY

Industry	Rank		Percent of	
	Size of Each Industry in California ($ Output)	Each Industry's Interconnectedness with the California Printing Industry	Total California Regional GDP	Printing Industry Indirect and Induced Output
Real Estate and Rental and Leasing	1	2	15.95%	12.7%
Manufacturing	2	1	11.05%	17.7%
Professional, Scientific, and Technical Services	3	4	8.34%	8.8%
Information	4	7	7.96%	5.6%
Health Care and Social Assistance	5	6	6.25%	6.3%
Wholesale Trade	6	5	5.86%	7.7%
Retail Trade	7	8	5.84%	5.4%
Finance and Insurance	8	3	5.10%	9.0%
Construction	9	16	3.21%	1.1%
Administrative and Waste Management Services	10	9	3.04%	4.7%
Accommodation and Food Services	11	10	2.56%	4.5%
Transportation and Warehousing	12	11	2.28%	4.1%
Other Services, Except Government	13	12	2.15%	3.5%
Agriculture, Forestry, Fishing, and Hunting	14	19	1.69%	0.5%
Management of Companies and Enterprises	15	13	1.55%	3.0%
Arts, Entertainment, and Recreation	16	15	1.29%	1.3%
Utilities	17	14	1.25%	2.3%
Mining	18	18	1.18%	0.9%
Educational Services	19	17	1.00%	1.1%

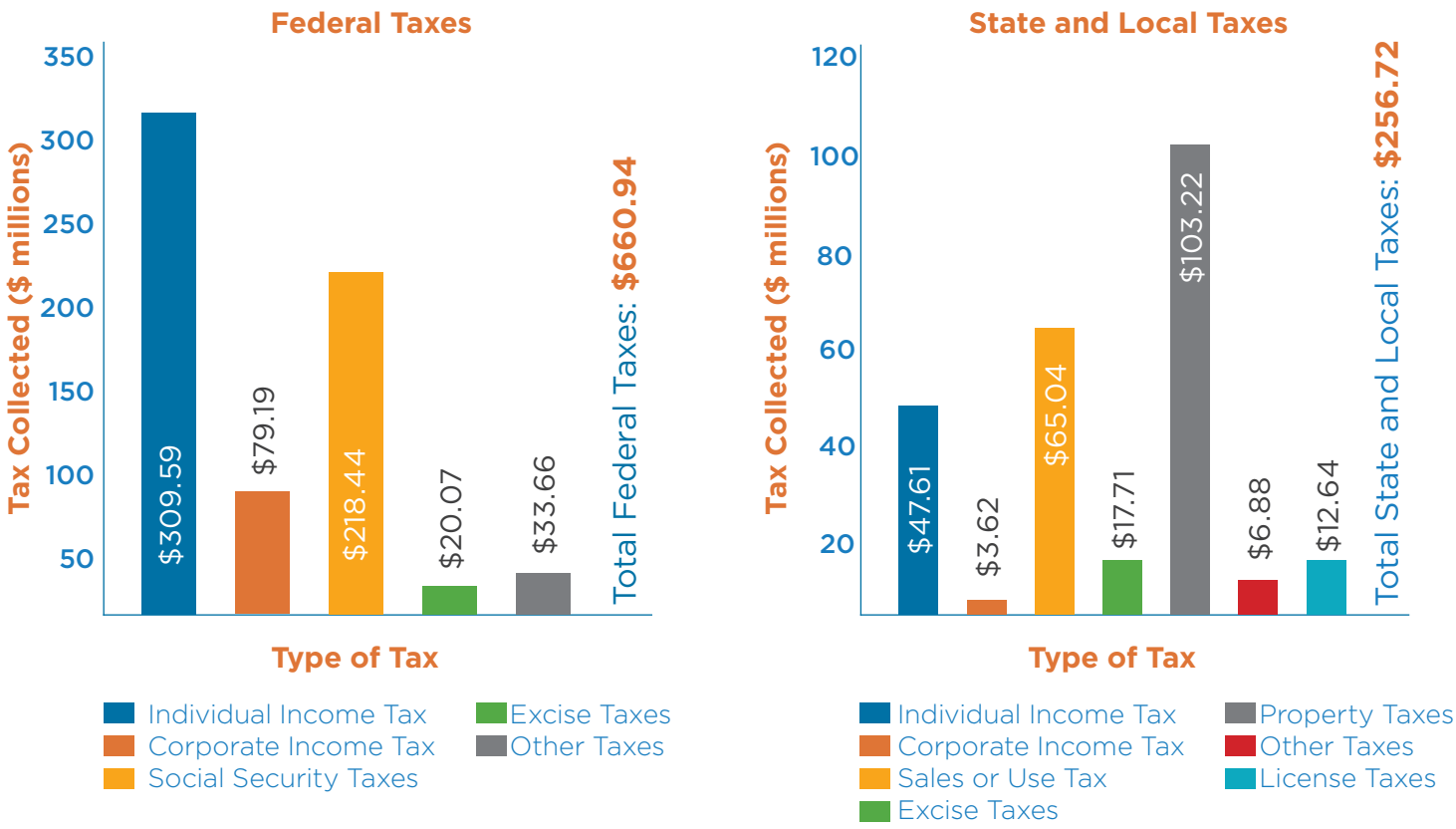
Figure 5.

