



**Enhancing Book Publishers'
Ability to Respond to
Changing Market Demands**



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INTRODUCTION

Digital printing technology continues to transform book manufacturing by offering print providers and publishers new options to improve efficiency and profitability. While book printers have been producing books on digital presses for some time, innovations in inkjet printing are moving more work from offset to digital, improving productivity, and offering new opportunities for products and services.

Production inkjet devices are a key driver for moving book pages from offset to digital printing presses. These ultra-high-speed digital presses have redefined the economics of printing books on demand in larger quantities, without sacrifices in quality. According to IT Strategies, more than 10% of all book pages are now printed on production inkjet presses, a percentage that will continue to grow at double-digit rates for the foreseeable future.

This report highlights the critical trends influencing book publishing and how production inkjet devices can meet publishers' requirements. It will examine how inkjet supports publishers' economic objectives, expands their market opportunities, and lets them enrich the content and the perceived value of their books.

BOOKS, A RESILIENT PRINT APPLICATION

Printed books continue to demonstrate their value, relevance, and resilience. As the COVID-19 pandemic lockdowns and quarantines throughout most of 2020 brought consumers an unexpected avalanche of homebound hours, many filled the time by reading printed books. In turn, print book sales in the U.S. soared to their best yearly numbers since 2010. According to The NDP Group, which claims to track 85% of trade print books sold in the U.S. through its NDP BookScan survey, unit sales volume in 2020 rose 8.2%, year over year, to reach 751 million units.

Sales momentum continued into 2021. Citing additional data from NDP BookScan, *Publishers Weekly* reported that unit sales jumped 18.5% in the first six months over the same period in 2020.

Another contributing factor to the boom in book sales is demand for books that address current events and issues that people care passionately about, such as social justice and race. The NDP Group says that titles focusing on these topics grew by 160% – more than 700,000 units – from January through May 2021 compared to the previous year.

As in-person gathering restrictions wane, publishers now wonder how reading and book buying will fare as people reconnect with the kinds of out-of-home entertainment that they couldn't enjoy while sheltering in place from COVID-19. Digital printing offers publishers the ability to better respond to fluctuations in demand.

ECONOMICS OF DIGITAL PRINTING FOR BOOKS

For over two decades, books have been produced on digital printing systems. The potential that publishers saw in digital printing then has reached full fruition today.

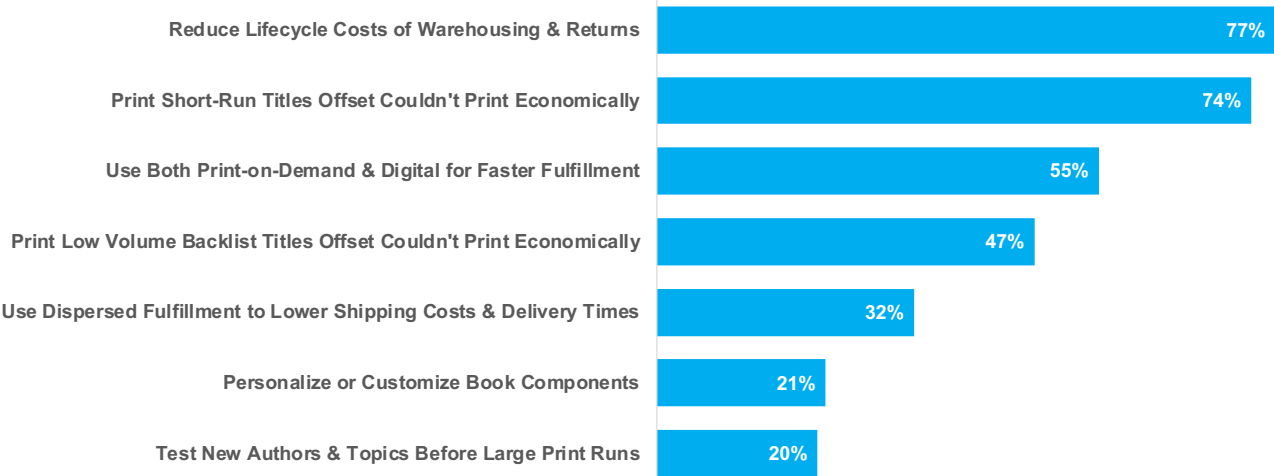
A catalyst for digital transformation of book printing was unit cost: the sum of the charges incurred in printing one copy of a book. With conventional printing on offset equipment, unit cost declines as the number of copies increases. This is a good proposition for bestsellers, but not for smaller runs, in which the unit cost of the first few hundred copies can be prohibitively high.

