


MARKETS AND PRODUCTS

FUNCTIONAL PRINTERS



2019 SGIA INDUSTRY SURVEY — MARKETS AND PRODUCTS: Functional Printers



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SGIA members get unlimited access to the resulting reports, featured here, that reflect the scope of the printing industry.

If you have any questions please contact research@sgia.org.



Executive Summary

The first quarter 2019 SGIA Industry Survey — Markets and Products investigated what printing companies produce and for whom; what's growing and what isn't; convergence, or the melding of segments as printers of all types expand beyond their traditional roles; and printing company performance, expectations and confidence. The 411 participants included graphic and sign producers, apparel decorators, functional printers, commercial printers, package printers/converters and in-plant printers, as well as manufacturers, distributors and suppliers to the specialty graphics segment.

This report presents results for the 24 participants whose primary business is functional printing. The survey defined functional printing as "printing done as a part of a manufacturing process; applications include printed electronics, marking/branding of parts or products and decorative products, often printed at scale."

The group's annual sales range from less than \$500,000 to \$50 million or more. Collectively, they offer nearly 20 functional printing products to local, regional, national and international markets.

Four-fifths use both digital and analog production technologies, with digital dominant for 25.0%, analog dominant for 20.0% and neither technology dominant for 35.0%. Capacity utilization averages 51% - 80% for nearly two-thirds, 50% or less for one-quarter and more than 80% for one-tenth.

The highest percentages offer industrial decals/labels (71.4%), industrial part marking (66.7%) and instrumentation/dials/overlays (57.1%). Nearly one-quarter want to add 3D printing.

Eighty-five percent offer finishing/post-production services, with lamination (52.6%) and die cutting/laser cutting

(47.4%) most widely offered. Two-fifths offer finishing/post-production services to other printers, and two-fifths purchase them from other printers.

More than 62.0% work in at least one segment in addition to functional printing. Half offer graphics and signs, 37.5% apparel decoration, 25.0% commercial printing and 16.7% package printing/converting. Average contribution to company revenue ranges from 18.9% for graphics and signs to 9.0% for commercial printing.

Last year, sales increased for 84.2%, but profitability increased for just 42.1%. A number of factors contributed to the pressure on margins, including rising costs and limited pricing power, and for some functional printers, investments that reduced current profits but boost profit potential. One printer said, "Our profitability decreased in 2018, because we are transitioning into new product offerings, dealing with tariffs and implementing lean initiatives throughout the company."

This year, 73.7% expect to increase sales and 63.2% expect to increase profitability. Confidence in functional printing is contributing to the optimism: 57.1% currently have a positive view of the segment's future, 42.9% a neutral view and none a negative view. Confidence in the American economy — 30.8% positive, 53.8% neutral and 15.4% negative — is not as high.

Profile of Participating Companies

The functional printing companies surveyed vary widely in size, with annual sales ranging from less than \$500,000 to \$50 million or more, and employment from fewer than five to 250 or more. Most, however, are small (42.1% sell less than \$1 million per year and 31.6% have fewer than 10 employees) or midsize (26.3% sell \$10 million - \$19,999,999 per year and 42.1% have 50 - 99 employees) (Table 1).

Table 1: Company Size, Annual Sales and Employment

(N=19)

Functional Printers Annual Sales	
Less than \$500,000	26.3%
\$500,000 - \$999,999	15.8%
\$1,000,000 - \$2,999,999	10.5%
\$3,000,000 - \$4,999,999	5.3%
\$5,000,000 - \$9,999,999	26.3%
\$10,000,000 - \$19,999,999	10.5%
\$20,000,000 - \$49,999,999	0.0%
\$50,000,000 or more	5.3%
Functional Printers Employment	
Fewer than 10 employees	31.6%
10 - 19	10.5%
20 - 49	5.3%
50 - 99	42.1%
100 - 499	5.3%
250 or more	5.3%

Table 2: Location and Geographic Areas Served

(Location: N=24, Geographic Area: N=23)