and sales or use taxes (25%) were the two main sources of revenue for state and local governments. *(Figure 6).*

Conclusions

The printing industry in California is large and a significantly interconnected industry. Each additional dollar generated by the printing industry in California leads to an additional $1.18 spent in backward-linked supply chain spending and additional household spending. Each print job supports 1.1 jobs in the California labor market due to spending of labor income in the backward-linked supply chain industries and household spending. Print industry output in California is most interconnected with other manufacturers; real estate and rental and leasing; and finance and insurance. Print industry employment in California is most interconnected with the following industries: manufacturing; retail trade; and health care and social assistance. The effects of an industry on the local economy add to total output, employment, wages, and also support of government programs. In California almost 7% of the printing industry's $3.8 billion in value-added output went to support state and local governments. Data used in this study are based on many sources, including BEA RIMS II multipliers, The Tax Foundation, County Business Patterns Database, PIA Print Market Atlas, and the PIA Ratios Financial database for the printing industry.

2013 FEDERAL, STATE, AND LOCAL TAXES GENERATED BY THE PRINTING INDUSTRY IN CALIFORNIA



Total Fiscal Contribution: **$917.66**

Figure 6. *Sources: U.S. Census, Office of Management and Budget, and Tax Foundation*

Definitions

Direct Contribution or Final-Demand Industry: The "Direct" contribution relates to the first round of inputs purchased from the final-demand industry or the figure we calculate in the Print Market Atlas. It is the portion of print shipments that are purchased for consumption by the final user. It includes the consumption of the goods and services that are produced and distributed in the economy. In the Input-Output accounts, final-use transactions consist of transactions that make up the final-expenditure components of GDP: personal consumption expenditures; private fixed investment; change in private inventories; exports of goods and services; imports of goods and services; federal, state, and local government consumption expenditures; and gross investment.

Indirect Contribution: Relates to the subsequent rounds of inputs purchased by supporting industries. Some of the supporting industries include: mining, utilities, construction, manufacturing, wholesale trade, retail trade, information, educational services, healthcare, and social services; arts, entertainment, and recreation, etc. The sum of the "Direct" and "Indirect" contributions is called the inter-industry effect or inter-industry total. This takes into account the spending the printing industry generates in other industries—the impact of local industries buying goods and services from other local industries. The cycle of spending works its way backward through the supply chain until all money leaks from the local economy, either through imports or by payments to value-added.

Induced Contributions: RIMS Type II multipliers not only account for the inter-industry effect, but also account for the induced economic contribution to final demand. The induced contribution relates to spending of workers whose earnings or labor income are affected by the final demand contribution. This contribution is called the household-spending contribution. We use the multipliers to measure the total contribution to the state economy.

Total Economic Contribution: Includes the final demand generated by the printing industry, the inter-industry contributions or indirect effects, and the induced contribution from household spending that the printing industry supports.

