

PERFORMANCE EVALUATION OF DIGITAL PRINTING AND PUBLISHING INDUSTRY IN INDIA

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ABSTRACT

With emerging technology and software that offer cost-effective and personalized solutions, the digital printing industry experiences major changes. Offset and traditional will not only co-exist for the near future but will supplement each other – bringing medium to long jobs and digital output on short to medium races. The thriving Indian market, 65% that consumerism, country-wide brands and the sector's opening to international investors give the industry the opportunities. In this article we have addressed digital printing and publishing industry output assessment in India. In the Indian publishing sector, contrast between paper, printer and internet media is also booming.

Keywords: performance, digital printing, publishing industry;

I. INTRODUCTION

Printing is one of the greatest cultural achievements of the human race and a medium which suits our senses perfectly. The text, the first medium of mass media, opened up a knowledge and educational environment for vast parts of the population. The publishing business has become an important part of life and publishing was a need for corporations in the world. The processes of the printing industry have been modified by a variety of inventions. The invention of the printing press was an automated method, while printing was initially hand-work regulated by the printer. Printing and interactive technology support each other today and develop innovative technologies. It is quick to treat written material; will illustrate, amuse, direct and cater to feelings. And you are also likely to get some of the items in your hands written on presses every day. This chapter deals with past, patterns, problems and an analysis.

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II. DEFINITION OF DIGITAL PRINTING

Digital printing is a method of printing without touch. This ensures that there is no need to provide different print devices since the print image is directly transmitted to the printer from the machine. The laborious press set-up is no longer needed in contrast with other printing methods, such as offset printing or flexo printing.

Digital printing is equivalent to offset printing in respect to size. Therefore, automated printing is suitable for packages and presentations of a high quality. Digital printing is now known for printed products such as commercial cards, documents, stickers & marks, brochures & brochures, posters & tables, etc.

Typical uses & benefits of digital printing

In specific, digital printing is ideal for small to medium sized print runs in multiple formats. The low set-up costs are excellent value for investment compared with other printing types. This ensures that streamlined orders for wide print runs are no longer needed or that high stocks are retained. Keep agile and save on configuration costs for printing!

For a swift business launch, digital printing is important because you can receive cost-effective test runs for your market research. Since the printing method is contactless, accelerated image shifts and therefore shorter distribution times are feasible. You should use digital printing to maximize the supply chain!

Conserve your customers for special campaigns or seasonal packaging by customized packaging. You may also personalize the print shots. Your colours options do not have restrictions for your style – CMYK colour models are made of the three key-coating colours Cyan, Magenta, Yellow and Black. The CMYK process colours can simulate a whole range of special colours in digital printing. This reduces colour variations to a minimum. It is also likely to have invisible code in the print document. Project today your contemporary and customized printing!

Advantages of digital printing

How do you profit from converting to digital printing? The reasons behind this transition to digital printing are provided by THIMM:

- Versatility is the main success factor: in digital printing you can print offset standard sequence designs without restriction on the amount of colours.
- Mark replacement: Product labels may be reproduced by the internet print shop directly onto the packaging
- Continuous coding for your manufacturing or packaging region contribute to process optimization
- Packaging and displays can be rendered in one piece using digital printing because of a print width of 2,80 m.
- The integration of multiple digital printing templates on one roll allows short and medium runs feasible.
- A new and creative strategy

Disadvantages:

- While digital printing costs comparatively little, this process appears to be costly when it comes to large print volumes. The reality that a digital printer varies between 15 and 50 feet per minute makes it impossible to print huge numbers.
- While digital printing systems do not accept metal inks, unlike the colour Palette, which supports a broad variety of colours.
- If strong sunshine is present, much of the inks disappear. Although the inks of digital printing disappear even more rapidly.
- No set-up and no maintenance costs are required, however, automated printers must be upgraded and regularly reviewed to ensure that they work properly. This will ultimately cost more than the real printing.

