

5th drupa Global Trends Report 2018 Executive Summary

Welcome to the executive summary of our 5th drupa Global Trends Report, tracking key economic and market developments across the global print industry. The full report is made available free to all survey participants and others can purchase it from www.drupa.com. The survey conducted in November 2017 had nearly one thousand participants with a good cross section from across most market sectors and regions. Our thanks must first go to them for participating.

Each Autumn we circulate two separate surveys for printers and suppliers, sharing some questions, but also asking more specific questions relevant to each group. 708 printers participated and whilst the majority were from Europe (421), the rest of the world was well represented in all regions (287). Given the smaller number of suppliers, we were pleased to receive responses from 234, of which 160 reported on Europe, but again the other regions were well represented.

This is the most encouraging report since we started publishing this annual survey in 2013 for most printers and suppliers in most markets and regions. It reflects the slow but steady global economic recovery from the 2008 recession and the increasing confidence shown by many in print as to how they can best exploit technological innovation and the integration of digital communications.

The unique feature of the drupa Trends Reports is its global expert panel, recruited around the world from visitors to drupa. By publishing this global survey every year we can track the key market, regional and technological trends over time. However even with a lengthy survey we cannot drill down into as much detail as is asked of us each year – busy people simply do not have the time. Hence from this year we have added an optional additional survey that allows us to examine in more detail one hot topic. This year's Spotlight is on inkjet printing, perhaps the decisive technological print development in recent years, and will be published in May 2018.

Messe Düsseldorf, in its role as drupa organiser, thanks Printfuture (UK) and Wissler & Partner (Switzerland) for conducting and authoring this report series. We are confident that you find the resulting report and Spotlight very useful. We would be pleased to receive any feedback, so send us an email to drupa-expert-panel@drupa.de.

The drupa team April 2018

drupa Global Trends April 2018





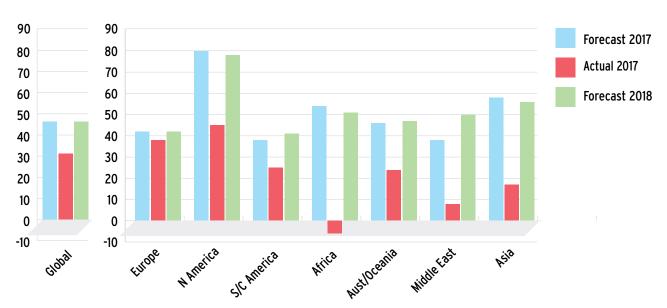
5th drupa Global Trends Report 2018 - Executive Summary

The best global results for print since 2013

Printers in general are increasingly confident in their future prospects and their suppliers even more so. That is the clear trend in the results of the drupa Global Trends Reports over the last four years. We summarise the results in the drupa Barometers of economic confidence. In 2017 40% of printers described their company as in a 'good' economic state and 9% described it as 'poor' (the balance answered 'satisfactory'). This gives a positive net balance of 31% and it is that net balance (plus or minus) that we show in the chart below and it is the % net balance that is used in many of the subsequent charts.¹

drupa Printer Barometer 2018 - economic confidence

% net balance positive v negative



How do you rate the current economic situation of your company? What are your expectations of your company's economic situation for the next 12 months?

You will see that printers frequently are more optimistic in their forecasts for the coming year than works out in practice, so the actual result for 2017 is lower than the forecast from the previous year. Nevertheless it is a positive picture for most regions, Africa and the Middle East being the clear exceptions, although forecasts remain upbeat even there.

It is particularly very useful to track economic confidence over time and we can see from the charts included in Infographic 1 that North America stands out as consistently stronger than the rest of the world, but Europe gains steadily while Africa and the Middle East decline.

