

August 21, 2007

Primary Research

# Opportunities for Ink Jet Printing in the Indian Packaging Market

## Author

John Cook  
&  
Tarun Kumar

## Published by

Xyanni  
India Partnership for  
Emerging Enterprise  
&  
Jetting Technology  
Opportunities Consulting  
Service

© 2007 InfoTrends, Inc.  
www.infotrends.com  
&  
Xyanni  
www.xyanni.com

## Introduction

This document provides the data and analysis for a snapshot report on the ink jet packaging market in India. It includes the key data points uncovered by the survey that was solicited to various buyers and influencers that are attending the India Packaging Show. This study covers the existing and desired uses of ink jet in the Indian packaging market in relation to a number of factors, including technology, application, product, image, and substrate.

## For More Information

*If you would like to ask for more free soft or hard copies of this report, receive permission to use any part of the report, or be informed of upcoming market updates, reports, and related projects, please e-mail us at [tarun@xyanni.com](mailto:tarun@xyanni.com) or [info@infotrends.com](mailto:info@infotrends.com).*

## Infotrends

**Headquarters:**  
97 Libbey Industrial Parkway  
Suite 300  
Weymouth, MA 02189  
United States  
+1 781 616 2100  
[info@infotrends.com](mailto:info@infotrends.com)

**Europe:**  
3<sup>rd</sup> Floor, Sceptre House  
7-9 Castle Street  
Luton, Bedfordshire  
United Kingdom, LU1 3AJ  
+44 1582 400120  
[euro.info@infotrends.com](mailto:euro.info@infotrends.com)

**Asia:**  
Hiroo Office Building  
1-3-18 Hiroo, Shibuya-ku  
Tokyo 150-00 12  
Japan  
+ 81 3 5475 2663  
[info@infotrends.co.jp](mailto:info@infotrends.co.jp)

## Xyanni

**India:**  
Level 4 Rectangle No.1  
Commercial Complex D4  
Saket  
New Delhi 110017  
+91 11 4606 5307

**UK**  
St. John's Innovation Centre  
Cowley Road  
Cambridge CB4 0WS  
+91 99109 28 666  
[tarun@xyanni.com](mailto:tarun@xyanni.com)

**About John Cook:**

With 25 years in the digital printing industry John Cook has international experience in sales, marketing, product strategy and business development. He has managed the development and launch of several highly successful printing system and controller products. He has started up and profitably grown a number of successful business units including the Industrial Marking & Printing practice in 1996 for CAP Ventures. While at IKON Office Solutions he was responsible for the development and implementation of enterprise e- Business and Tele-Web initiatives. Cook has held positions of increasing responsibility in product management, sales, marketing and general management with Kodak, Domino, Dimatix and 1&1 Internet.

**About Tarun Kumar:**

Tarun has worked for about 15 years at senior positions in India in the high technology as well conventional industries. As General Manager, India, he founded and headed Xaar plc's business in India for nearly three years, till December 2006. In an earlier assignment, he was GM & Head of Business Development at RMSI, a subsidiary of DMGT plc, employing about 800 persons in India, deals in GIS solutions and new media. Tarun was Chevening Scholar at Leeds University, UK and is a Fellow of the 21st Century Trust, UK.

**About InfoTrends:**

InfoTrends, a Questex company, is the leading worldwide market research and strategic consulting firm for the digital imaging and document solutions industry. We provide research, analysis, forecasts, and advice to help clients understand market trends, identify opportunities, and develop strategies to grow their businesses. Additional information about InfoTrends is available on the Web at [www.infotrends.com](http://www.infotrends.com)

**About Xyanni:**

Xyanni, the India Partnership for Emerging Enterprise, creates and delivers market strategy and business development services, as a key-partner, to those small and medium sized clients in Europe/ West, that are planning to expand their activities related to emerging sectors, to India. More information on Xyanni offerings can be seen at [www.xyanni.com](http://www.xyanni.com).

Ink Jet, like other digital printing technologies, is increasingly becoming a commonly used printing method. The established geographical markets are in advanced industrial countries such as England, Germany, and the United States. However, large emerging markets like Brazil, Russia, India and China are already providing incremental opportunity in terms of acceptance of ink jet technology for various applications including packaging.

Though not as large as China, the Indian market is larger than both Brazil and Russia. The Indian economy is growing rapidly. India is now one of only 10 countries in the world that has a GDP of more than USD 1 trillion, its position being 4th after US, China, and Japan. There are over 100 companies in India that have a market capitalization of more than USD 1 billion each. Over 1000 companies in India have received foreign investment. 125 of the Fortune 500 companies have R & D bases in India. There are 20 Indian companies that figure in Forbes 200 list. Some of the Indian companies are bigger than the top global companies in their respective or related industries. For example, two Indian companies Infosys and TCS are bigger than Accenture, in terms of market capitalization.

The middle class now is about 30% of the population, while the number was about 20% in 2000 and 8% in 1980. The economic growth is fueled by the demands being made by the Indian population of over 1 billion. There are more mobile phones sold in India every month than in any other country in the world.

