

SHAPING THE EUROPEAN FUTURE WITH BOOKS (FACTS AND THOUGHTS REGARDING A CONFERENCE)

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Abstract

The authors – who have been working in the world of printed books for decades – tried to formulate the challenges and trends that characterize the future coexistence of European people with printed books by analyzing recently published scientific publications, conference presentations and expert reports.

Keywords: *Future of print, book production, publishing, book market trends, sustainability.*

1. Introduction

The Óbuda University and Alfoldi Printing House, which is considered iconic in Hungary – with a history of more than 460 years – are conducting joint research, the aim of which is to explore the expectations of the young generation who use textbooks in relation to printed communication. How the design and production of textbooks should be adapted to these expectations.

The authors – as part of this scientific program – summarize and analyze the expected trends in the world of books, which will also be the key driving forces of the book market and book production: lifestyle and habit changes characteristic of the period of the Covid-19 epidemic; issues of sustainability, the rise of digital printing, the ever-widening use of electronic end-user products, and the exploding costs of production.

2. Methodology

The authors participated in the conference organized by INTEGRAF (the European printing industry association) in 2021, which focused on the future of printed books.

“Shaping the Future with Books” conference was an event with two chapters. Chapter 1 was a webinar in February 2021 which gave an overview of the latest market research, as well as expert views on the status of the book industry from the perspectives of a printer and a publisher. Chapter

2 was organized in October 2021, as an “in person” conference at the Frankfurt Book Fair, in Germany. The keynote speaker was Intergraf’s research partner Smithers, who presented their market data and recommendations, prepared exclusively for this event.

The authors summarized the following facts and thoughts from the conference presentations, supplemented with conclusions from other scientific publications and their own research results within the given framework of this paper.

3. European printed book market

Whilst the book printing market in Europe has faced challenges from falling readership and greater costs within the supply chain which are driving a decline in number of physical books being printed, the output in terms of revenue are expected to grow from 2020 onwards predominantly due to the increasing adoption of digital printing processes.

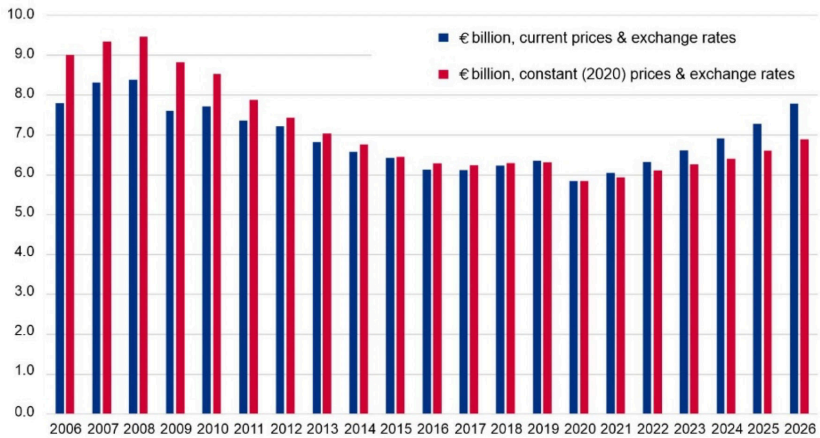
COVID-19 caused the most dramatic change to the market since the crisis in 2008. The pandemic’s most immediate influence was on supply chains throughout the book printing market, many printers could not work at full capacity as well as many suppliers were restricted by regulations especially in regards to crossing country borders. As a result, 2019 the total European market was valued at €6.32 billion, which saw a decline of 8% in just one year in 2020.

Through the 2021–2026 period, book printing revenues are set to increase by 29% in current terms (17% in constant terms) in Western Europe. Central & Eastern Europe book printing revenues is also expected to rise by 27% in current terms (10% constant terms) during this five-year period.

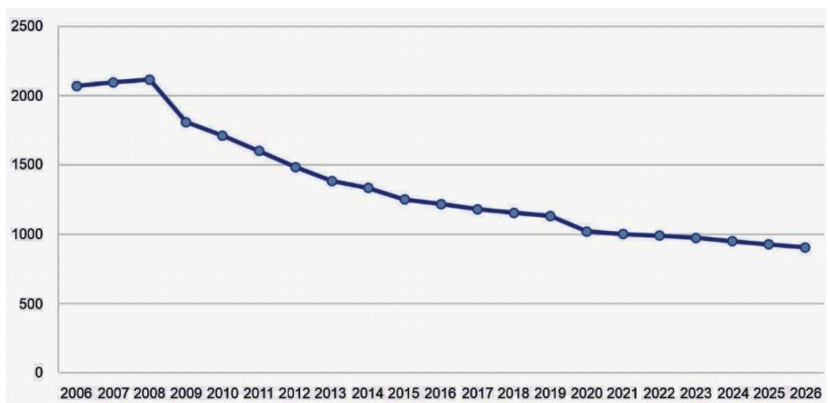
On the Figure 1 the constant price values show market data at 2020 prices, removing impact of inflation and exchange rate fluctuations from one year to the next.