For more information on how Input-Output multipliers are developed by the BEA we recommend reading the RIMS II handbook, "An essential tool for regional developers and planners."

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APPENDIX CONTENTS

Notes on Appendix A, B, and C

The information contained in Appendix A, B and C are all for the year 2012. The year 2012 is the last full year of data that Printing Industries of America has broken out national industry data for each state. This data is presented to show the California printing industry compared to the printing industries of other states.

2012 U.S. COMMERCIAL PRINT AND RELATED SUPPORT ACTIVITIES (NAICS 323)

STATE RANKINGS

State	Employment		Establishments		Shipments ($1,000s)	
		Rank		Rank		Rank
Alabama	3,727	31	342	26	$658,922	31
Alaska	324	49	40	49	$57,282	49
Arizona	5,048	27	440	22	$892,470	27
Arkansas	3,448	32	210	33	$609,595	32
California	45,645	1	3,360	1	$8,069,888	1
Colorado	5,446	25	505	20	$962,835	25
Connecticut	6,336	23	367	24	$1,120,184	23
Delaware	451	48	56	47	$79,735	48
District of Columbia	319	50	41	48	$56,398	50
Florida	16,975	9	1,590	4	$3,001,125	9
Georgia	12,749	14	787	11	$2,253,982	14
Hawaii	1,031	44	99	41	$182,277	44
Idaho	1,079	42	102	40	$190,764	42
Illinois	31,252	2	1,464	5	$5,525,252	2
Indiana	14,976	11	599	16	$2,647,708	11
Iowa	6,693	22	310	28	$1,183,301	22
Kansas	7,831	21	299	29	$1,384,495	21
Kentucky	10,095	19	344	25	$1,784,763	19
Louisiana	2,554	35	279	31	$451,539	35
Maine	1,662	39	126	39	$293,836	39
Maryland	8,501	20	451	21	$1,502,949	20
Massachusetts	10,494	18	642	15	$1,855,305	18
Michigan	14,522	12	900	9	$2,567,442	12
Minnesota	23,236	8	716	13	$4,108,049	8
Mississippi	1,977	37	155	36	$349,527	37
Missouri	13,861	13	650	14	$2,450,580	13
Montana	773	46	85	43	$136,664	46
Nebraska	2,939	33	187	34	$519,606	33
Nevada	2,922	34	174	35	$516,600	34
New Hampshire	2,177	36	151	37	$384,887	36
New Jersey	15,960	10	935	8	$2,821,676	10
New Mexico	796	45	132	38	$140,730	45
New York	23,956	5	1,765	3	$4,235,343	5
North Carolina	12,138	16	856	10	$2,145,959	16
North Dakota	750	47	59	46	$132,598	47
Ohio	23,850	6	1,176	7	$4,216,603	6
Oklahoma	3,816	30	287	30	$674,656	30
Oregon	5,387	26	394	23	$952,404	26
Pennsylvania	29,500	3	1,198	6	$5,215,504	3
Rhode Island	1,602	40	126	39	$283,228	40
South Carolina	4,370	29	322	27	$772,602	29
South Dakota	1,383	41	84	44	$244,510	41
Tennessee	11,529	17	582	17	$2,038,290	17
Texas	23,571	7	1,820	2	$4,167,276	7
Utah	4,956	28	257	32	$876,205	28
Vermont	1,036	43	69	45	$183,161	43
Virginia	12,574	15	573	18	$2,223,042	15
Washington	6,029	24	531	19	$1,065,908	24
West Virginia	1,855	38	87	42	$327,958	38
Wisconsin	27,245	4	763	12	$4,816,828	4
Wyoming	262	51	39	50	$46,321	51
Total U.S.	**471,608**		**27,526**		**$83,378,764**	

APPENDIX A

COMMERCIAL PRINT AND RELATED SUPPORT ACTIVITIES (NAICS 323)

