

Identifying Strategic Groups in the Printing Industry and Their Related Performance Benchmarks

PRINTING INDUSTRY PERFORMANCE & INSIGHTS

Providing regional printing association members
a printing industry outlook view and actionable knowledge.

January
2022

Identifying Strategic Groups in the Printing Industry and Their Related Performance Benchmarks

Before entering academia, from the early 1980s through 2008, I led three printing companies with significant ownership of two. During those decades, printing companies were similar in production processes applied (ink, paper, folding, and binding) and products provided. In that environment, performance benchmarking tools provided by national printing associations were very helpful. However, today printing companies may vary significantly in what they do and what products/services they provide. For instance, one \$3 million printing firm may focus mainly on sheetfed and digital production, and another \$3 million company may focus totally on digital production and providing other ancillary services. Differences in production processes and products may make traditional benchmarking, based on all firms in our industry, ineffective. Aiming to provide helpful performance benchmarks and knowledge to regional printing association members, in our January PIP study, we sought to identify “strategic groups.” A strategic group, an academic phrase, represents a set of firms pursuing a similar strategy within an industry. Going forward, we use the phrase “printing industry groups” or “groups” for the strategic groups we found.

To identify printing industry groups, we asked what processes companies apply and the products/services they provide, both as approximate percentages of revenue. We used “cluster analysis” to the product and processes responses. Cluster analysis is a statistical tool that sorts objects into groups with similarities. We see our clusters as reflecting groups of firms in the printing industry. However, our groups do not include cold- or heat-set web. The 120 usable responses were insufficient to identify groups of cold- or heat-set web firms. We will hope for more participation in future studies. We will seek to confirm the groups we identified here, possibly add groups, and update performance benchmarks for each group. After the key takeaways, we describe our five printing industry groups and provide related performance benchmarks.

Key Takeaways

- Through cluster analysis, we identified groups that seem to reflect our industry well.
- We report revenue growth, profit, and ROA, averages for each group. It appears each group is growing and producing profits, which speaks well for our industry.
- It appears the application of sheetfed printing may affect the difference between EBITDA and net profit, along with ROA – discussed in more detail below.

- We report the number of employees per million dollars of annual revenue for each group, and those numbers are generally close among four of our five groups. However, group four – focusing on specialized labels – appears to use fewer employees per million dollars in annual revenue than the other four groups.
- *Proactively* seeking ways to reduce cost often appeared as a strategic focus of high-performing firms in different groups.

Five Printing Industry Groups and Related Benchmarks

We first describe the primary production processes applied and products provided for each group. We then offer general observations from each group's data, followed by performance benchmarks. Last, we share the strategic foci of higher performers in each group.

We number the groups merely as an identification tool. The numbers do not reflect rankings. If your firm falls between a couple of groups, consider the performance benchmarks from both groups.

Group One

- Practically all-digital production.
- Focuses on general commercial printed products (brochures, posters, business cards, stationery, business forms, greeting cards, envelopes, etc.).

Most of these firms have 25 or fewer employees and generate less than \$5 million in annual revenue. However, five relatively large firms fell into this group, ranging from 60 to 300 employees and generating \$9 million to \$300 million in revenue. As expected, the larger firms in this group targeted a national market, while the smaller firms were more local. In the benchmarking numbers below, we do not share averages from the larger and smaller firms if their findings were similar (i.e., the smaller and larger firms differed little for that measure).

- Benchmarks
 - The smaller and larger firms in this group grew in revenue over the last two quarters of 2021. Larger companies averaged 13%, and smaller companies averaged 6%.
 - From 2020 to 2021, firms in this group grew their annual revenue by an average of 10.00%.
 - The average EBITDA as a percentage of revenue was 9.01%. However, multiple companies report EBITDA of more than 20%.
 - The average net profit as a percentage of revenue was 6.46%.
 - The average ROA (Return on Assets) was 18.23%.
 - Firms in this group employed about 5.95 personnel per million dollars in revenue.