Before digital printing, this meant that publishers often had to buy a minimum number of copies specified by the printer in order keep unit costs under control. By accepting these offset “minimums”, publishers sometimes found themselves inventorying more copies than they actually would be able to sell – a requirement that deliberately built the waste of unsold units into the bookselling equation.

In contrast, the unit cost of a book printed digitally stays the same from the first copy to the end of the run. There’s no decrease in unit cost, no matter how many units are printed. In small quantities, the unit cost of a book printed on a digital press will be lower than that of a book printed on an offset press. In the 1990s, this was precisely the break from the minimum quantity requirements of offset printing that publishers were looking for.

Today, the static unit cost of digital print is the foundation of short- and medium-run book manufacturing. A survey of publishers by NAPCO Research found that nearly half (46%) of those who printed books on digital presses reported experiencing savings in unit cost. In the same study, nearly three-quarters (74%) said that digital enabled them to print short-run titles that offset couldn’t produce economically (Figure 1). Even more (77%) cited the reduced life cycle cost of warehousing and returns as additional key benefits.

Figure 1: Key benefits of Digital Book Printing



Q. What are the primary drivers for why you use digital printing?
n=150 Book Publishers
Source: How Book Publishers Use Digital Printing to Sell Books More Profitably, NAPCO Research 2018



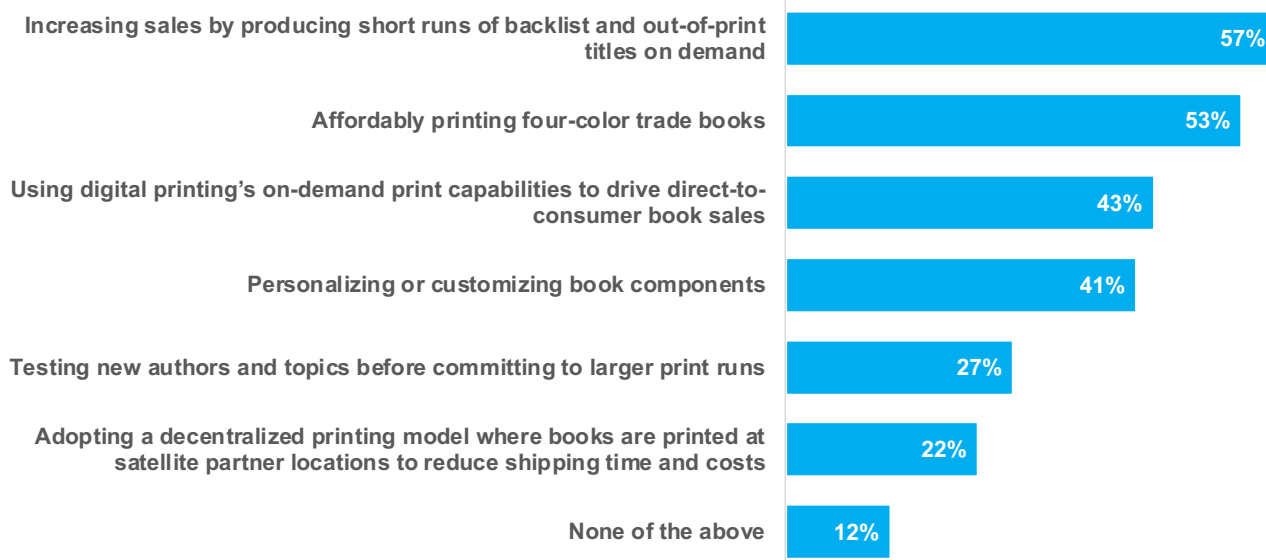
Digital printing's ability to print books in economical quantities, all the way down to just one unit, offers publishers a powerful tool to address variations in demand. In this scenario, minimums, inventories, and sell-through projections don't apply, because the model has shifted from print-then-sell to sell-then-print. Publishers no longer have to guess at the number of copies needed or fulfill from existing stock – they simply direct their print service providers to print and ship the book (or books) when the order is received.

Eliminating inventory releases the cash tied up every time a book is printed, bound, and warehoused prior to sale. Publishers can instead use the capital for new acquisitions, marketing, and other activities that generate a return on investment. This enables them to concentrate on the core business of book publishing without being distracted by manufacturing and logistics.

With this kind of support, publishers gain more flexibility to produce new works that deserve an audience but may not have a sales potential sufficient to justify the cost of offset printing. Digital printing offers the same salvation to backlist titles, which now can be reprinted economically on digital equipment instead of missing out on a next edition because the cost of an offset run would be too high.

This means that the “out-of-print” book has become a thing of the past, given that any title can be reprinted digitally and sold for profit as long as somebody, somewhere wants to purchase a copy of it. Better than half (57%) of book printers surveyed by NAPCO Research affirmed that increasing sales by producing short runs of backlist and out-of-print titles on demand was one way in which their publisher customers used digital printing to grow revenue (Figure 2).