As eluded to previously, despite the projected increase in revenue the output volume is on a downward trajectory, and has been since 2008. The decline in printing output by ‘000 tonnes has been regular since 2015 barring a more dramatic drop of 10% between 2019 and 2020. Following the pandemic, the output by volume is expected to return to a more reasonable decrease at –2% CAGR between 2020 and 2026 (Figure 2).

The most common book printing process employed by book printing today is offset lithography; this includes three main variations, sheetfed, heatset (web), and coldest (web). Digital print is becoming more popular with a focused trend towards inkjet. Other processes include flexo, gravure, and letterpress.



*Fig. 1: European Book Printing Output, 2006–2026
(Source: Smithers, 2021)*



*Figure 2: European Book Printing Output, 2016–2026 ('000 tons)
(Source: Smithers)*

Sheetfed offset has traditionally been used for shorter runs and high-quality printed books, with applications including covers, book jackets and colour sections for many books, with specialist large format perfecting book presses widely used to print short to medium runs. This sector received a boost with the arrival of size VI (1.0m x 1.4m) large format colour perfectors with high levels of automation to make fast-changeover, full-colour book printing more efficient. Sheetfed book volumes are falling though, as more efficient alternatives are used.

Coldset book printing remains very significant, employed across a range of diaries, religious, educational and trade fiction titles – both hardback and softback. Heatset is used to print long-run colour books; many book presses have heatset ovens that can be used for colour and switched off when the press is producing mono titles (often using two webs).

Electrophotography first made its mark in book printing back in the 1990s with the Xerox Docutech making short-run mono books economic. It gradually increased share with continuous presses offering an alternative to litho, opening up print-on demand and long-tail operations and keeping more titles in print. It also opened up new opportunities, with self-publishing becoming a significant sector and some book printers offering author support with web-to-print to take files into templates, and providing services such as obtaining ISBN details, etc. Colour electrophotography is now increasingly used to print colour sections – particularly covers – as an alternative to sheetfed.

High-volume inkjet is being rapidly adopted by book printers across the world as supply chains develop to print smaller batches quickly and economically. High-speed inkjet presses, linked to sophisticated slitting, cutting and folding finishing systems, are now allowing the economic production of mono and colour titles, either as book blocks or folded sections. The economic crossover (where litho cost is lower than inkjet) is approaching a run of 10,000 for mono and in the thousands for colour titles. The combination of high-volume printing with highly automated finishing has changed the economics and response times for book production and consequently traditional publishing supply chains.

The printing output of all three lithography processes is still greater than digital in terms of revenue (by current price). Yet over the next five years, Inkjet is projected to grow by 125% between 2021 and 2026, which will see it overtake the combined analogue print processes (Figure 3). However, in terms of volume of printed books, analogue processes will remain collectively greater than that of Inkjet. Whilst every other printing process is declining in output, Inkjet is the only process seeing any market gain, even

with the growth of Inkjet the European book printing market as a whole is dropping by 7% from 2021-2026 (million A4 prints) (figure 4).

“Inkjet is changing this market” (Thomas Poetz, Smithers)

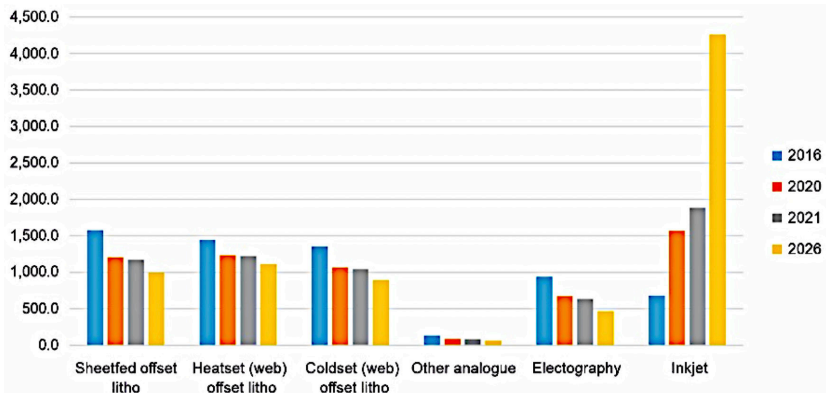


Figure 3: European Book Printing Output by Process (€ million, current prices and exchange rates) (Source: Smithers, 2021)