2012 NATIONAL OVERVIEW

NAISC Segment	Employment	Establishments	Shipments ($1,000s)
323111 Commercial Print	357,535	20,744	$63,211,028.10
323113 Commercial Screen	59,193	4,525	$10,465,130.4
323117 Commercial Book	26,109	493	$4,615,986.5
323120 Support Activities	28,771	1,764	$5,086,619.5
Total	**471,608**	**27,526**	**$83,378,764.50**

2012 U.S. PRINT RELATED MEDIA (PUBLISHING) (NAICS 511)

STATE RANKINGS

State	Employment		Establishments		Shipments ($1,000s)	
		Rank		Rank		Rank
New York	54,819	1	1,442	2	$10,115,009	1
California	36,360	2	1,838	1	$5,843,425	2
Illinois	21,661	3	776	5	$3,911,558	3
Pennsylvania	21,525	4	610	6	$3,266,453	4
Texas	20,564	6	1,109	3	$3,112,765	5
Ohio	19,021	7	570	8	$3,104,792	6
Florida	21,115	5	1,056	4	$2,968,282	7
Massachusetts	16,114	8	452	13	$2,935,116	8
New Jersey	15,290	9	475	11	$2,761,235	9
Missouri	11,972	13	403	17	$2,474,794	10
Minnesota	12,107	12	481	10	$2,242,840	11
Michigan	12,888	10	430	14	$2,214,013	12
Virginia	12,706	11	595	7	$1,947,886	13
Georgia	11,268	14	496	9	$1,695,782	14
Wisconsin	9,766	15	397	18	$1,551,799	15
Tennessee	9,243	16	333	20	$1,451,001	16
Iowa	8,596	18	336	19	$1,413,204	17
Colorado	7,777	20	429	15	$1,364,858	18
North Carolina	9,049	17	470	12	$1,325,681	19
Kentucky	6,401	23	257	25	$1,325,048	20
Indiana	8,474	19	307	23	$1,283,313	21
Maryland	6,865	22	312	22	$1,215,186	22
Kansas	5,324	28	238	28	$1,138,161	23
Washington	7,295	21	424	16	$1,038,683	24
Arkansas	4,702	29	159	33	$994,776	25
District of Columbia	6,313	24	122	38	$974,862	26
Connecticut	6,073	26	246	26	$912,495	27
Arizona	6,178	25	319	21	$900,522	28
Alabama	5,736	27	227	29	$864,988	29
Oregon	4,626	30	286	24	$681,601	30
Nebraska	4,305	32	184	32	$632,542	31
Oklahoma	4,423	31	243	27	$602,772	32
Maine	2,671	35	135	36	$457,573	33
Louisiana	3,451	33	193	31	$448,859	34
South Carolina	3,406	34	203	30	$447,345	35
New Hampshire	2,414	36	109	42	$384,653	36
Utah	2,195	37	123	37	$325,051	37
Idaho	2,032	40	107	43	$312,315	38
Mississippi	2,174	38	137	35	$263,195	39
New Mexico	1,890	41	117	41	$260,937	40
West Virginia	2,034	39	96	44	$238,424	41
Nevada	1,729	42	140	34	$234,919	42
Montana	1,646	43	120	40	$203,254	43
South Dakota	1,580	44	121	39	$197,235	44
North Dakota	1,400	45	86	46	$177,772	45
Hawaii	1,209	46	74	47	$174,497	46
Vermont	1,194	47	87	45	$169,795	47
Rhode Island	1,070	48	50	49	$140,368	48
Wyoming	1,014	49	52	48	$118,315	49
Alaska	689	50	42	50	$96,931	50
Delaware	629	51	40	51	$92,828	51
Total U.S.	**442,983**		**18,054**		**$73,009,709**	

APPENDIX B

U.S. PRINT RELATED MEDIA (PUBLISHING) (NAICS 511)

2012 NATIONAL OVERVIEW

NAISC Segment	Employment	Establishments	Shipments ($1,000s)
511110 Newspaper	231,281	7,624	$25,084,259.30
511120 Periodical	105,856	6,486	$18,924,610.30
511130 Book	63,371	2,622	$17,519,129.50
511140 Directory and Mailing List	31,577	1,206	$7,393,484.80
511191 Greeting Cards	10,898	116	$4,088,225.10
Total	**442,983**	**18,054**	**$73,009,709.10**