While this growth is all around, the implications for, and the emerging trends in, the specific sub sectors like hi tech industry, manufacturing, packaging, digital printing, ink jet technology and variable data printing need to be studied in greater detail. Information for the core technology providers, digital printing equipment manufacturers, integrators, instrumentation suppliers, consumables and components suppliers is hard to come by. Details about market size, applications, operating environments and the value proposition for digital printing is not readily available.

Some relative indicators are available. There are about 500 shopping malls under various stages of planning and construction. As the literacy rate has grown from 17% in 1950 to 65% in 2000, the information to be printed on packaging needs to be enhanced and more customized. Various state governments are passing laws to print the variable information on medicines-packaging in local languages too. And there are 18 official languages, with almost each one having their own script.

Xyanni and InfoTrends have come together to close some of the information gaps. This study is a step in that direction. The questionnaire used for the study was administered to over 400 entities related to packaging in India. We plan to develop a database of 50 thousand entities related to packaging in India, allowing us to expand this study. The intent is to help in making strategic marketing and business development decisions for companies in the US and Europe.

We have conducted this study utilizing our own resources and have not sought or received funding from any external organization.

This full report is available in soft as well as hard copy free of cost. Please write to us if you need extra copies.

John Cook  
Weymouth, MA, USA  
India

Tarun Kumar  
New Delhi,

August 2007

Table of Contents

Introduction.....6

User Needs.....6

Just-in-Time Packaging.....7

Ink Development.....7

The Jetting Technology Market.....7

Methodology.....8

Respondent Profiles.....8

The Key Attributes in Viewing Packaging as an Emerging Market.....8

Buyers and Influencers.....9

Key Market Drivers.....11

Value Proposition.....13

Needs & Desired Benefits.....13

Conclusion.....20

**Introduction**

This document provides the data and analysis for a snapshot report on the ink jet packaging market in India. It includes the key data points uncovered by the survey that was solicited to various buyers and influencers that are attending the India Packaging Show. This study covers the existing and desired uses of ink jet in the Indian packaging market in relation to a number of factors, including technology, application, product, image, and substrate.

**User Needs**

Over the past five years, the need to provide shorter run lengths, faster turnaround, more versions, and more complex variable information for the packaging industry has been increasing steadily. Demographic customization of packaging to reflect local language and custom is an increasing desire in India and consumers are demanding that companies offer these features with little or no price premium. Brand managers have long viewed the package as an integral component of the product, and are pushing for more market customized packages that maximize the presentation and marketing of their lines. As in the US and Europe printers, converters, and trade shops serving the packaging industry are facing a time of rapid change. Innovative new packaging formats are being introduced, graphics are becoming increasingly complex, and customers expect their brand colours to be accurate and consistent regardless of substrate, printing process, or location. Trade shops and converters need to streamline and accelerate their processes so they can deliver shorter runs, quicker time-to-market, and competitively-priced packaging. On a worldwide basis, packaging printers of all sizes are turning to ink jet solutions to produce high-impact packaging with maximum shelf appeal.

**Just-in-Time Packaging**

In the consumables market, the lifetime of a product shortens as variety increases. With an average product life of less than 6 months, it often does not pay to manufacture in large amounts. Manufacturers must instead focus on producing smaller amounts and intensifying marketing efforts at the right time.

**Ink Development**

There are many ink products on the market that offer the characteristics required for packaging applications. Over the past few years, ink technology has seen considerable improvements in terms of drying time, adhesion, durability, and quality. In addition, the ability to customize or fill out a family of inks that are based on a given chemistry is practical in terms of cost and turnaround time. Environmental issues have also been addressed with a variety of water-based and UV curable formulations that offer excellent opacity, adhesion, abrasion resistance, water-fastness, and UV-fastness. Chemistry and ink providers are now capable of offering custom solutions in a reasonable time-frame. Additionally, improvements in white inks are enabling producers to provide excellent image contrast on a diverse range of backgrounds and substrates without changing the ink. UV curing inks and systems have also improved and become more cost-effective. They offer a more environmentally-friendly option that provides the image quality and durability needed for high-value package printing on a diverse range of substrates.

**The Jetting Technology Market**

The ink jet industry has undergone significant changes over the past five years, including further consolidation, continued price and margin erosion, and an increase in aftermarket suppliers. While brand loyalty has waned and ink jet technology is largely viewed as a commodity rather than a high-tech purchase, there are several positives that point to potential growth opportunities. Ink jet is now seen as a reliable, operator-friendly technology. Improved print quality, increased image area, and enhanced ink performance expand the breadth and depth of the applications being penetrated. Emerging markets include packaging, textiles, bio-medical, electronics, food decoration, print on demand, and transaction printing. Driving factors for jetting technology include one-to-one marketing, product differentiation, just-in-time production, shorter run lengths, print on demand, operation/process improvement, and manufacturing flexibility.