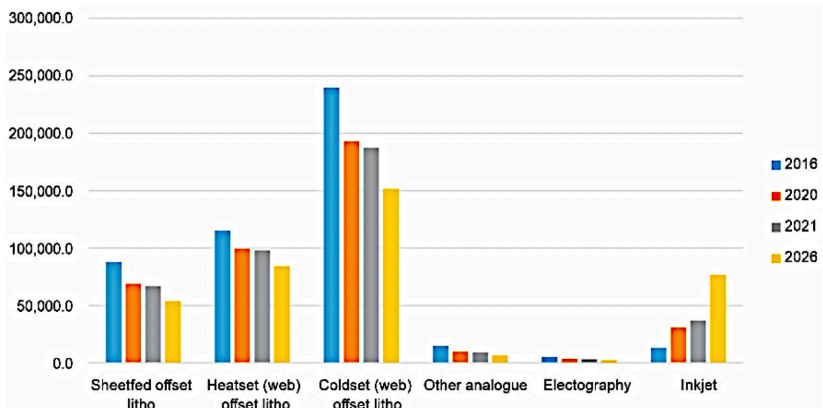


Figure 4: European Book Printing Output by Process, 2016–2026 (Million A4 Prints or equivalent) (Source: Smithers, 2021)

4. Key drivers and trends

Over the last few years, there have been a number of significant factors impacting on the book printing industry, some of which have immediate short-term effects, whilst others will have major impacts in the long-term. COVID-19 has been the most significant factor, but most of the initial changes will likely only be short lived. Whilst the development of higher quality digital printing methods will lead to a more long-term change to the industry. Other trends including changing production methods to compensation for the increase in costs, and the growing demand for sustainable practices from an ever more aware consumer market, will force production to adapt (Mureau – Wells, 2018).

One trend that may not affect the market as expected is the changes to a digital platform, with the e-books market seemingly stagnating.

4.1. Sustainability ... *is not a trend anymore, it is real business*

Climate change is one of the biggest topics in the modern era with a huge emphasis being put on environmentally friendly actions for people, companies, and countries. This topic is at the forefront for many consumers and will often influence their feelings towards a company and its products. This mind-set from the public has put pressure on, governments and unions, as well as businesses, to promote sustainable practices.

The paper industry is already one of the most sustainable in the world, unfortunately, the industry has somehow gained something of a bad reputation when it comes to sustainability. There has even been schemes to try to limit paper usage by consumers even though managed forests, which are the greatest suppliers of pulp for paper, are often carbon neutral in their efforts. Despite this, companies within the paper supply chain have made a move to be even more socially responsible.

This move to sustainability is highlighted by some of the largest publishers' devotion to a sustainable approach, with their aims to make a positive social and environmental impact. This plan is based on three pillars: learning for everyone, learning for a better world, and leading responsibly.

Printers must increasingly prove their credentials by providing clear emissions data about their products. 'Intergraf recommendation on CO₂ emissions calculation in the printing industry', was published in 2013. This recommendation was the only international graphic standard for carbon calculation in the world, designed to ensure that everyone who uses it calculates on the same basis (ISO 16759:2013).

Reducing waste/over-printing is important: "it would make a big difference if we could get the right books to the right people" (Michiel Kolman, Elsevier)

4.2. Consumer trends ... *social media is stealing time from consumers to read books*

Reading is a very environmentally-friendly activity – be it in the physical or digital world.

Retail is not physical vs. online, it is omnichannel

„Print has a strong value proposition for consumers”, with price not even in the top five selection criteria of where and why one buys a book. This led to the conclusion that “a beautifully printed book remains important even in an omnichannel market”. (Andre Breedt, Nielsen Book)

How do 15-year-olds read in today's world?

37% of students rarely or never read books; 36% read books more often in paper format; 15% read books more often in digital format; and 12% read books equally often in paper or digital format. (Miyako Ikeda, OECD)

When comparing between different kinds of readers, the OECD found that “in high-performing education systems more students tend to read books more often in paper format”, while “in low-performing education systems more students tend to read books more often using digital devices”.

Consumer behavior perspective

As society changes, so does its reading practices. But it is clear, that printed books remain an important part of this conversation. Book volumes in all formats (print and digital) are growing, with certain genres lending themselves more to certain formats and all co-existing in a diverse marketplace. There are some concerning trends, such as the decreasing rate of young adults reading books (in any format) and the growing socio-economic gap between those who read and those who do not. However, reading – be it for pleasure, information, or learning – remains a popular activity that is given importance.