Turning to market sectors, as in previous reports, we have used four broad categories: Commercial, Publishing, Packaging and Functional.² Packaging printers have grown steadily in confidence; as have Functional printers until this year, when

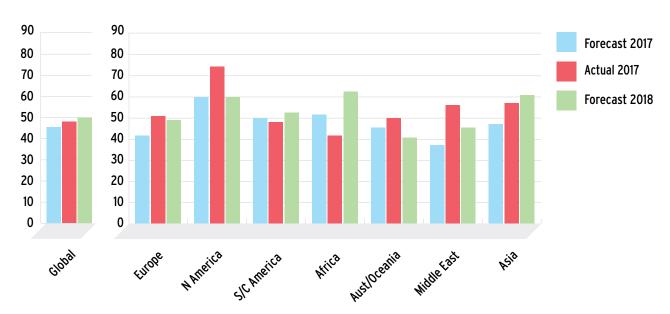
- 1. Numbers of printer and supplier participants by market sector and region are given in the full report Appendix.
- 2. These markets are defined in the Glossary at the end of this Executive Summary.

there was a puzzling loss of confidence (matched by a similar drop reported by their suppliers). Commercial and Publishing printers have also been gaining steadily in confidence, although there is a clear loss of momentum amongst Publishing printers this year.

Yet this positive story for most printers is nothing compared with the non-stop growth in confidence amongst suppliers, who have steadily increased the positive net balance each year since 2014 - 18% in 2014, 25% in 2015, 34% in 2016 and 53% in 2017. And this optimism is even in the struggling regions like Africa and the Middle East. The positive overall story for suppliers was reflected in a surge in the sales of core equipment/software/materials (+29% net balance). Indeed all revenue streams showed their best ever net positive balance.

drupa Supplier Barometer 2018 - economic confidence





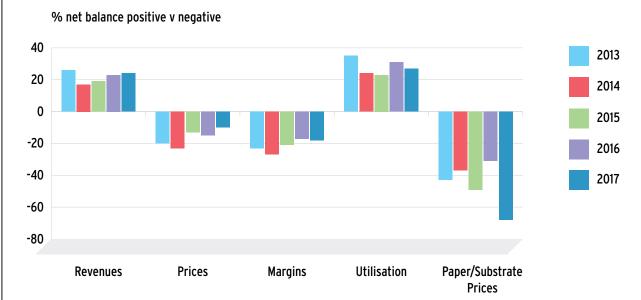
How do you rate the current economic situation of your company? What are your expectations of your company's economic situation for the next 12 months?

Do not let this positive story mask the challenging financial pressures on both printers and suppliers. Falling prices and reducing margins have been the pattern since the survey started in 2013. Printers respond by increasing utilisation and hence revenues whilst trying to keep overheads as steady as possible. But the

picture over time is easing somewhat, with this year's widespread paper/substrate price rises not impacting too severely on margins.¹

1. A paper price increase is viewed from the perspective of a printer for this purpose i.e. a negative net balance is bad news.

Global printer financial performance measures

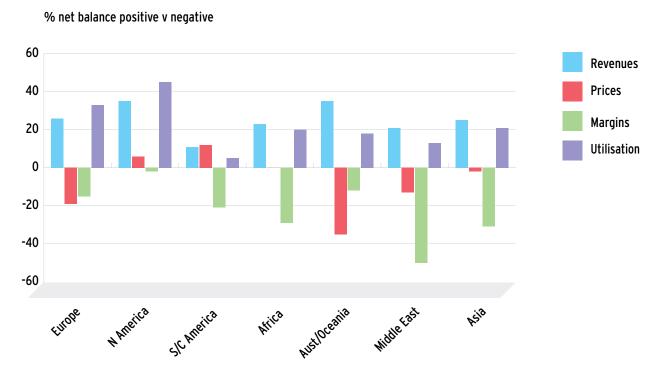


How have your company's revenues, prices, margins, utilisation and paper/substrate prices changed over the last 12 months?

Regionally the picture is more complex. So printers in North America and South/Central America reported a positive net balance on prices whilst the Middle East reported a severe drop

in margins. Suppliers found pressures on both prices and margins challenging in the Middle East and Australia/Oceania and particularly severe in South/Central America.