**Methodology**

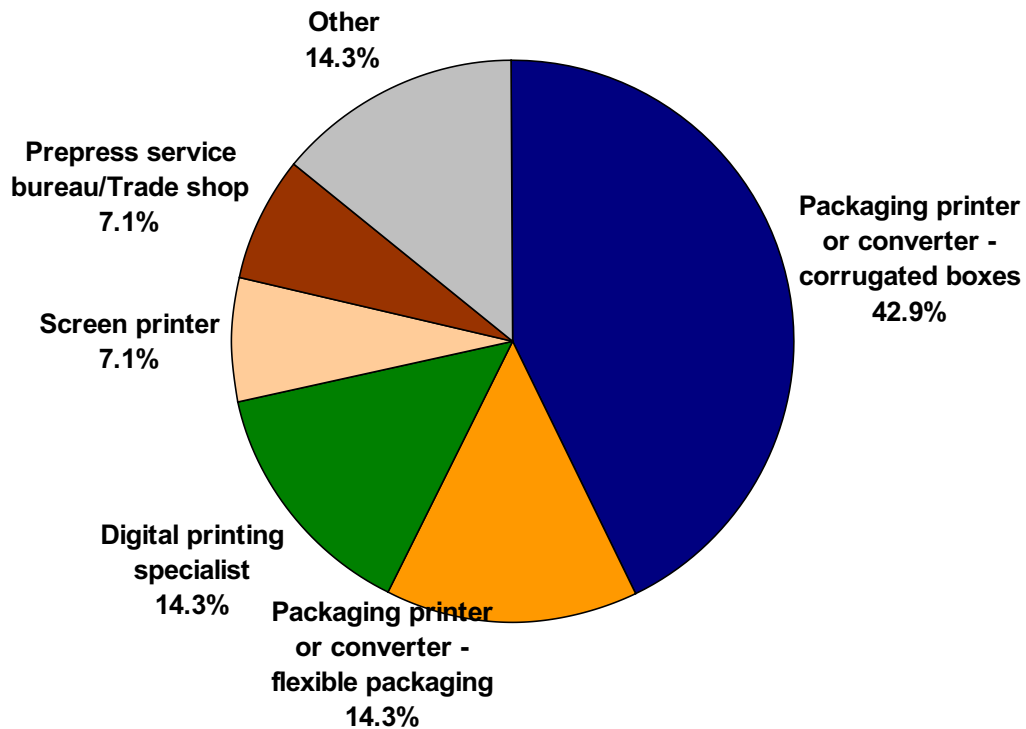
In conducting this report, we hoped to gain a greater understanding of the following factors:

- Buyers and influencers
- Key market drivers
- Value proposition
- Needs and desired benefits
- Applications analysis
- Operating environments
- Imaging requirements

Research for this report was conducted through secondary sources as well as unstructured primary interviews with 17 participants within the packaging and ink jet industries. The primary web based survey was administered via e-mail to 400+ buyers and influencers of packaging and printing equipment in packaging operations sourced from the pre-registration data for the India Packaging Show.

**Respondent Profiles**

**Figure 1: To gain a better understanding of the overall packaging market, we asked our respondents about their companies' primary business.**



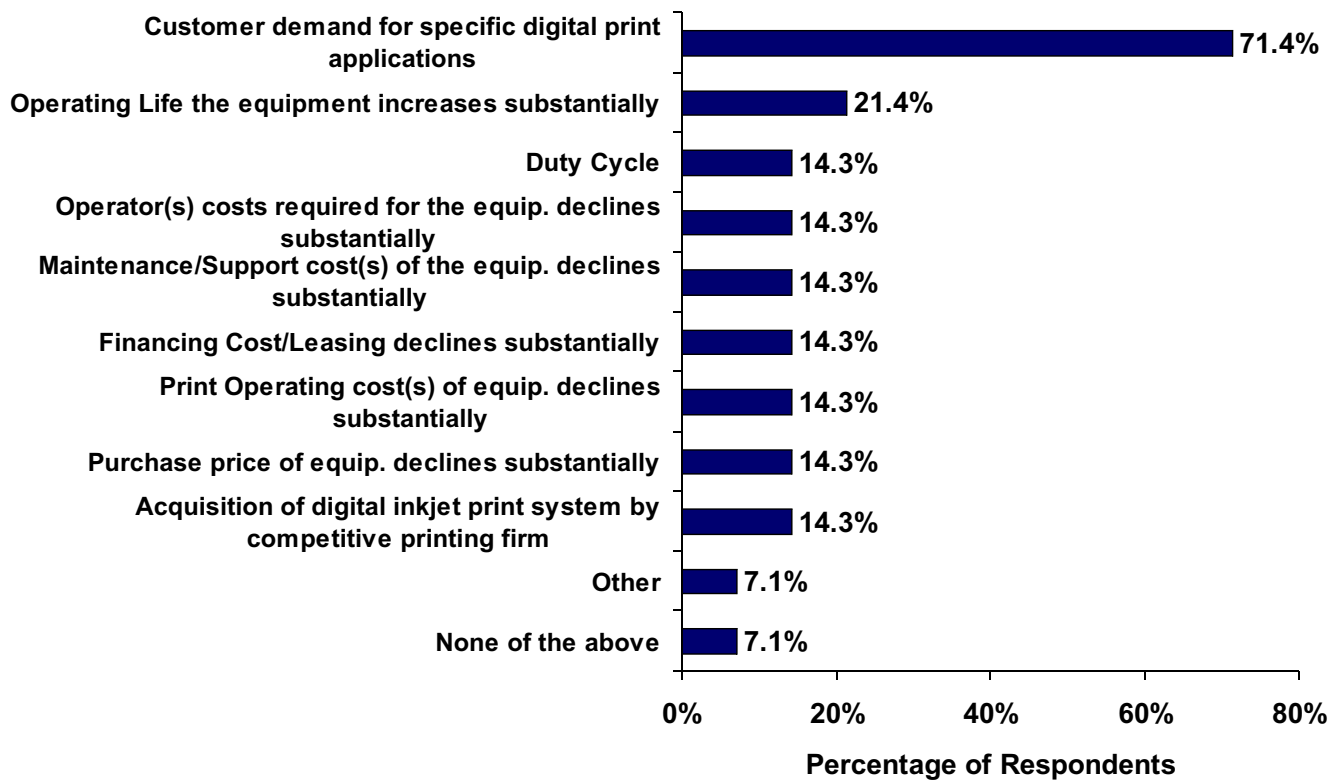
**The Key Attributes in Viewing Packaging as an Emerging Market**