2012 U.S. COMMERCIAL PRINT AND RELATED SUPPORT ACTIVITIES AND PRINT RELATED MEDIA (NAICS 323 + NAICS 511) STATE RANKINGS

State	Employment	Rank	Establishments	Rank	Shipments ($1,000s)	Rank
Alabama	9,463	28	569	27	$1,523,910	29
Alaska	1,013	51	82	50	$154,214	51
Arizona	11,226	26	759	22	$1,792,992	26
Arkansas	8,150	30	369	34	$1,604,371	28
California	82,005	1	5,198	1	$13,913,313	2
Colorado	13,223	23	934	18	$2,327,693	23
Connecticut	12,409	25	613	25	$2,032,679	25
Delaware	1,080	50	96	48	$172,563	49
District of Columbia	6,632	34	163	45	$1,031,260	34
Florida	38,090	7	2,646	4	$5,969,407	9
Georgia	24,017	15	1,283	11	$3,949,764	15
Hawaii	2,240	46	173	44	$356,775	45
Idaho	3,111	41	209	40	$503,079	41
Illinois	52,913	3	2,240	5	$9,436,810	3
Indiana	23,450	16	906	20	$3,931,022	16
Iowa	15,289	21	646	24	$2,596,504	21
Kansas	13,155	24	537	28	$2,522,656	22
Kentucky	16,496	19	601	26	$3,109,811	19
Louisiana	6,005	35	472	31	$900,398	35
Maine	4,333	38	261	37	$751,409	38
Maryland	15,366	20	763	21	$2,718,135	20
Massachusetts	26,608	12	1,094	15	$4,790,421	12
Michigan	27,410	11	1,330	9	$4,781,456	13
Minnesota	35,343	9	1,197	12	$6,350,889	8
Mississippi	4,151	39	292	36	$612,722	39
Missouri	25,833	13	1,053	16	$4,925,374	11
Montana	2,419	45	205	41	$339,918	47
Nebraska	7,244	32	371	33	$1,152,147	33
Nevada	4,651	36	314	35	$751,519	37
New Hampshire	4,591	37	260	38	$769,539	36
New Jersey	31,250	10	1,410	8	$5,582,911	10
New Mexico	2,686	43	249	39	$401,668	44
New York	78,775	2	3,207	2	$14,350,352	1
North Carolina	21,187	17	1,326	10	$3,471,640	18
North Dakota	2,150	48	145	47	$310,369	48
Ohio	42,871	6	1,746	7	$7,321,395	5
Oklahoma	8,239	29	530	29	$1,277,428	30
Oregon	10,013	27	680	23	$1,634,005	27
Pennsylvania	51,025	4	1,808	6	$8,481,958	4
Rhode Island	2,672	44	176	43	$423,596	43
South Carolina	7,776	31	525	30	$1,219,947	31
South Dakota	2,963	42	205	41	$441,745	42
Tennessee	20,772	18	915	19	$3,489,291	17
Texas	44,135	5	2,929	3	$7,280,042	6
Utah	7,151	33	380	32	$1,201,255	32
Vermont	2,230	47	156	46	$352,956	46
Virginia	25,280	14	1,168	13	$4,170,929	14
Washington	13,324	22	955	17	$2,104,591	24
West Virginia	3,889	40	183	42	$566,382	40
Wisconsin	37,011	8	1,160	14	$6,368,626	7
Wyoming	1,276	49	91	49	$164,636	50
Total U.S.	**914,591**		**45,580**		**$156,388,474**	

APPENDIX C

COMMERCIAL PRINT AND RELATED SUPPORT ACTIVITIES AND PRINT RELATED MEDIA (NAICS 323 + 511)

2012 NATIONAL OVERVIEW

	Employment	Establishments	Shipments ($1,000s)
NAISC 323 + 511	914,591	45,580	$156,388,473.50