Functional Printers Location		
United States	75.0%	
Canada	8.3%	
Other	16.7%	
Functional Printers Geographic Area Served	Serve	Serve Exclusively
National	69.6%	21.7%
Regional	56.5%	17.4%
International	47.8%	8.7%
Local	43.5%	0.0%

Table 3: Type of Business

(Primary Business: N=23, Description: N=16)

Functional Printers Primary Business	
Business-to-business (B2B)	60.9%
B2B and business-to-consumer (B2C)	26.1%
B2C	13.0%
Functional Printers Description	
Print-for-pay company, serving industrial and other market areas	64.8%
Print-for-pay company, solely serving industrial markets	17.6%
Non-print-for-pay company, solely serving industrial markets	17.6%

Table 4: Years in Business

(N=20)

Functional Printers Years in Business	
More than 50 years	35.0%
21 - 50 years	50.0%
11 - 20 years	5.0%
3 - 10 years	5.0%
1 - 2 years	5.0%
Less than one year	0.0%

Three-quarters are located in the United States, 8.3% in Canada and 16.7% in other countries, including Mexico, Argentina and India (Table 2). Nearly 70.0% serve national markets, 56.5% regional markets, 47.8% international markets and 43.5% local markets. While 52.2% serve a combination of geographic markets, 47.8% serve only one, whether national (21.7%), regional (17.4%) or international (8.7%). None of the participants serve only local markets.

Nearly 61.0% sell strictly to other businesses, 26.1% to businesses and consumers, and 13.0% strictly to consumers. Nearly 65.0% describe themselves as a print-for-pay company serving industrial and other market areas; 17.6% as a print-for-pay company solely serving industrial markets; and 17.6% as a non-print-for-pay company solely serving industrial markets (Table 3).

Finally, 85.0% have been in business more than 20 years and 35.0% more than 50 years. Just 10.0% have been in business 10 years or less (Table 4).

Operations

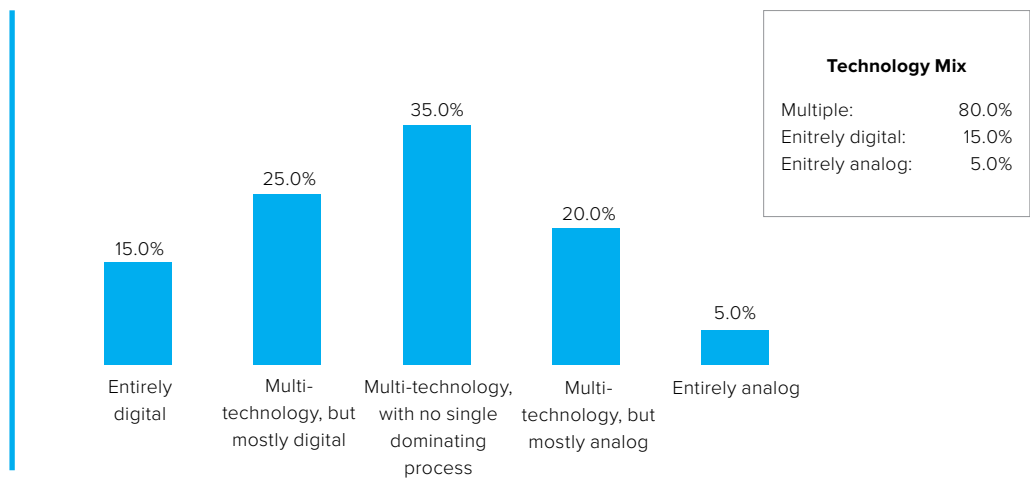
Most (80.0%) of the functional printers surveyed use both digital and analog production technologies; 15.0% are entirely digital and 5.0% entirely analog. Among the 80.0% of printers using a mix of analog and digital technologies, 35.0% report neither technology dominates their operations, while 40.0% are mostly digital and 25.0% mostly analog (Graph 1).