**Buyers and Influencers**

In general, the buyers of packaging technology tend to be owners and senior operations management personnel as this is a significant capital expenditure that requires executive sign-off. The influencers are the departments working with customers and selling the capabilities enabled by the use of ink jet system-sales, marketing, and product & brand management. The influencers are in engineering and operations that typically drive the actual buying process from specification of needs through implementation and sign-off of the system.

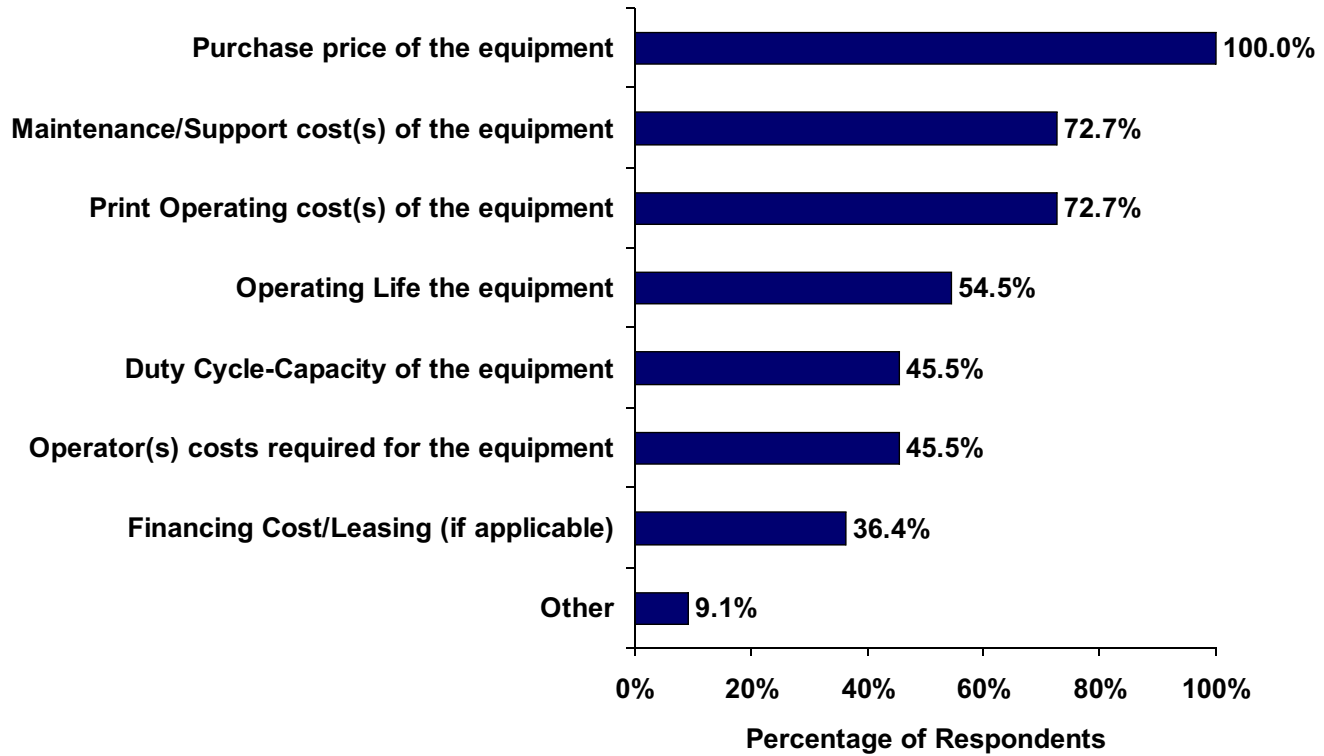
Our survey participants were asked if any events would prompt them to consider purchasing an ink jet system. As is often the case in the shift from analog to digital printing technology, the majority of respondents cited customer demand for specific digital print jobs; clearly, these respondents are willing to invest in new technologies if it means keeping their clients satisfied. Therefore, market development needs to take place with the potential buyers' customers.