Printer financial measures by region 2017



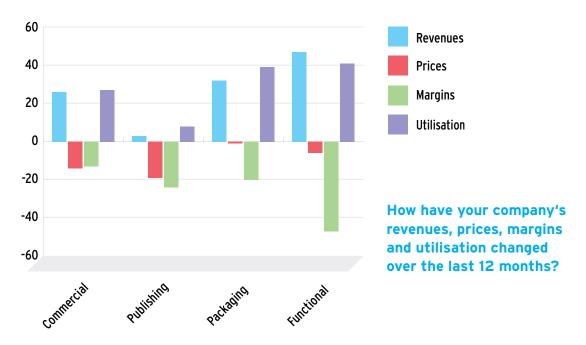
How have your company's revenues, prices, margins and utilisation changed over the last 12 months?

Packaging printers come out best amongst market sectors with prices held almost steady.

There was a surprise squeeze on margins amongst Functional printers.

Printer global performance measures by market

% net balance positive v negative



Reflecting the generally positive global economic conditions reported in this year's drupa Economic Summary, both printers and suppliers reported an easing in the financial conditions, e.g. access to and cost of credit, although both reported ever worsening debtor days.

There is an amazing variety in the print processes used¹ and digital print continues to spread. 65% of printer respondents have Sheetfed offset in their plants, 47% Digital toner cutsheet colour, 29% Digital toner cutsheet mono, 24% Digital inkjet wide format (sheet and roll fed) and 20% Flexo. As for growth in volume, Digital toner cutsheet colour has a positive net balance of 23%², Wide format 12% and Flexo and Sheetfed offset both 10%.

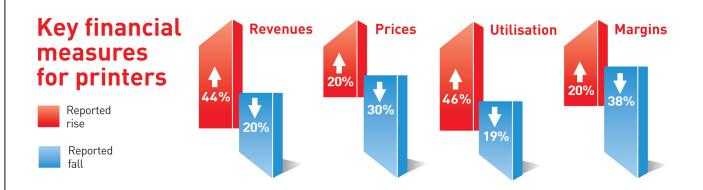
For conventional i.e. non-digital print, run lengths and lead times decline steadily year-on-year while the number of jobs rises. The pattern is the same for digital print with one important exception - run lengths are rising.

The proportion of total turnover from digital print is rising slowly with 23% of the panel reporting more than 25% of turnover was digital in 2013, up to 30% in 2017.

Functional printers are now largely digital, with 60% reporting digital being more than 50% of turnover. 42% of Commercial printers report more than 25% of turnover as digital, 21% of Publishing printers do so, but just 12% of Packaging printers.

Despite the attention given to ecommerce in general terms, only 27% of all panel printers operate a web-to-print/storefront installation, up just 2% from 2014. For Functional printers it is an important source of orders, but it is less so for the other sectors, with minimal impact in Packaging.

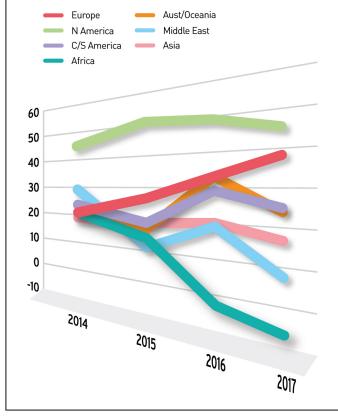
- 1. Definitions of print processes are given in the Glossary at the end of the executive summary.
- 2. To clarify, a +23% net balance means that there were 23% more respondents stating that volume had increased than those who stated that volumes had fallen (those stating it was unchanged do not count).





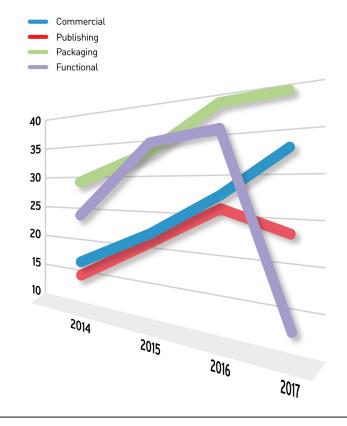
Printer regional economic confidence over time

% net balance positive v negative



Global market sector economic confidence over time for printers

% net balance positive v negative



Capital expenditure

Reflecting the growing confidence amongst the drupa expert panel in general, capital expenditure continues to grow amongst printers and suppliers alike. Globally 33% more printers reported an increase in expenditure than those reporting a fall, with North America most positive at +51% and Australia/Oceania the lowest region at +18%. Not surprisingly Packaging printers reported the biggest positive net balance at +45%, Functional at +42%, Commercial at +30% and Publishing at +20%. Finishing is the most popular focus for investment for the second year running, followed by print technology and then prepress/workflow/MIS.