Capacity utilization rates (average production in use as a percentage of total production capacity) vary from greater than 90.0% to 30.0% or less. But 65.0% operate in one of three ranges: 51% - 60% (20.0%), 61% - 70% (25.0%) or 71% - 80% (20.0%). In comparison, one-quarter operate at 50% of capacity or less and one-tenth at more than 80%.

Capacity utilization alone tells us little about a company’s profitability. Is capacity being used efficiently? Is the company generating sales that support efficiency and profitability? And how efficient is the company, overall? The second quarter 2019 SGIA Industry Survey —Financial Ratios will tackle those critical questions.

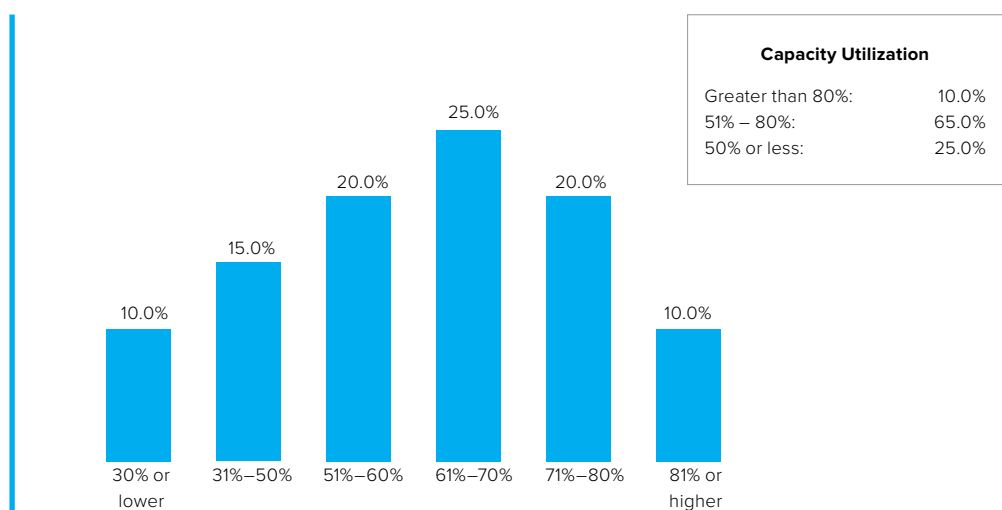
Graph 1: Technology Mix

(N=20)



Graph 2: Capacity Utilization

(N=20)



Segments Served/Convergence

The majority of our survey group is participating in printing industry convergence, with 62.5% working in at least one segment in addition to functional printing and 41.7% working in at least two. Half have entered graphics and signs, 33.3% commercial printing, 25.0% garment decoration and 16.7% package printing/converting (Table 5).

Among companies working in the segment indicated, contribution to company revenue averages 18.9% for graphics and signs, 14.8% for garment decoration, 9.3% for package printing/converting and 9.0% for commercial printing. Among all companies surveyed, contributions average 9.0% for graphics and signs, 3.2% for garment decoration, 2.7% for commercial printing and 1.2% for package printing/converting, suggesting that penetration, particularly of the last three segments, is still very limited.

Table 5: Revenue by Segment

(N=24)

Functional Printers Revenue by Segment		Average Share of Company Revenue	
Segment	Serving	Companies Working in Segment	All Companies Surveyed
Functional Printing	100.0%	74.3%	74.3%
Graphic and Sign	50.0%	18.9%	9.0%
Commercial Printing	33.3%	9.0%	2.7%
Garment Decoration	25.0%	14.8%	3.2%
Package Printing/Converting	16.7%	9.3%	1.2%

* 9.5% of revenue comes from products and services outside of the five segments listed.