III. DIGITAL BOOM

Many sectors have been guided to move from analogue to digital in recent developments in digital technologies. Video, cable networks, graphics and telecommunications have all hopped quickly on board and benefitted from increased performance or efficiency. There's no gap in the publishing business. Many areas of the printing field have already embraced digital as an alternative or substitute to offset printing, and digital printing practitioners expect that in the years to come digital printing would expand considerably. CAP Ventures forecasts retail print prices to climb from 3.6 billion dollars in 2001 to 50.5 billion dollars for the manufacturing and digital printing industry. Frank Romano, a business analyst, agrees. He forecasts that the global offset level will remain unchanged, whilst the amount of artificial colours will increase in the subsequent five years. Even the small-size fast print shops that have successfully printed offset for years and steadily embraced digital printing can't miss this kind of development.

The modern value-added technologies are undeniably the lifeblood of the printing industry and will become much more significant in the next ten years. The suppliers of graphics facilities need to have more than just ink on paper because they're needed by their clients. It would be risky to disregard value-added services like advice, mailing and delivery, prepress services and variable printing of content, as this non-traditional expertise has been established by more and more printers to become more competition-based. The printers who are utilizing these facilities now have considerable advantages, including greater consumer loyalty, higher operating sales and a growing client base. While these facilities will seem overwhelming, it won't have to be achieved by printers alone.

There are already several developments in India's printing sector, the first in digital printing. A crucial field in the development of digital printing known as 'Modern Company Printing.' Digital publishing and associated facilities satisfy growing expectations from print customers. It is estimated that the print industry would rise by 14 percent.

" it can definitely be mentioned in his visionary words that India is going to be one of the world's leading printing nations by the year 2015, by bringing all insight into the nut shell, historical trends, the economic environment, the socioeconomic, industrial and political scenario".

IV. PERFORMANCE OF PRINTING AND PUBLISHING INDUSTRY

In 2017, the Indian printing industry rose to INR303 billion at 3 percent. More than 250,000 major, mid- and medium-sized printing firms make up the Indian Printing Sector, with a 12% annual growth rate. The sector is valued at USD 11 billion in turnover. The printing industry in India has experienced a transformative transition over the last 15 years. The business value of the printing packaging industry rose from \$10.2 billion to \$12.7 billion in 2014 and accounted for 43% of global printing sector revenue in 2017.

Annually, 17% of packaged print industry is rising at an annual pace of 10-12%, while 30% of digital printing rises at a rapid rate. But Indian Printing Industry's impeding development may be accounted for by the global economic downturn, but over the past years it continues to rise at an annual pace of 6.8%.

The Indian Paper and Print Industry strives to develop production. The printing industry is able to adopt the new printing technologies, such as optical and UV tincture. The printing and writing paper demand is projected to rise by 6 percent annually in the coming years. In different subsectors, such as textiles, labelling or magazines, the industry is undergoing further restructuring. Currently, worldwide industry measurements are valued at \$456.5 billion for industrial printing (packaging, textiles and labels).

The Paper Industry of India has produced over 2,9 billion dollars in investment in the past five years and is today the world's fastest developing paper sector. India's \$7.3 billion paper industry creates explicitly and indirectly work for 400,000 people.

Modern printers also use manual printing that is challenging to satisfy the demands of consumers. Digital Printing is, thus, an unavoidable consumer print product. Leading firms (Digitex India, Jaipur Printers) have made digital printing feasible in the countries through initiatives to encourage digital printing knowledge and technical adoption. HP India says digital printing has grown rapidly in India and an growth in demand in many sectors increases the capacity of digital printing such that end users can produce creative performance. HP India claims innovative and specialised technologies will allow brands in a sector such as India to gain a strategic advantage over other brands.

Modern inks in the printing environment are UV inks of far higher consistency that are dried in lieu of traditional evaporation and absorption through a photomechanical method. Vu printers allow the printing of painted, hybrid and supercomplete inventories on matte and glossy surfaces, offering publishers wide competitive advantages in the industry.

GEW recently introduced UV LED cure lamp technology, fully air-cooled, to the Indian industry. In order to enhance the control and cooling system, the printer press utilising ArcLEd technology may be modified to Lead.