**Figure 2: Which of the following events would cause your company to consider purchasing an ink jet system? Please check all that apply.**



When asked which criteria they took into consideration when making a purchasing decision, survey participants most often mentioned the purchase price or operation/maintenance costs. In addition to being attracted to reasonable acquisition costs, consumers are also concerned about fees on the back end that may be required to run or support the equipment.

Figure 3: Which of the following criteria do you consider when making a purchasing decision? Please check all that apply.

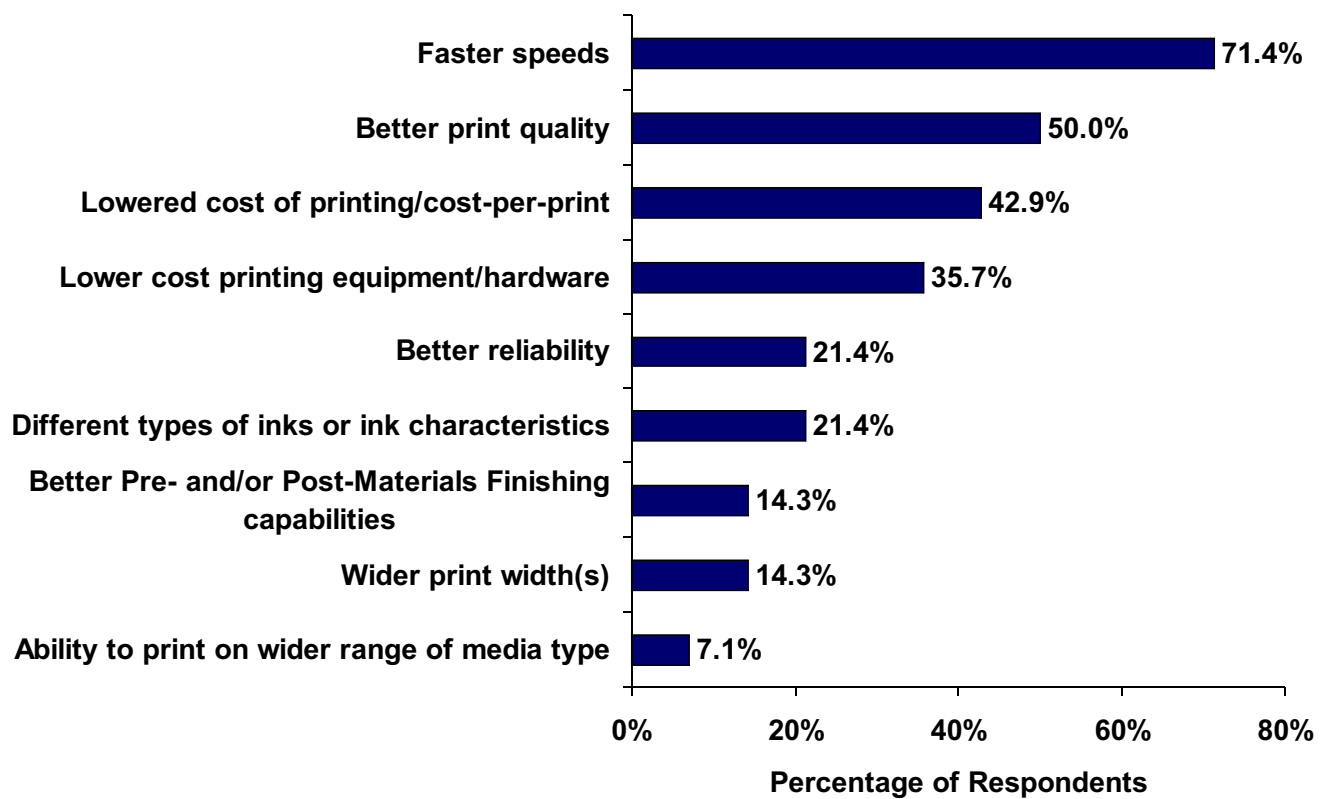


**Key Market Drivers**

The key market drivers reflect the trends to improve marketing (e.g., localized or targeted) campaigns, shorter runs, inventory elimination, and faster turnaround times.