Products

As Graph 3 shows, the functional printing products offered serve purposes from identification to decoration to the manufacture of parts and products. On average, respondents offer five of the products. Majorities offer industrial decals/labels (71.4%), industrial part marking (66.7%), instrumentations/dials/overlays (57.1%) and medical devices/items (52.4%). In contrast, fewer than one in six offers ceramic tile printing (14.3%), industrial textiles (9.5%) or photovoltaics/solar panels (4.8%).

Graph 3: Products Offered

(N=21)

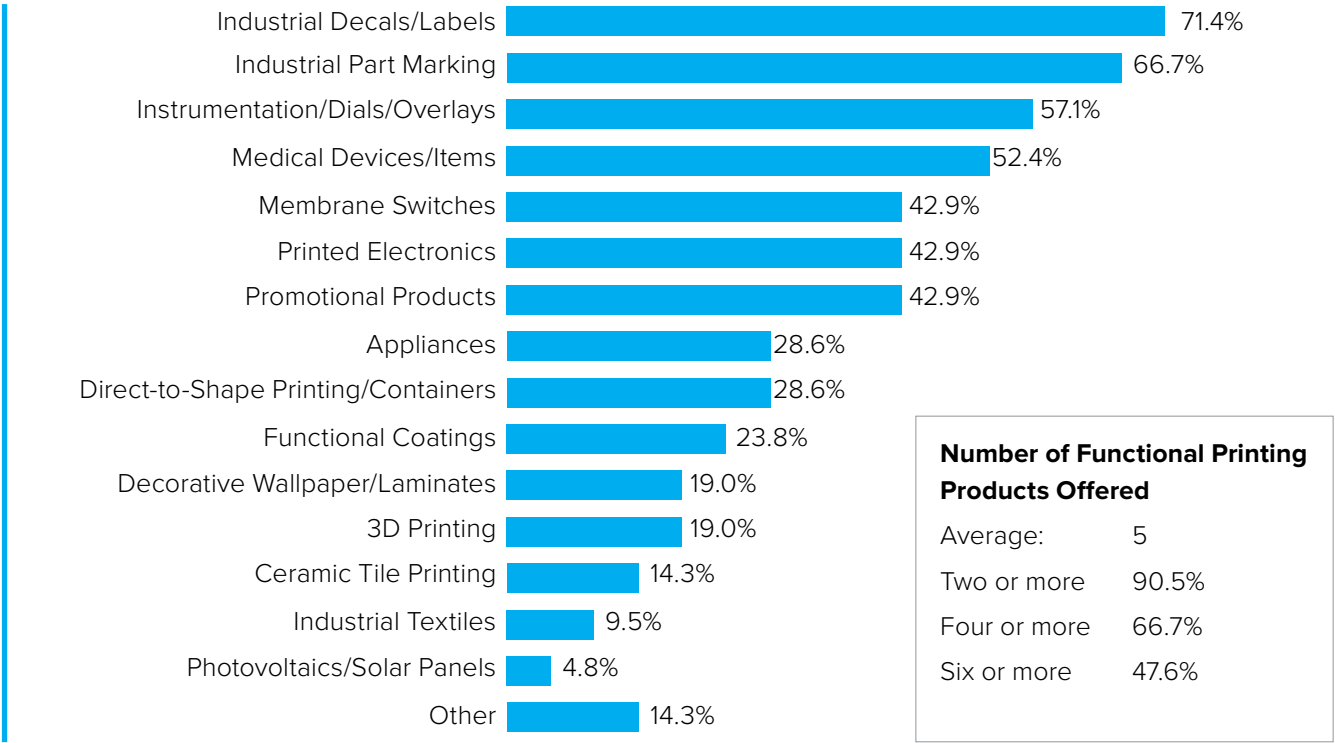


Table 6: Product Growth Trends

(N=21)

Functional Printers Product Growth Trends	Growing	Staying the Same	Declining
Medical Devices/Items	72.7%	27.3%	0.0%
Industrial Decals/Labels	66.7%	33.3%	0.0%
Industrial Part Marking	64.3%	28.6%	7.1%
Instrumentation/Dials/Overlays	50.0%	41.7%	8.3%