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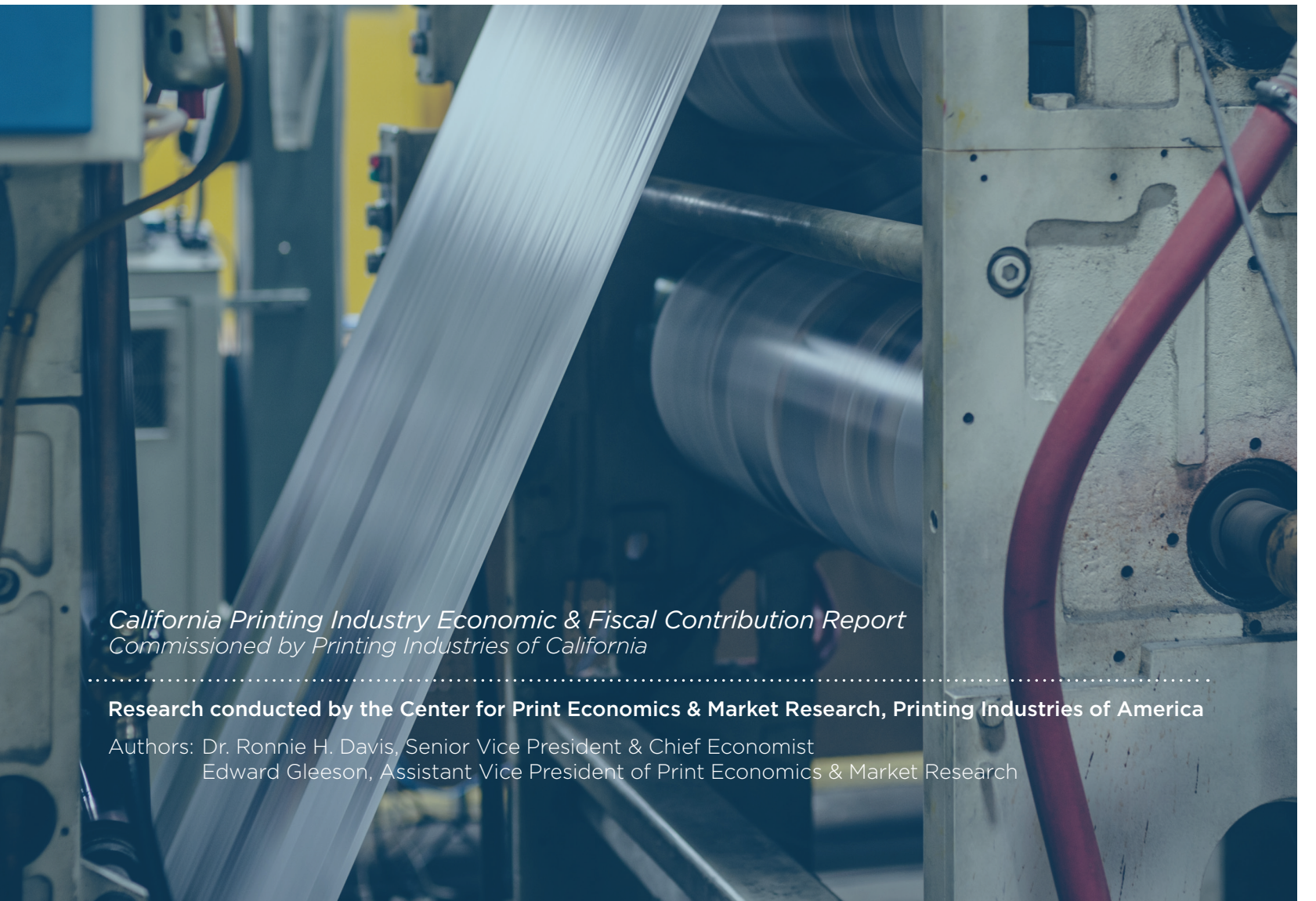

California Printing Industry Economic & Fiscal Contribution Report

Commissioned by Printing Industries of California

Research conducted by the Center for Print Economics & Market Research, Printing Industries of America

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