- Higher performers' strategic focus
 - The highest performing firms in this group focus heavily on controlling and reducing costs.
 - Higher-performing firms in this group do not proactively seek to identify other potential products and markets unless they see competitors pursuing new products and processes.

Group Two

- Similar to group one.
- Practically all-digital production.
- Produces general commercial printing products (brochures, posters, business cards, stationery, business forms, greeting cards, envelopes, etc.).
- But, different from group one, group two has a strong presence in other products and services, which might include mailing, fulfillment, promotional products (such as apparel), consulting, or marketing.

Like group one, firms in group two have a wide variety of annual revenue amounts, ranging from \$300,000 to \$60 million. However, there are no distinct categories of large and small firms in group two. We do see larger firms seeking a national market than smaller firms. However, it appears smaller firms in this group pursue a national market than do in group one. Interestingly, one mid-sized firm in this group, about \$5 million in revenue, seeks an international market.

- Benchmarks
 - This group averaged revenue growth of 4.91% during the last two quarters of 2021, but slightly less than group one.
 - On average, between 2020 and 2021, firms in this group grew annual revenue by 13.53%, compared to 10.00% for group one
 - The average EBITDA as a percentage of revenue was 15.51%. However, a couple of companies showed an EBITDA of more than 30%.
 - The average net profit as a percentage of revenue was 11.75%.
 - The average ROA (Return on Assets) was 20.19%.
 - Group two's higher EBITDA, net profit, and ROA percentages, relative to group one, may imply benefits of digital printing companies diversifying and adding products.
 - Firms in group two employed about 5.70 personnel per million dollars in revenue, slightly less than group one. So, when a digital-focused printing firm provides a wide gamut of products and services, do they generate more revenue per employee? It looks like it does! And does that contribute to group two's higher profit than group one? Maybe!

- Higher performers' strategic focus
 - Higher performing firms in this group proactively seek to identify potential other products and markets.
 - The highest performing firms in this group seek cost-cutting opportunities.

Group Three

- Applies various production processes, digital, wide format, and sheetfed.
- Focuses on general commercial printed products (brochures, posters, business cards, stationery, business forms, greeting cards, envelopes, etc.).

Like the previous groups, there's a wide range of annual revenues in group three, from \$150,000 to \$52 million. Similar to group two, there are no distinct categories of large and small firms. As above, it appears larger firms seek a national market than smaller firms, and we see a couple of firms that engage in an international market.

- Benchmarks
 - During the last two quarters of 2021, this group averaged substantial revenue growth of 9.26%.
 - On average, between 2020 and 2021, firms in this group grew annual revenue by an average of 21.30%. However, three firms reported 60%+ growth between 2020 and 2021. Covid may have hit those firms hard in 2020, and they rebounded in 2021. Even without those three firms, this group still averaged 16% annual growth in 2021.
 - The average EBITDA as a percentage of revenue was 9.71%. Only a few firms showed negative EBITDA, and some reported EBITDA of over 20%.
 - The average net profit as a percentage of revenue was 4.79%. To take a closer look, we calculated net profit as a percentage of EBITDA. For group three, the average net profit was 49.33% of EBITDA. In contrast, net profit as a percentage of EBITDA was 71.70% for group one and 75.76% for group two. Given the lower net profit as a percentage of EBITDA for this group relative to groups one and two, one might wonder if the additional depreciation and interest expense from buying sheetfed presses and finishing equipment may reduce net profit for this group.
 - The average ROA (Return on Assets) was 7.04%, which seems low. Does investing in conventional printing equipment increase assets to a level for which it is difficult to generate a healthy return? We don't know. However, prompted by these numbers, leaders might proactively consider possible ROA when considering new equipment.
 - Firms in group three employed about 5.78 personnel per million dollars in revenue, which is comparable to the previous groups.

- Higher performers' strategic focus
 - Higher-performing firms in this group proactively seek other product and market possibilities. They actively market and advertise their business, possibly through direct mail, social media, or emails.
 - However, they also actively seek ways to reduce costs.