Plans for print investment in 2018 depend on the market sector, with Flexo the most popular choice in Packaging, followed by Sheetfed offset. In Commercial it is Digital toner cutsheet colour that leads followed closely by Sheetfed offset and Digital inkjet wide-format. In Publishing it is Sheetfed offset that leads and Digital toner cutsheet colour in second. While in Functional, it is Digital toner cutsheet colour that leads and Digital inkjet wide-format in second.

Given the very positive economic confidence shown by the suppliers, it is not surprising to report that they continue to invest steadily, with a global 18% positive net balance in capital expenditure, with a range from +41% in North America to +8% in Africa. Building new sales channels is the most common focus. Year-on-year suppliers report an ever-growing expenditure on marketing with a substantial increase in positive net balance from +26% in 2014 to +39% in 2017. Product training and online content/education are the most popular tools to grow.

As last year a lack of demand creating strong competition were reported as the two most common constraints to growth by both printers and suppliers. Printers put their faith in reduced staffing levels and improved productivity linked to systems integration to help achieve higher profit levels, while suppliers plan new product launches and new sales channels as their preferred route to higher profits. Suppliers were asked what technology trends will have the most

disruptive impact on print over the next five years? Automation and data exchange (so-called 'Industry 4.0') was the most popular, followed by cross-media integration with print and the use and management of big data.

Market sector trends

85% of Commercial printers globally describe themselves as offering 'General commercial print' with an average of 1.8 additional specialist markets. But these vary significantly by region e.g. 81% in North America offer Direct mail but none (0%) in the Middle East and only 2% in South/Central America. Variable data print is the most common added- value service, followed by Creative design and Stock, storage and fulfilment.

Publishing printers in most regions face declines in core product demand and respond by widening their product range. Hence Newspaper printers offer magazines and catalogues, Magazine printers offer catalogues and Book printers diversify to offer digital book production, both short run and on-demand, to complement conventional production. Yet the impact of digital media on existing business is still modest with few reporting significant numbers of lost titles to online-only editions.

Packaging printers in the main are enjoying good levels of demand, so the pressure to diversify is less - just 1.8 applications per company. As for digital print, the number offering this continues to rise globally from 24% in 2013 to 35% in 2017. 18% of Tags and Labels printers report over 10% of SKUs are digital, as do 15% of Cartons/Board printers and 13% of Flexibles printers. On the other hand there is little growth in Added Value SKUs (e.g. variable data), with a typical gain of just 2% more printers reporting any additional impact over five years.

Our sample of Functional printers has in the main diversified into Functional print from other market sectors and these still report a significant proportion of turnover in other markets. In the functional markets, Digital inkjet has become the dominant process (65% use this) as Screen/pad has declined (down to 24%).

In conclusion

This is the most positive drupa Global Trends Report yet. Both printers and suppliers are bullish in their forecasts. That the global economy is on the up, as reported in the Economic Summary that follows in the main report, is certainly the underlying cause of this optimism.

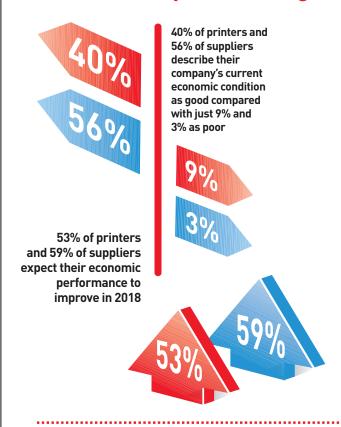
Meanwhile digital media and communications continue to spread and integrate. However instead of being viewed as a threat to the future existence of print, printers and suppliers are increasingly finding ways to exploit these new and evolving technologies in ways that place print as a central tool for consumers.