Table 7: Products Offered and Interested in Adding

(N=21)

Functional Printers Products Offered and Interested in Adding	Currently Offer	Interested in Adding
3D Printing	19.0%	23.8%
Instrumentation/Dials/Overlays	57.1%	4.8%
Medical Devices/Items	52.4%	4.8%
Membrane Switches	42.9%	4.8%
Printed Electronics	42.9%	4.8%
Promotional Products	42.9%	4.8%
Appliances	28.6%	4.8%
Direct-to-Shape Printing/Containers	28.6%	4.8%
Decorative Wallpaper/Laminates	19.0%	4.8%
Industrial Textiles	9.5%	4.8%
Photovoltaics/Solar Panels	4.8%	4.8%
Industrial Decals/Labels	71.4%	0.0%
Industrial Part Marking	66.7%	0.0%
Functional Coatings	23.8%	0.0%
Ceramic Tile Printing	14.3%	0.0%

We don't have enough data yet to report growth trends for all functional printing products. But trends for the four products offered by a majority of our survey group are very positive: 72.7% report growth in medical devices/items and 66.7% in industrial decals/labels, and none report decline in either market. Industrial part marking is growing according to 64.3%, and just 7.1% see it declining. Half (50.0%) say instrumentation/dials/overlays is growing, and only 8.3% say it's declining (Table 6).

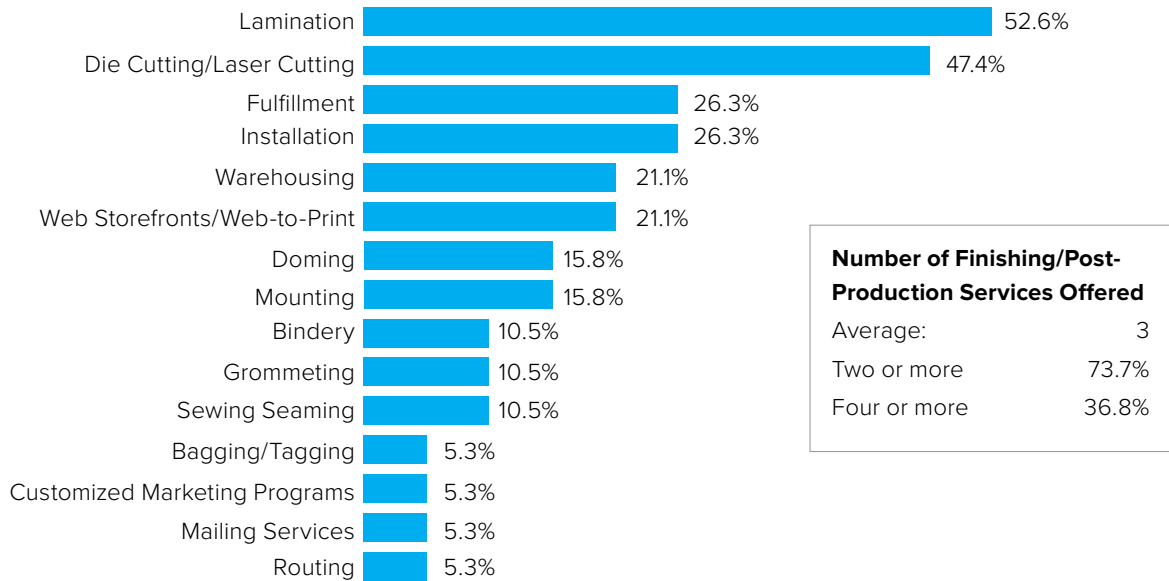
Nearly 67.0% would like to add at least one functional printing product. 3D printing, cited by 23.8%, is the top target by far because, as one respondent said, "It is interesting technology and growing." If all who want to add the capability do so, the percent offering 3D printing will more than double, from 19.0% to 42.8% (Table 7).