UV Lead is more than the mercury illumination, the potential of printing machines. This system needs less electricity since the device is not susceptible to mercury and it ignites automatically.

Textile printing is another important field of digital printing. In textile printing, approximately 1000 automated printers are used. Digital printers in the market are projected to hit up to 3,000 within the next three years. Out of which 80 are using wireless messaging, Surat, also known as Silk City, India has more than 2500 textile mills. Indian computers from producers control the industry in particular. Currently \$7.5 bn is projected for the worldwide digital printing sector and only 1% of the textiles are digitally produced. Which means there would be tremendous opportunities for the digital textile printing industry in the future.

The new mark and box printer items were recently displayed at Toyo Ink Arets India. UV inks for flexo-printing technologies were launched by the firm. Flexo-printing is a method of printing that uses a versatile relief plate which is a modern letterpress process and is appropriate for use on all materials, including plastic, metallic films or paper. In order to provide more quality, value and competitiveness to clients, the R&D, service and supply chains network will continue to improve labelling and packaging goods.

The new digital printers will achieve more precise and workable results on the market. The diversification of printing technology has vastly increased the total output power, offset and automated printing press efficiency. Transforming business into innovating innovations and consumer needs would shift the country's printing types.

Print Publishing

The main prospects for development for paper goods are based on digital advertising and written printing sales. In 2012 INR 20,859 crore, the publishing industry rose to 27,607 crore, with population growth and growing levels of literacy and an increasing economy facing digital invasion.

Print packaging

The demand is projected to rise 7.8 per cent over five years with the growing opportunity of package printing. The scale of the packaging printing industry grew from INR 53,374 in 2012 to 77,714 in 2017-18, which accounted for 43% of overall print product revenues in 2017. The rise of packaged printing is guided by growing demand for consumer items in developing Asia-Pacific countries.

V. INTEGRATION OF PRINT PRODUCTION WORKFLOWS

Digital Workflow

Many tools are essential for managing manufacturing procedures, including the workflow. The workflow is a collection of activities that have been placed together to fulfil a specific goal. Development procedures carried out in a workflow involve the assistance of the information system in order to guarantee an efficient transmission of the request or communication to the addressed group. Networking may also be carried out via external or phone. Control personnel will track the progress of the operation. This input makes it possible to change the fly plan. --

quick or automatic activation of routine operations, — partially automated and quicker administrative work is carried out, — job monitoring is easy and accurate by means of a visual and textual report, — there are no issues with distances from the sites, communication is quickly created, — remote activities can be organized into communities, — clients and collaborators can also monitor the movement.

Print Production Workflow

Printing houses as processing units have a dynamic architecture, process management, as it is split into three zones, is a task for experts. The activities of prepress, press and post press must be carried out in peace. A workflow framework will help the accomplishment of this equilibrium. Method management in the printing industry requires a full regulation over the manufacturing process from the proposal and the final product (figure 1).

Development of the Digital Workflow in the Print Production Process

Digital workflow was still based on analogue data in the printing industry in the 1970s. Five processes also involved the digitalization of the offset process. Initially, colour scanners and photo typing devices were used for digitization. Drum scanner electrolytes the originals, corrects colours and removes colours in the processing unit and documents the effects on the video. This rendered documents, pictures and graphics digitally accessible.

The second stage with the advent of Digital Publishing (DTP) in digitalization of data in the 1980s. This technology is focused on the clear theory of computer science. DTP allows the incorporation digitally of full pages of document, picture and graphics components by means of software programs and their production by laser imaging equipment on screen.

A new system and device are already accessible shortly after the launch of the DTP: wireless sheet-mounting. These software utilities required pages to be placed, printed sheets to be mounted and displayed on films in print format. Machine to Film (CtF) was renamed.

Device to plate (CtP) digitalization stops at the pre-press. Without creating any clip, the knowledge is passed directly to the printing plate. One of the innovations is where the printers are rendered directly on the device in a special machine picture setter utilizing the laser imaging machine. CtP is also used when plate-making is incorporated directly into the printing press (press / direct imaging computer).