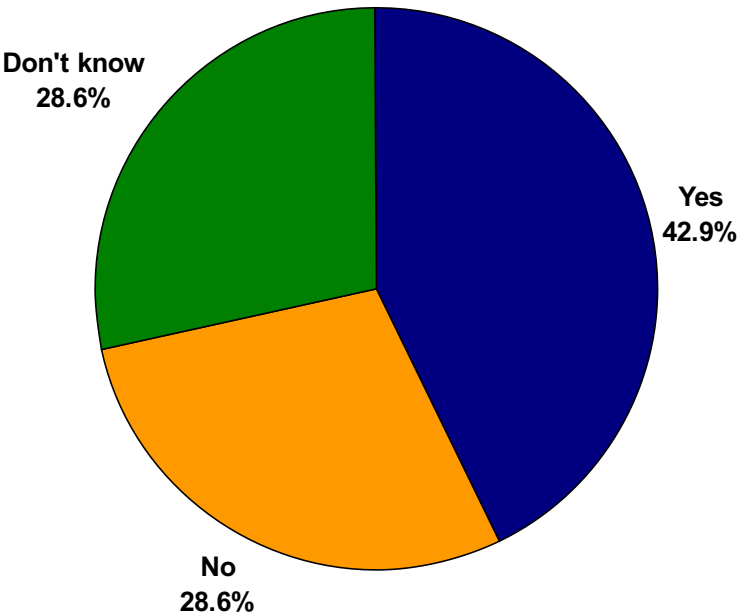
As illustrated below, our survey respondents reported that faster speeds, better print quality, and the ability to print on different/irregular services were the capabilities that would most likely convince their companies to invest in an ink jet system.

**Figure 4: Which of the following capabilities would convince your company to purchase an ink jet system? Please select up to three.**



When asked if the company had considered the purchase of an ink jet system in the last (12) months more than 40% of respondents indicated they had.

Figure 5: Percentage of respondents that have considered purchasing an ink jet system in the last 12 months.



**Value Proposition**

The value proposition for the implementation of ink jet systems splits into two areas. In the view of the buyer of the service (the package producer's customer), it is the ability to gain market share, incremental revenue, and profit through product differentiation and targeted marketing. For the buyer of ink jet, it is the enhanced capability to drive incremental business from existing customers and acquire new customers. In addition, the solution is expected to improve operating costs through reduced inventory, improved turnaround time, and shorter run lengths.

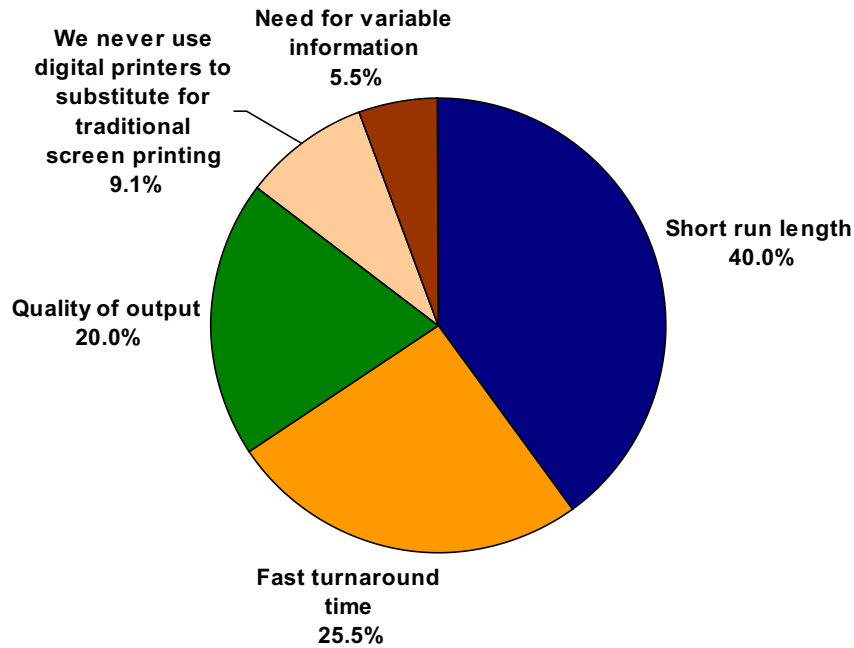
**Needs & Desired Benefits**

Needs and desired benefits are reflective of the value proposition. It is the need to print variable information to the individual produced package if necessary to gain shelf attraction and incremental customers as the resultant benefit. This benefit drives the value desired within the value proposition.

Stated simplistically, the operational needs are for implementing digital printing capability with minimal impact to existing operating processes and costs. The resultant benefits of more cost effectively handling short runs, eliminating inventory and improved delivery times.

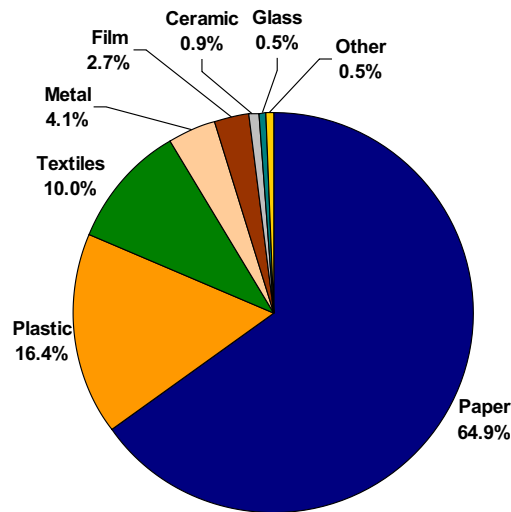
Our respondents were also asked why they might choose to run a job on a digital printer rather than a screen printer. The most popular responses were short run length (40%), fast turnaround time (25.5%), and quality of output (20%). The benefits of digital (ink jet) technology are highly valued among consumers who are seeking efficiency and quality.