Finishing and Additional Services

The 85% who provide finishing/post-production services, offer three services on average. The largest groups offer lamination (52.6%) and cutting/laser cutting (47.4%). More than 37.1% offer warehousing (21.3%), fulfillment (26.3%) or both (10.5%), and 26.3% offer installation (Graph 4).

Graph 4: Finishing and Post-Production Services Offered

(N=19)

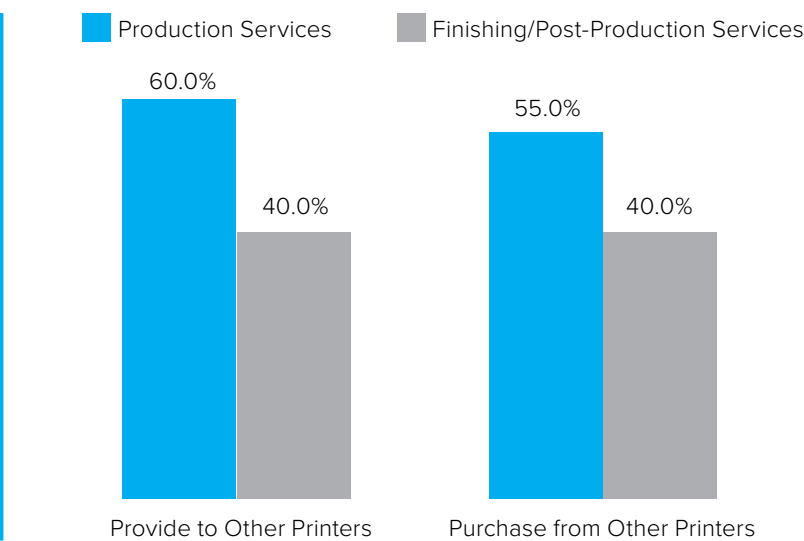


Exchange with Other Printers

Among our sample of functional printers, the exchange of production services with other printers is more common than the exchange of finishing/post-production services. Specifically, 60.0% provide production services to other printers, and 55.0% purchase them from other printers, while 40.0% provide finishing/post-production services to and 40.0% purchase those services from other printers (Graph 5).

Graph 5: Exchange with Other Printers

(N=20)



Performance, Outlook and Confidence

Last year, sales increased for 84.2%, and production increased for 68.4% of functional printers surveyed, but profitability increased for only 42.1% (Graph 6 and Table 8). Rising labor and material costs, coupled with limited pricing power (just 36.8% raised prices), contributed to the difference.

But it wasn't entirely macroeconomics. Some are making investments that reduce current profits but boost profit potential. For example, one president/owner attributes the 2018 decline in her company's profitability to "dealing with tariffs" as well as "transitioning into new product offerings ... and implementing lean initiatives throughout the company" that will "address many shortcomings." She expects to increase revenue, prices and profitability in 2019.

Just 36.8% increased their employment in 2018. We didn't measure how much economy-wide shortages of skilled (or at least trainable) personnel limited hiring. But the effect has likely been significant and will be a subject of future SGIA research.

Graph 6: 2018 Sales Results

(N=19)