The last step is the combined development of computers (CIM). In the implementation of CI Microphone in the printing industry, it is important to move output related data from pre-press, plan for development and monitor printing and finishing systems and shipping handling. This architecture is intended to build a networked printer.

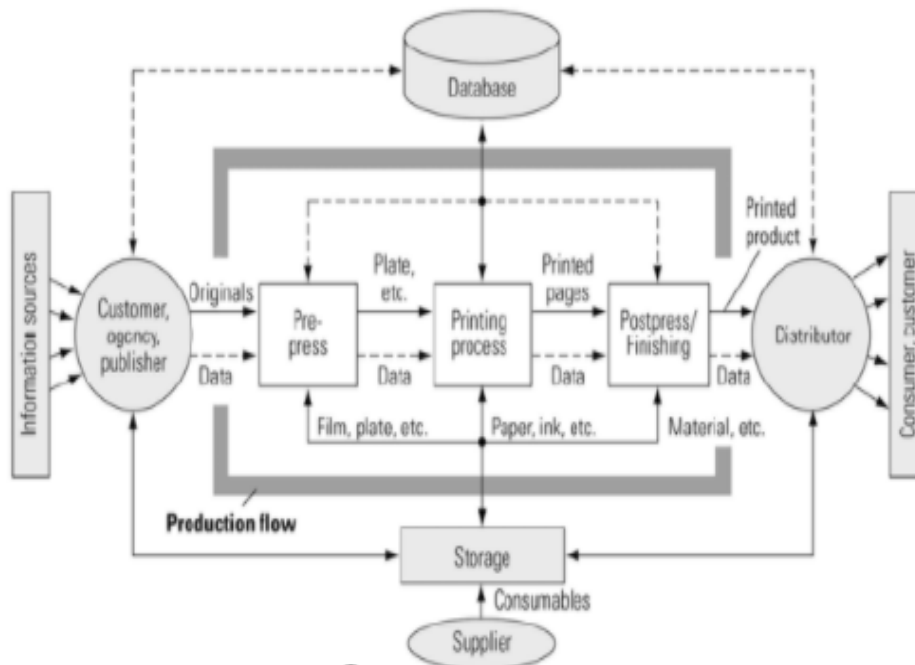


Figure 1

Print production process

VI. ROLE OF PRINT MEDIA

Nowadays, the position of the media and particularly print media has increased every day in this ultramodern world. He was a prosecutor in India. He worked.

Print media has increased people's consciousness about their rights and responsibilities. Print Media has increased people's consciousness about their rights and responsibilities. Print Media has become regarded as the fourth party, or 'Comment Monger.'

We will refresh ourselves just by running through the daily news, every nook and a corner of the planet. That is because of the impact that print media are carrying out captured and known behaviors of individuals that are connected with robbery, shooting, kidnapping, addiction and alcoholism. They are always fearful that the law enforcement authorities will apprehend them. In this process, we get details on both positive and negative stuff about us.

And people who are engaged in incorrect or dishonest activity realize the influence and value of written media, but this is perhaps the only source of their non-ethical actions. It's the only ray of hope that 'India' can see a brighter future.

VII. ROLE OF DIGITAL MEDIA

Each material stored in the electronic readable formats is digital data. On digital electronics devices digital media may be produced, accessed, transmitted, updated and stored. Digital may be described as any data expressed in a sequence of digits, and media relates to any information transmitted to us via a computer, by means of a medium used to transmit or connect information together through digital media. This includes text, audio, video and graphics transmitted through the internet for internet viewing.

Digital technology, for example, contains digital files, visual photographs, visual video, video games, blogs, social networking, computer records, libraries, digital audio as an MP3, e-books and paper documentation. Through modern technology, the electronic media is also in contrast to most conventional or physical media such as novels, journals, and magazines like documentary videos, audio tapes and video recordings.

The implications of new technology on community and culture have been substantially large and nuanced. Digital technology has created transformative advances, in tandem with the Internet and mobile computers, in advertising, news, public policy, culture, education, trade and politics. Digital technology has also raised fresh threats to copyright and intellectual property regulations, promoting an accessible software campaign where graphic owners willingly surrender their legal rights. The ubiquity of Digital Media and its influence on culture means that we are in the early stages of a modern period in technological history, known as the "Data" period. It is conceivable that we are at the beginning of an epoch that progresses to a paperless world in which all information are generated and processed by computers.