**Figure 6: What is your primary reason for wanting to run a job on a digital printer?**



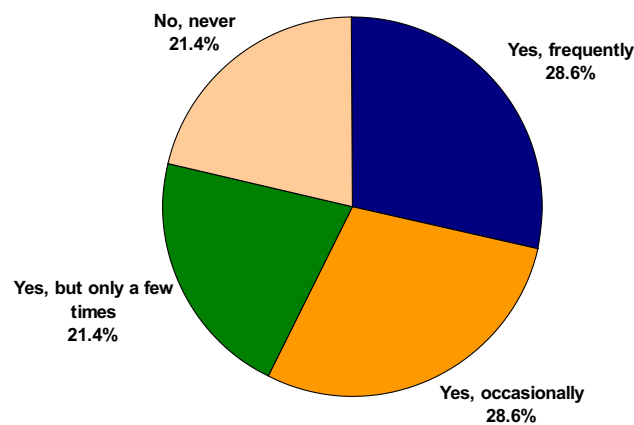
When our respondents were asked to approximate the percentage of their ink jet printing jobs that were produced on various substrates, plain paper (64.9%) captured the lion's share. Although it is not surprising that paper was the most popular substrate, it is important not to discount the alternatives. As ink technologies improve and applications expand, ink jet is well suited to be implemented on an increasingly broad range of media types.

Figure 7: Approximately what percentage of your ink jet printing jobs are produced on the following substrates?



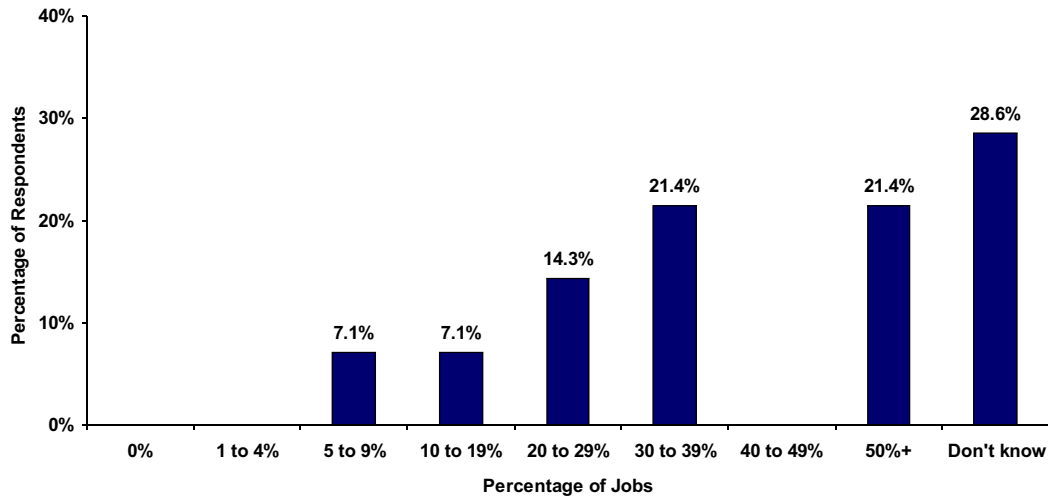
When asked how often their customers requested variable information on screen printed packaging jobs, over half of our respondents (57.2%) indicated receiving these requests frequently or occasionally. Less than a quarter of the respondents reported that their customers never requested variable information. Clearly, variable data capabilities are part of the value proposition for ink jet in screen printed packaging applications.

Figure 8: Do your customers request variable information on screen printed packaging jobs?



As shown in the Figure below, our respondents were slightly less likely to believe that their screen packaging printing work could benefit from variable information capabilities. 21.4% believed that more than half of their work could benefit from variable information. Once again, there was a relatively high percentage (28.6%) of “don't know” responses.

**Figure 9: What percentage of your screen printed packaging work could benefit from the use of variable information capabilities?**



**Figure 10: It was interesting to note that 17% of the print volume across all respondents was printed digitally. This shows a fairly high receptivity and knowledge base related to digital printing technology.**