Figure 2: Ways Digital Printing Is Growing Publishers' Revenue



Q. In which of the following ways are your book publishing customers using digital printing to grow revenue?
n=49 Book Printers

Source: The Role of Inkjet Printing in Powering Industry 4.0 in Book Publishing, NAPCO Research/BMI 2019



Publishers have come to appreciate digital printing as a solution for reducing their production costs, shrinking their inventories, and expanding and preserving their book lists. Lately, they also are seeing domestically based providers of digital printing services as alternatives to the overseas printing companies to which many publishing houses have outsourced production over the years.

These foreign printers are cost competitive, but their advantage often erodes when the expense and delay of international shipping are factored in. Supply chain upheavals arising from the COVID-19 pandemic have bolstered the argument for bringing book manufacturing back home. *The Economist*, for example, recently reported that the cost of shipping goods from China to ports on America's west coast has quadrupled from its pre-pandemic level.

These trends point to book printing as an incredibly strong opportunity for production inkjet printing as publishers re-shore manufacturing from overseas sources.

THE IMPORTANCE OF SUSTAINABILITY

As consumers concern for the environment grows more significant, no discussion on the business of book publishing can overlook the responsibility of publishers and printers to produce books sustainably and reduce excess waste.

Conventional printing, with its inherent physical waste and more hazardous chemical ingredients, doesn't satisfy the bottom-line objectives for a sustainable future. Digital presses print without plates and oil-based inks; instead, they use safer ink chemistries and water, cutting environmental costs of permits and disposal fees. Another benefit of digital printing is that the first set of pages printed are ready to finish and ship, unlike the press makeready waste associated with offset. After the run, there are no rollers and blankets to wash up or any solvent-soaked rags to dispose of.

In addition to the print process waste, there is the waste of excess copies from overproduction required as part of the conventional printing model. This mismatch of supply and demand is not only a financial risk, but it is also bad for the planet – a cost that often times goes unnoticed. The carbon expenditure of manufacturing the overproduction and the logistics of inventory, storage, transportation and disposal all play a part.

Thermal, drop-on-demand inkjet printing with aqueous pigment- and dye-based inks – the technology underlying Memjet's VersaPass®, DuraLink®, and DuraFlex® solutions – are stable, consistent and safer for the earth and the people handling them. With this type of inkjet, it's possible to control resolution and ink coverage in ways that not only assure print quality but minimize environmental impact as well.

Manageable unit cost, flexibility for short and medium runs, inventory reduction, and eco-friendliness – all courtesy of inkjet – add up to digitally driven economic opportunity for book publishing at a moment when the industry has never been in a better position to take advantage of it.

DIGITALLY ENABLED OPPORTUNITIES FOR BOOK PUBLISHERS

Publishing industry research identifies the substantial opportunity digital printing offers publishers, particularly in backlist and self-published titles. Both are categories that tended to languish when offset was the only method of producing them. Digital printing transforms them into profit contributors that don't need mass sales to justify their retention in the catalog.

Most backlist titles are older books that their publishers no longer actively promote. Nevertheless, they continue to generate sales as "long tail" works that have modest but reliable followings among the audiences they were written for.

The backlist was a healthy place for books to be during the pandemic year of 2020 when, according to NDP BookScan, titles in the category accounted for 67% of all print units purchased – up from 63% the year before. In 2010, the backlist accounted for only 54% of all unit sales.

In any year, digital printing is a natural adjunct to backlist publishing. Once a title leaves front list status – new and enjoying strong initial sales – and proceeds to the later stages of its life cycle, digital printing offers the publisher a cost-effective way to reprint the book in the small batches that its remaining sales are likely to consist of. If demand picks up again, offset printing can be reconsidered – but digital keeps the title alive no matter what the current volume of orders happens to be.

The principle is the same for self-publishing authors: writers who bring their books to life either entirely on their own or with the help of publishing houses that specialize in this segment of the market. Self-publishing, once unfairly derided as the province of the "vanity press," has gained considerably in both size and respect.

The Book Manufacturers' Institute (BMI)/NAPCO Research report, *The State of the Book Industry 2021*, reveals that since 2008, the number of self-published books produced has increased by more than 20% in each year, with a 45.9% jump from 2017 to 2018. Between 2008 and 2018, the number of self-published titles jumped by more than 1,906%, topping out at more than 1.5 million of them in 2018.

Self-publishing authors often don't have the luxury of a sales history to help them forecast demand. In almost all cases, they bear the full expense of creating, manufacturing, and distributing their books – meaning that they have no margin for error in deciding the number of copies they can afford to print.