So E-books are seen to complement printed books, not replace them. Emails and social media are so universal and overwhelming for many consumers that printed communications are increasingly valued, particularly when integrated with digital communications. Packaging thrives, with digital SKUs increasingly adding to the mix for Brand owners. And Functional print is ever extending the ways that print can support consumer lifestyles.

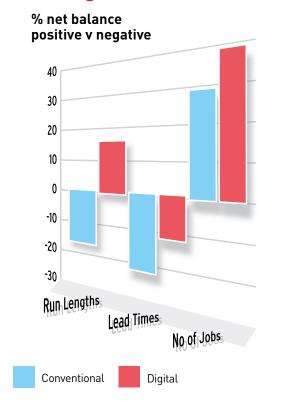
This is not to say there is universal optimism. Many general print markets are under pressure, e.g. Publishing markets in most regions are challenging. Regionally the picture is also patchy, e.g. Europe is increasingly strong and North America is powering away, but the Middle East and Africa are struggling and South/Central America is fragile.

Innovation, i.e. the exploitation of new technologies, is the key and is reflected in the positive investment plans that the drupa expert panel reported. One major opportunity is in inkjet printing and this is the topic of our first Spotlight report, to be published separately from this report.

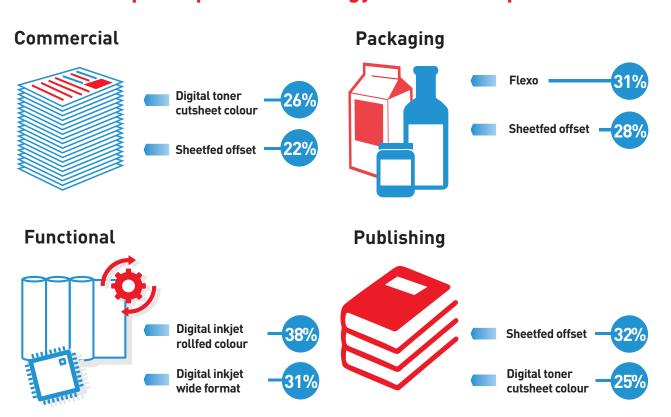
How are companies doing?



Change in work mix 2017



Top two print technology investment plans



Glossary

Commercial market sector	General printing, Direct Mail, Business forms, Security, Wide-format (rigid and flexible media), Photoproducts, Transactional, Trade finishing for commercial work
Publishing printer market sector	Newspapers, Magazines, Catalogues and Books (Conventional, Short-run and On-demand), Trade finishing for publications
Packaging market sector	Labels, Cartons & Carton board, Flexible packaging, Corrugated/Secondary, Rigid, Point of Sale/Point of Purchase/ Banners
Functional market sector	Industrial/Decorative work - Textiles, Wall coverings, Other decorative printing, Ceramics, Printed electronics, 3D
Digital toner cutsheet mono	Single colour electrophotography machines (using dry or liquid toners), with sheetfed paper supply
Digital toner cutsheet colour	Multiple colour electrophotography machines (using dry or liquid toners), with sheetfed paper supply
Digital toner rollfed mono	Single colour electrophotography machines (using dry or liquid toners), with rollfed paper supply
Digital toner rollfed colour	Multiple colour electrophotography machines (using dry or liquid toners), with rollfed paper supply
Digital injet rollfed mono	Mono and colour Inkjet machines with rollfed paper supply. Category includes all formats.
Digital inkjet rollfed colour	Multiple colour Inkjet machines with rollfed paper supply
Digital inkjet cutsheet mono	Single colour inkjet machine with sheetfed paper supply
Digital inkjet cutsheet colour	Multiple colour inkjet machines with sheetfed paper supply
Digital inkjet wide format	Wide format multiple colour inkjet machines either cutsheet or rollfed
Thermal	Digital print using coated thermochromic paper or a thermal transfer ribbon
Hybrid offset/flexo/digital	Multiple print processes included in the same machine