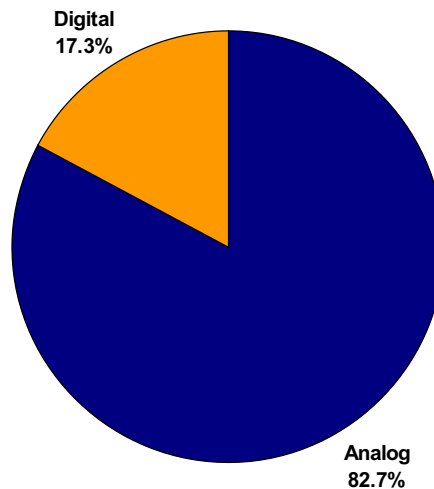
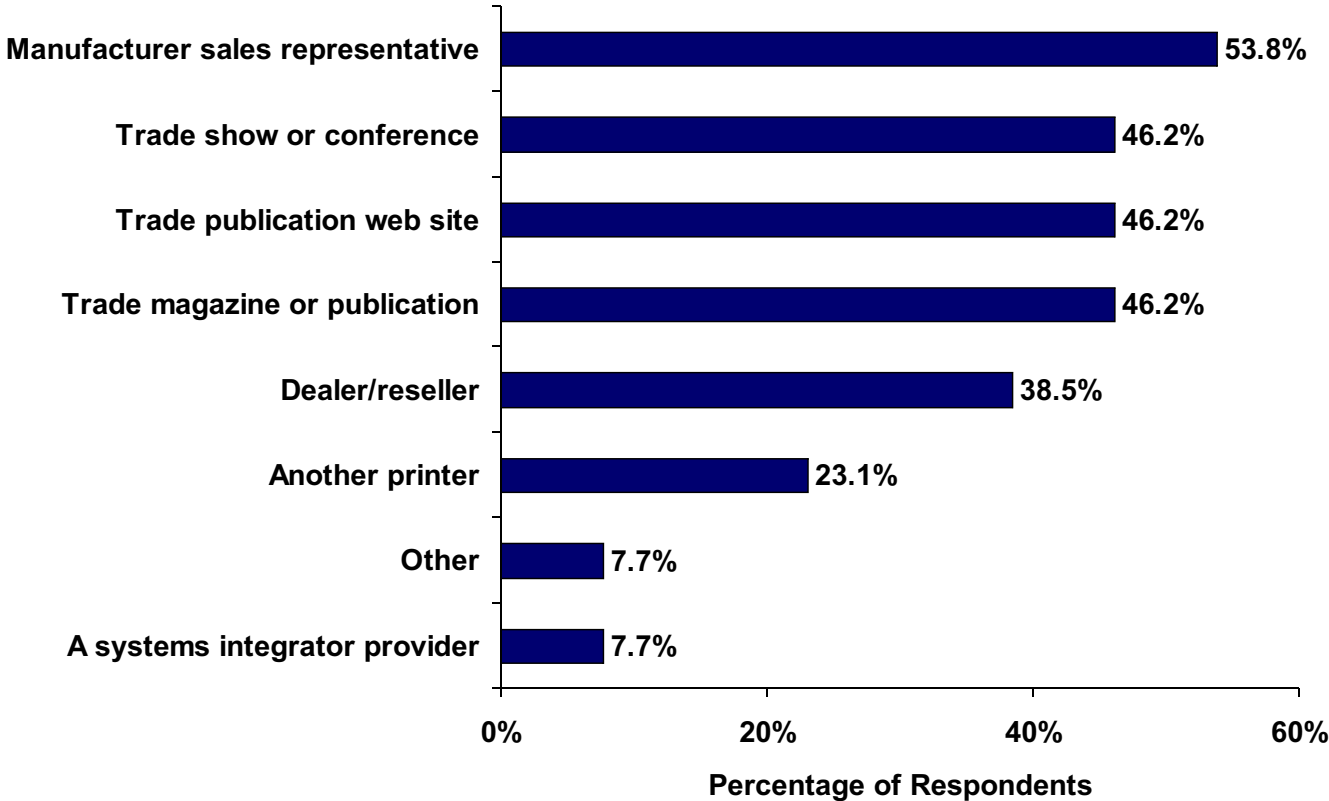


Figure 11: When asked the sources of information used for purchasing decisions respondents replied as follows:



**Conclusion**

As with the overall packaging market, the uses and needs for ink jet technology in the Indian packaging market are fragmented and rapidly changing. This country appears to offer one of the more significant growth opportunities for ink jet systems providers. Specifically, nearly 72% of survey respondents without an ink jet system reported that they would consider purchasing one if their customers demanded specific digital print jobs. In addition, 45% of the replies indicated plans to purchase an ink jet system in the next 12 months.

Solutions vendors should strive to continue the education of the Indian market (service providers as well as consumers) about the benefits of ink jet technology and the more recent enhancements to the printing systems and inks. Effectively combining education, market development, and product enhancements along with solid local service and support will directly impact the adoption rate of ink jet technology. Again, the most important conclusion reflected in the survey and interviews is that the capability is needed and desired it is just the timing of the presence of strong systems manufacturers and distributors that will dictate the rate of growth in India.

**Infotrends****Headquarters:**

97 Libbey Industrial Parkway  
Suite 300  
Weymouth, MA 02189  
United States  
+1 781 616 2100  
info@infotrends.com

**Xyanni****India:**

Level 4 Rectangle No.1  
Commercial Complex D4  
Saket  
New Delhi 110017  
+91 11 4606 5307

**Europe:**

3<sup>rd</sup> Floor, Sceptre House  
7-9 Castle Street  
Luton, Bedfordshire  
United Kingdom, LU1 3AJ  
+44 1582 400120  
euro.info@infotrends.com

**UK**

St. John's Innovation Centre  
Cowley Road  
Cambridge CB4 0WS  
+91 99109 28 666  
tarun@xyanni.com

**Asia:**

Hiroo Office Building  
1-3-18 Hiroo, Shibuya-ku  
Tokyo 150-00 12  
Japan  
+ 81 3 5475 2663  
info@infotrends.co.jp