Digital print-on-demand gets their books into production without guesswork, waste, inventory cost, or time-to-market delays. Self-publishers print only what they need and when they need it, to handle orders as they're received or to ship in fulfillment of pre-publication sales. Because the data for a digitally created book can be easily sent electronically to any capable print production site, self-publishers have the opportunity for worldwide distribution as a bonus – something they could never dream of enjoying within the constraints of conventional production.

Self-publishers and mainstream publishers alike are learning that all of these advantages reach peak efficiency with production inkjet, the ideal digital printing process for 21st-century book manufacturing.

INKJET ADVANTAGES FOR BOOK MANUFACTURING

Until now, the challenge for book manufacturing was how to find a digital printing method that matches the quality, speed, flexibility, and affordability of offset printing. Production inkjet makes the offset-to-digital transition fully achievable. This is because no other digital printing technology is as productive across the general range of book manufacturing as inkjet. Toner-based systems, with their slower printing speeds and format limitations, don't offer the same breadth of capability.

Today, book printers recognize inkjet as the most cost-effective solution for shorter runs. At the same time, the technology continues to expand into volumes that traditionally have belonged to offset. Some publishers have found that they can comfortably produce 2,000 books or more at lower costs than they would incur with offset printing.

Accelerating the trend are steady advances in inkjet press performance: faster running speeds; higher print resolutions; bigger sheet sizes and web widths; greater longevity of inkjet heads and other critical components; more options for inline and near-line finishing; and probably most important, the increasing ability of these devices to print with sheetfed quality on standard offset papers without needing complicated coating or pre-treatment routines.

A sheetfed or continuous-feed inkjet press built along these lines is the "white paper factory" that book printers have always longed for: a fully integrated solution for text, color imagery, and variable content that delivers a finished product in a single high-speed pass. The high speed of production inkjet in both monochrome and color also enables it to compete with offset for non-variable work.

Print quality sometimes raised questions in the early days of production inkjet systems, but seldom among book printers.

The versatility of production inkjet printing can be leveraged in automated workflows that make it easy to:

- Add color pages to books as desired
- Update content for reprints and reruns
- Version books by language, regional and seasonal material, etc.
- Enhance the reading experience with variable text and imaging, including personalized, reader-specific content
- Make book pages interactive by adding QR codes, AR taggants, and or other multimedia technologies

CONCLUSION

What lies ahead for the book market obliges publishers to recalibrate their strategies for bringing titles to market. Nowadays, a book needs to be relevant, customizable, readily available, and above all, profitable to manufacture and sell. This requires printers to be sure that they have made the right decisions about the technologies they will use to manufacture books going forward.

It is up to printers to give their publisher customers flexible, environmentally friendly manufacturing solutions that let them print what they need, when they need it, where they need it, in cost-justifiable quantities, and with whatever enhancements will add value in the eyes of end-using readers. Printers also have to convince publishers that by producing in this way, they are protecting a business model that will keep books alive, well, and profitable no matter how much more competitive the media marketplace becomes.

Ongoing trends in the publishing market will drive more book production toward digital inkjet. Inkjet is unique among printing processes in being able to meet these criteria with all of the productivity, quality, and value-adding capabilities that printers have always looked for in digital solutions.

WHO WE ARE

NAPCORESEARCH

NAPCO Research crafts custom data-centric solutions that leverage our highly engaged audiences across the markets in which we operate, our industry subject matter experts and in-house research expertise. We partner with our clients to identify their unique business problem and create solutions that enable deeply informed decision-making.

NAPCO Research can help with:

- Business goal prioritization
- Opportunity discovery
- Market segmentation
- Landscape insight
- User needs and wants
- Product features and functionality
- Content marketing strategy
- Sales strategy and tactics
- Market conditions
- Benchmarking
- Industry trends
- Brand awareness

Contact research@napco.com to talk with our analysts to find out how we can help you with your research needs.



WHO WE ARE



Beautiful Precision, Simplicity, and Affordability.

Memjet is a global leader in the design and development of innovative thermal inkjet printhead technology, supporting modules, and aqueous inks. The modularity and technical components, combined with Memjet's commitment to customer success, empower OEM partners all over the world to develop fast, cost-effective printing solutions to grow and succeed in new markets. Together, we are building the future of print.

Memjet's range of digital technology powers the way we print today:

1. [VersaPass® technology](#)
2. [DuraLink® technology](#)
3. [DuraFlex® technology](#)

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Whether you are an OEM looking to integrate Memjet technology into your printing solution, a print provider looking for the right Powered by Memjet product or a brand owner who wants to use digital inkjet printing technology in new and interesting ways, we can help. Please contact us at www.memjet.com.