Group Four

- Practically all digital and flexography (flexo).
- Strong presence in specialized packaging (adhesive labels, shrink labels, flexible packaging).

This group consisted of only six firms. These firms' annual revenue ranged from almost \$3 million to \$50 million, averaging about \$16 million. Most of these firms pursued a regional (more than one state) or national market. We did not see any firms pursuing an international market in this group. The smallest firm focused on customers in one state.

- Benchmarks
 - There was a wide range of percentage revenue change for the third and fourth quarters of 2021, varying from -20% to a positive 33%. This significant variance may reflect Covid's ups and downs. Three firms reported revenue growth between those quarters, and three reported revenue contraction. Among the six firms, the average change in quarterly revenue was 1.00%.
 - However, the percentage change in annual revenue between 2020 and 2021 was more consistent, with only one firm reporting a decline, down 5%. Annual revenue grew by an average of 10%, with one firm reporting a 30% rise.
 - Average EBITDA as a percentage of revenue was 11.03%, ranging from 5% to 25%.
 - Net profit as a percentage of revenue averaged 10.01%. The relatively small difference between EBITDA and net profit is consistent with what we saw in groups one and two.
 - ROA (Return on Assets) averaged 27.50%, relatively high, like groups one and two, but even higher. As discussed with group three, less investment in assets relative to firms engaged in sheetfed production may enhance this group's ROA and minimize the difference between EBITDA and net profit.
 - This group averaged 4.02 employees per million dollars in revenue, which is substantially lower than the previous groups. One might wonder if focusing on a specialized market allows for higher pricing and more revenue per employee or is more efficient in employees' revenue generation.

- Higher performers' strategic focus
 - Although this group is relatively focused on one product type, specialized packaging, it was interesting that higher-performing players reported they proactively seek and consider other product options. For instance, they may seek other specialized labels to produce or other markets where labels they currently produce might resonate.
 - Higher performers in this group also emphasize producing superior quality and continually striving to improve their product quality.
 - Yet, consistent with the three groups above, they aggressively seek ways to reduce costs.

Group Five

- Applies various production processes, digital, sheetfed, and flexography (flexo).
- Focuses on general packaging labels (litho labels, top sheets, folding carton, corrugated)

Seven firms fell into this group. Annual revenue in this cluster ranged from just under \$1 million to \$35 million, with an average of about \$18 million. Larger firms in this strategic group, \$20 million to \$ 35 million, sought business from a national market. Firms in the middle of the revenue scale, \$7 million to \$ 10 million, pursued a regional market consisting of multiple states. The smallest firm focused on customers in one state. As with group four, the specialized labels group, we did not see any firms pursuing an international market in this group.

- Benchmarks
 - There were two outliers for the percentage revenue change or the third and fourth quarters of 2021, one with a 27% revenue growth and another showing a 13% reduction. Again, a possible product of Covid. Together, the seven firms averaged 6.80% quarterly revenue growth.
 - Firms in this group averaged 16.23% revenue growth between 2020 and 2021.
 - The average EBITDA as a percentage of revenue was 12.67%. Interestingly, except for one firm that reported 20% EBITDA, all six of the other firms reported a 10% to 12% EBITDA.
 - Net profit as a percentage of revenue averaged 5.83%. The relatively significant difference between EBITDA and net profit is consistent with what we saw in group three (average net profit was 49.33% of EBITDA for group three and 46.01% for this group). That compares to 71.70% for group one, 75.76% for group two, and 90.75% for group four. As stated above, interest expense and depreciation related to sheetfed equipment might reduce net profit as a percentage of EBITDA.
 - The average ROA (Return on Assets) was 11.52%, comparable but slightly better than group three. Again, from these results, leaders might project ROA when considering new equipment.