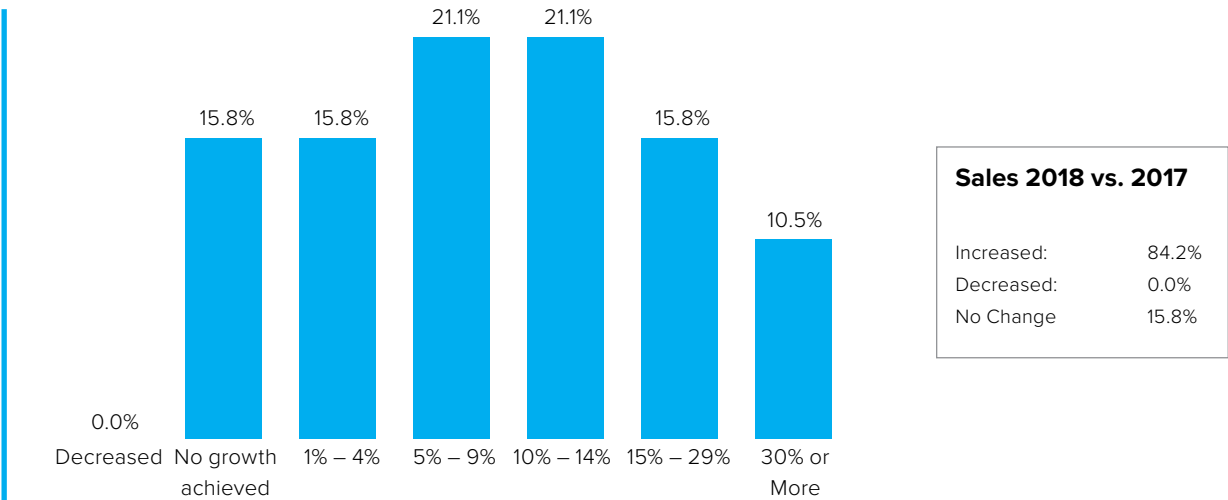


Table 8: Performance and Outlook
(N=19)

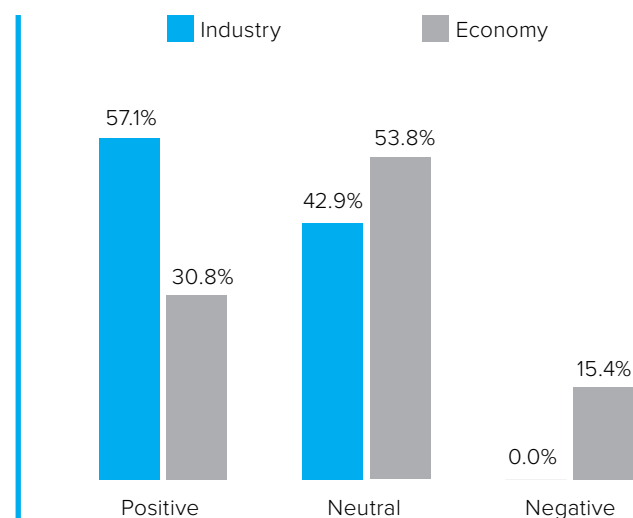
Functional Printers Performance	Past Year		
	Increased	Stayed the Same	Decreased
Sales	84.2%	15.8%	0.0%
Production	68.4%	31.6%	0.0%
Employment	36.8%	57.9%	5.3%
Prices	42.1%	47.4%	10.5%
Profitability	36.8%	52.6%	10.5%

Functional Printers Expectations	Coming Year		
	Increase	Stay the Same	Decrease
Sales	73.7%	21.1%	5.3%
Production	63.2%	36.8%	0.0%
Employment	52.6%	47.4%	0.0%
Prices	63.2%	31.6%	5.3%
Profitability	52.6%	47.4%	0.0%

Nearly three-quarters (73.7%) of our survey group expects to increase sales, 63.2% production, 52.6% prices, 63.2% profitability and 52.6% employment. Less than 6.0% expect a decline in sales or profitability, and none expect a decline in production, prices or employment (Table 8).

Confidence in functional printing is contributing to the optimism: 57.1% have a positive view of the segment's future, 42.9% are neutral and none are negative. In contrast, only 30.8% have a positive view of the American economy, 53.8% are neutral and 15.4% are negative (Graph 7).

Graph 7: Confidence in Industry and National Economy
(Industry: N=14, Economy: N=13)



About SGIA Research

Research to Count On and Act On

SGIA research provides first-hand accounts of what's happening in the printing industry, what's expected and why. We survey the community regularly, collecting information on key business indicators and explanations that put the indicators in context. We conduct follow-up telephone interviews to enhance context and insight. And because our surveys reach across the community — including graphic and sign producers, apparel decorators, functional printers, commercial printers, package printers/converters, in-plant printers, manufacturers, distributors and suppliers — we capture the realities of convergence, the phenomenon of printers moving beyond their primary industry segments.