VIII. COMPARISON BETWEEN DIGITAL MEDIA AND PRINT MEDIA

We may reasonably say that the growing consumer population has been boosted by social networking and expanded Internet penetration on mobile devices. But is social networking the key factor people become linked to the superhighway of information?

Internet media and social networking platform were also more moving (there may be a quiet nod by consumers on Twitter and Facebook). It is easy to read news online, since you can name it whenever and whenever you choose. You don't have to find room for dailies to mount up. News spreads even quicker than most traditional broadcast, of course, with the exception of live TV. And notifications can be quick, seamless and in a matter of minutes following the event for online publishers. Internet covers users beyond communities or regional borders and technically, citizens do it for free. There's also a great deal of testation (and reason) to visit blogs and social networks that syndicate information. But are these arguments adequate to induce lakhs of faithful printer publishers to switch?

Print has been around for hundreds of years and well-known publishing firms, while local, have a large reader base. There are individuals who choose to have their favorite magazine or newspaper every morning while sipping coffee or tea. You can just scan emails electronically or read complex copies of foreign news excerpts. In

any event, most significant articles nowadays are freely accessible online. But, as I see it, online media can become a secondary source of knowledge and also niche problems, and quite wealthy. Even if good online editors and writers would want print media to turn entirely into e-media, I assume all medium can coexist and have a position and a customer base, even though you may have a greater reader than the other.

Customers are already at least as open to new media as paper. The rising proliferation of smartphones and tablets and their linked cellular networks implies that more and more users are watching information on a portable platform. This also implies, of instance, that growing millions of users are now going to watch advertising on streaming platforms.

Digital technology offers many advantages for advertisement and ads. Depending on the specifics of each advertisement, it may be better than traditional media. Also, it is typically possible to create, deploy and upgrade multimedia ads quicker than paper.

Multiple modes of digital network interactivity. A social network marketing helps advertisers to connect with customers via tweets, blogging, tweeting, wall sharing and other means of addressing questions and providing rewards. Users will normally scan for or check for the digital document themselves. A multimedia advertising, such as a game or contest that encourages users to compete and includes customers, may even be interactive.

Digital advertisements have for more influence of who actually sees them than print advertising meaning that advertisers can concentrate on certain audiences more effectively. Some internet advertising will also produce user knowledge to give visibility about how the advertisements are actually watched. For example, Google AdWords and Facebook ads include usage behavior analysis and effective promotional referrals.

That doesn't mean print media are extinct – not in a long way. Print media presents users with a more real, visible tool. It's all that people should handle. It's more polite to supply you with a brochure or business card, easier to do and better, instead of thinking, "Hey, let me send you real quick text" or "Hey, go find me on Facebook very quickly" anytime you want to touch.

Print advertising may often provide a regional reach in new channels that is far more challenging to obtain. Signs and banners will build interest and make it easy for customers to identify you. In order to build awareness and to attract the customers to you, correctly put banners, flyers and other print media may be circulated in a group. Many users do access print media knowledge such as newspapers and magazines.

What 's best – internet or print? This is a complicated and interesting query, but we truly feel that there is only one solution – BOTH.

IX. CONCLUSION

In India, the printing sector has been an increasing multifaceted business. Its web design, print efficiency and power leaders are also on an even basis with their multinational partners. The overwhelming majority of large printers are in big cities like Delhi, Mumbai, Kolkata and Bangalore. India has substantially improved the printing

system in the last ten years. Many top-quality computers were set up and demand is increasingly increasing. Virtual devices and combinations are becoming common and gain more money. Prepress integrates the new developments easily, and CtP is rapidly increasing. In India, advanced post-press machinery is now accessible and printers are improving rapidly to keep ahead. Printing and related equipment imports and exports are considerable and are increasingly rising. The Indian printing industry is host to most of the leading world players.

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