- Strategic group five averaged 5.47 employees per million dollars in revenue, comparable to groups one, two, and three. But, as generalized label producers, group five's employees per million in revenue is substantially higher than group four, the specialized label producers.
- Higher performers' strategic focus
 - Higher-performing firms in group five remain relatively committed to the set of products they provide.
 - They also focus on seeking ways to improve quality and reduce costs.

Summary

At the end of this report, you will find a table summarizing the benchmarking performance metrics we share above for each group. We share several performance averages. In considering these numbers, we encourage printing firm leaders to seek better than average performance. Consider where you are and what your team should seek to change. Related, in the "higher performers' strategic focus" points above, we apply phrases such as "seeking ways to improve" and "proactively seek and consider other...options." That language is a bit soft. From our survey questions, which are drawn from solid small business academic research, "proactively" and "seeking" means meeting regularly with your management team to fill a whiteboard with options, deciding with paths to take, and assessing the effects of previously chosen paths. Examples of cost-cutting tactics might consider they might include the following: reducing staff to a level capable of handling slower months and then using overtime to accommodate busy months, considering rather a retail storefront is necessary, outsourcing activities that are not crucial and not often performed, combining tasks among employees, to name a few. These are merely a few examples. Again, it appears that leaders of high-performing firms seek to generate cost-cutting ideas...fill the whiteboard with thoughts.

Our survey participation was lower than we like. However, our findings seem to fit what we see in our industry and what we hear from those directly connected to printing businesses. We will study printing industry groups and performance benchmarks again, hopefully with more survey responses.

We much appreciate the regional printing associations that support the PIPi studies. They are listed below.

We hope you find this material helpful in decision-making and provides valuable benchmarks. If you have questions or comments, please email Dr. Ralph Williams at ralph.williams@mtsu.edu.

Dr. Ralph Williams Jr.

Associate Professor of Management
Jones College of Business
Middle Tennessee State University

Dr. Scott Seipel

Associate Professor of Information Systems and Analytics
Jones College of Business
Middle Tennessee State University

Dr. Joshua R. Aaron

Professor of Management
Jones College of Business
Middle Tennessee State University

Dr. Jackie Gilbert

Professor of Management
Jones College of Business
Middle Tennessee State University

Participating Regional Printing Associations

FGA – Florida Graphic Alliance

GAA – Graphic Arts Association

GLGA – Great Lakes Graphics Association

GMA – Graphic Media Alliance

PGAMA – Printing and Graphics Association Mid-Atlantic

PIA – Printing Industries Alliance

PIAMA – Printing and Imaging Association MidAmerica

PIAS – Printing Industry Association of the South

PIASC – Printing Industry Association of Southern California

PIASD – Printing Industry Association of San Diego

PICA – Printing Industry of the Carolinas

PIMW – Printing Industry MidWest

PINE – Printing Industries of New England

PMA – Print Media Assoc.

VMA – Visual Media Alliance

<i>Group</i>	<i>Process and Products</i>	<i>Average 2021 3rd to 4th quarter % revenue change</i>	<i>Average 2020 to 2021 % annual revenue change</i>	<i>Average EBITDA as a % of revenue</i>	<i>Average Net profit as a % of revenue</i>	<i>Average ROA</i>	<i>Average Employees per million \$ in revenue</i>
Group One	Practically all-digital production. General commercial printed products.	Larger firms = 13%. Small firms = 6%.	10.00%	9.01%	6.4.	18.23%	5.95
Group Two	Practically all-digital production. General commercial printed products. Strong presence in other products and services.	4.91%	13.53%	15.51%	11.75%	20.19%	5.70
Group Three	Variety of production processes, digital, wide format, and sheetfed. General commercial printed products.	9.26%	21.30%. (16% with three outliers removed)	9.71%	4.79%	7.04%	5.78
Group Four	Practically all digital and flexography (flexo). Strong presence in specialized packaging.	1.00%	10.00%	11.03%	10.01%	27.50%	4.02
Group Five	Variety of production processes, digital, sheetfed, and flexography. Focuses on general packaging labels.	6.80%	16.23%	12.67%	5.83%	11.52%	5.47