Traditional printed media is much more effective when it comes to memory recall and the retrieval of information” compared with digital media. (Olga Munroe, Leeds Beckett University)

4.3. Book-production ... *is a changing world*

COVID-19 has undoubtedly had the greatest immediate impact on all industries in recent years, especially during 2020, resulting in a reduction of output by volume and revenue. Pandemic has acted as a time machine, accelerating the trends that were already in motion. It quickened the consumer jump from printed educational and academic books to electronic substitutes. As well as speeding up them production methods change to shorter run prints and digital processes.

Many printing companies shifting towards a print on demand (POD) business model, the industry's commitment to automation is increasing.

These developments reflect recent changes in consumer behavior, which are “changing the market”. Consumers now expect personalized and individual products, easy and fast online ordering and delivery, and a greater emphasis on eco-friendly products with longevity (Horvath et al, 2018).

Consumers are increasingly ‘glued’ to their screens, with the more intelligent our mobile devices become, the more antiquated the humble book seems. Streaming services are becoming ever more popular and taking up an increasing size of the entertainment industry, and the ever-present entertainment formats such as TV and Video gaming, these together are squeezing the space available for other forms of entertainment such as books.

Not only are the products themselves being digitized, but also the methods of procuring said items have become increasingly digital. E-commerce has been continually growing over the years, especially in conjunction with the powerhouse Amazon.

The cost to produce printed books in Europe is increasing, this has been caused by a multitude of reasons. One factor influencing production cost rises is the desire for quick turn around on printed books, wholesalers and retailers do not want to hold high levels of stock and instead they are putting pressure on printers to produce smaller volumes of a larger range of titles. Another factor being the increase to transportation of products, it is becoming increasingly costly to distribute final products, the cost of shipping and lorry hauls have increased, largely due to the logistical issues set about by COVID-19, on top of this there is currently a driver shortage.

Prizes of graphic papers have been dramatically rising.

The future is digital, in more ways than one, from the production of books to the methods of purchasing and consuming product. The following is an example of the use of augmented reality (AR) in the world of printed books.

The purpose of the LibrAR mobile application developed by Alfoldi Nyomda is to extend and expand the information appearing in the book.

The camera of the mobile phone or tablet is pointed at the page of the book, and something else appears in the place of the image, e.g.: another image, an image gallery, animation, a 3D model that can be walked around virtually, a video, an audio file starts, but it is also possible, to launch the phone’s navigation program and navigate to a specific geographic location, but we can even discover hidden content in a book through it. The special feature of the application is that there is no need to spoil the overall image of the book, for example by placing a QR code, only a well-recognizable image and a so-called marker are needed. Most images and graphics can be used as markers. All that is needed is that it contains sharp, contrasting angles. And the librAR corner mark printed on the corner of the image is just



Figure 5: LibrAR application in use

to inform the reader: this image is more than meets the eye. The application of AR therefore opens new dimensions in the world of books and enables readers to have a much more interactive and enjoyable experience (Horvath et al, 2020).

Europe's book market is dynamic and mirrors similar trends in the wider graphical sector. For example, the growth of digital printing and shorter run lengths. Personalisation, special editions, print on-demand, and automation are all becoming more common, as is publishers' shift towards smaller stock models (reducing warehousing and waste). Moreover, the significant growth of inkjet is having an impact on book production.

There is also plenty of innovation in the sector to facilitate more competition with large companies like Amazon who dominate the market.

5. Conclusion and practical implications

Printed books have proven to be resilient in the face of digitization, even during a pandemic which accelerated the digital transition.

Common targets and actions can be formulated to European publishers and printers (Peter Kraus vom Cleef, FEP).

- “Work together to contribute to achieving the United Nations Sustainable Development Goals”.

- “Improve our ecosystem together by thinking in networks and reducing our carbon footprint” – for example, by using more AI to “better forecast what we need to print”.
- “Lobby together for our cultural and creative sector”

“Collect together all the research, studies and information about the benefits of reading – and particularly reading in print” – and publish it alongside other stakeholders like booksellers and librarians.

6. European book printing industry outlooks

The outlook for the European book printing industry is digital. Digital processes (specifically Inkjet) are likely to surpass analogue processes in terms of revenue as inkjet is expected to be the only process to see any growth over the next five years. On top of this digital media continues to cause physical books volume to decline. This has been seen with the reduction of education and academic books being substitute for e-learning methods. There are further digital impacts with competition from digitalised substitutes such e-books and audiobooks, along with digital entertainment such as TV, film, and gaming on the rise.

A key conclusion

Books was that books – both printed and digital – are an essential part of our daily lives. Printed books – in particular, remain popular and necessary because they continue to offer something different from digital versions. In this thriving market, there is space for different formats.

“There is something magical about the printed book” – in this market, there is room for all of us! (Vicky Ellis, Clays)

7. Acknowledgement

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