Two practices further distinguish SGIA research. Representative panels of participants reduce non-response bias, a source of serious potential error in survey research, and increase the comparability of data from survey to survey. Second, through “best in business intelligence” analyses, we go beyond what to do to how to do it.

The result is research the printing community can count on to be accurate, relevant and actionable, transforming what's happening and what's ahead into opportunities rather than threats.

SGIA Research Reports

The results of SGIA research are summarized in reports issued throughout the year. Among them:

Quarterly Industry Benchmarking Reports

- **First Quarter: Markets and Products.** Markets served, products provided, the ones printers believe have growth potential and those they'd like to add. Trends in and expectations for key metrics, including sales, production and profitability. Average capacity utilization. Printers' confidence in their primary business segment and in the American economy.
- **Second Quarter: Financial Benchmarking.** Sales growth and profitability rates for the past year and expectations for the coming year. Why sales and profitability are increasing or decreasing. Obstacles to increasing profitability. Days of receivables outstanding, receivables trends, standard credit terms and percent of sales past due.

- **Third Quarter: Wages, Salaries and Sales Compensation.** Compensation rates and employee benefits by region and printing industry segment for more than 30 job titles. Detailed sales compensation data, including compensation rates, methods, commission structure and bonus structure.
- **Fourth Quarter: Growth Strategies and Capital Investment.** Capital equipment installed, purchased over last 12 months and expected to be purchased over next 12 months by type. Factors influencing capital investments. Financing capital investments. Current and future growth strategies in production, management and sales. Current and future methods of attracting new customers. Barriers to growth.

Industry Benchmarking Report Supplements

A closer look at the critical issues and trends raised in the Quarterly Industry Benchmarking Reports, cross-segment analysis of sales growth, profitability and other performance indicators, takeaways from telephone interviews and best-in-business-intelligence how-to's. Published periodically.

SGIA Economy Watch

A summary of the American economy's performance, prospects and defining issues, including trends in GDP, business investment, consumer spending, employment and other major economic indicators. Published quarterly.

Participating in SGIA Research

SGIA members and non-members are eligible to participate in SGIA research. The benefits of participation include early access to all research reports and exclusive access to reports such as the Industry Benchmarking Report Supplements. To participate, contact Olga Dorokhina, Research Coordinator (olga@sgia.org) or Andy Paparozzi, Chief Economist (apaparozzi@sgia.org).

Accessing Research Results

Quarterly Industry Benchmarking Reports and Economy Watch are provided to SGIA members as a member benefit, and members can download the full reports at SGIA.org (login required). Non-members can download summary infographics. To join SGIA and have access to the full reports, visit www.sgia.org/membership or call 888-385-3588.

About Olga and Andy



Olga Dorokhina

Olga Dorokhina, Research Coordinator

Olga Dorokhina, Research Coordinator at SGIA, has extensive experience in research in Canada and the United States. Being involved in all stages of research, from survey design to data analysis and reports' presentation, Olga strongly believes that numbers could tell us interesting stories. We just need to listen to them while making our everyday business decisions. Her goal is to understand where companies fall on the industry spectrum and provide them with the tools to achieve their potential.



Andy Paparozzi

Andrew D. Paparozzi, Chief Economist

Andrew D. Paparozzi analyzes and reports on economic, technological, social and demographic trends that will define the printing industry's future. His most important responsibility, however, is being an observer of the industry by listening to the issues and concerns of company owners, executives and managers. He came to SGIA after more than 30 years at the National Association for Printing Leadership (NAPL), where he developed numerous studies on commercial printing industry's performance and prospects, including the State of the Industry Series and the Capital Investment Report. Andrew holds a Bachelor's degree in economics from Boston College and a Master's degree in economics — with concentrations in econometrics and public finance — from Columbia University.



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