

Indian Printing Industry Profile 2010





CONTENTS

	CHAPTERS	Page Nos.
1	Facts about the Indian Printing Industry	3
2	Region wise Contribution of the Indian Printing Industry	5
3	Sub sectors of the Indian Printing Industry	8
4	Printing Ink	15
5	Printing Processes of the Indian Printing Industry	17
6	End Use Sectors of the Indian Printing Industry	22
7	Machinery of the Indian Printing Industry	29



1. FACTS ABOUT THE INDIAN PRINTING INDUSTRY

- The Indian printing industry is valued at 10.6 billion euros as per the year 2006. The compounded annual growth rate is estimated to be 12.2% for the period 2007-12. The objective is to achieve 60% growth by the year 2014.
- The printing industry is highly fragmented. The newspapers and magazine publishing section has the large printers mainly apart from a few in package, label and commercial printing.
- About 77% of the printing houses are family owned. From 2002 onwards the government allowed foreign investment. Foreign investors can now invest up to 26% in daily newspapers and 100% in scientific or other publications with government approval.
- Printing sector has evolved from a manufacturing industry into a service industry. The segments of graphic design, print quality and capability have achieved global standard. Newspapers, books, catalogues, packaging products and other publications such as coffee table books have come up to the international standards as well.
- Most of the large printers are found in big cities of Delhi, Kolkata, Mumbai, Bangalore, Hyderabad and Chennai. Also, Sivakasi in Southern India has emerged as a commercial printing hub. It accounts for a major share of exports.
- There is an ample opportunity for the printing sector in India because of the following factors :
 - Large English knowing young population
 - Increase in literacy rate
 - Increase in life span (older people read more)
 - Increase in number of smaller households (nuclear families) has resulted in smaller packaging patterns. Development of taste for convenient living and rising health consciousness have led to a revolution in the packaging industry and consequently to the printing industry
- **Outsource Boom**
Countries like UK, US and Japan outsource printing jobs to India. The factors promoting this are:
 - Low cost of labor
 - Knowledge of English
 - Design capabilities
 - Talent pool
 - Technology and communication costs are falling rapidly
 - India's time zone is ideal to serve east or west.



- With the approval of the RBI (Reserve Bank of India), foreign offices can be set up in India. However their operation is subject to some restriction
- Foreign Investment: FDI is allowed up to 100% of share capital of the Indian Company if the investor does not have an existing joint venture or tech collaboration agreement in India, without any requirement to obtain government approval.
- In case of newspapers and periodicals dealing with news and current affairs, FDI up to 26% of equity capital of the Indian company's allowed with approval from FIPB (Foreign Investment promotion Board)
- In case of scientific magazines and specialty journals or periodicals , FDI up to 100% of equity capital of the Indian company may be allowed after approval from FIPB



2. REGION WISE PRINTING CONTRIBUTION TO THE INDIAN INDUSTRY

Table 2.1: Performance of Printing Industry Region wise

	Print Market share	Performance
Northern	33%	<ul style="list-style-type: none"> • Biggest market for printing newspapers, magazines and books • Uttar Pradesh and Delhi accounts for the major share
Eastern	12%	<ul style="list-style-type: none"> • Kolkata contributes the major share.
Western	28%	<ul style="list-style-type: none"> • Biggest market for package and label printing • Biggest market for commercial printing • Second largest newspaper circulation
Southern	27%	<ul style="list-style-type: none"> • Major contribution in commercial, packaging and label printing

Source: Pira International Ltd.

- Northern, Western and Southern India together contribute to 90% of the Commercial printing in India

Table 2.2: Printing market value by region, 2005-12 (Euro million)

	2005	2006	2007	2012	CAGR (%) 2005-12
Northern	2797.141	3060.744	3443.775	6266.466	12.7
Eastern	1034.775	1107.118	1218.005	1980.709	10.2
Western	2390.02	2599.165	2906.276	5125.914	12.0
Southern	2232.121	2438.054	2738.595	4938.669	12.5
Total	8454.057	9205.081	10306.651	18311.758	12.2

Source: Pira International Ltd.



Table 2.3: Share of printing market value by end use, 2006

	Northern India	Western India	Eastern India	Southern India
Newspapers	30%	15%	20%	16%
Magazines and Periodicals	4%	2%	2%	2%
Books	9%	7%	16%	9%
Commercial and others	35%	41%	32%	44%
Packaging and Labels	22%	35%	30%	29%

Source: Pira International Ltd.



3. SUB SECTORS IN THE INDIAN PRINTING INDUSTRY

Table 3.1: Overview of the status of the sub sectors

Sectors	Uses	CAGR * (%) 2007-12	Print market value predicted for 2012 (Euro million)	Performance
<i>Paper & Paper Board</i>		11.8	14808.269	India is the fifteenth largest producer of paper. Paper Industry supports about 300,000 people directly and i million paper indirectly in terms of employment
<i>Newsprint</i>	Used for newspapers, flyers, print media.	12.3	3876.3	Imports supplement the domestic production to meet the total domestic requirement.



<p><i>Mechanical Paper</i> (Coated and Uncoated papers)</p>	<p>Uncoated mechanical paper is used to make directory and magazine paper</p>	<p>12.9</p>	<p>97.82</p>	<p>Major part of the uncoated paper is imported. Coated paper is imported totally.</p>
<p><i>Wood-free Paper</i> (Coated and Uncoated Paper)</p>	<p>Coated wood-free paper is used for commercial printing, posters, calendars, magazines and packaging. Uncoated wood free paper is used for making notebooks, textbooks, diaries, envelopes, computer stationery</p>	<p>11.2</p>	<p>8278.565</p>	<p>Coated wood-free paper is one of the fastest growing segments. Demand for both coated and uncoated wood free-paper is expected to rise.</p>
<p><i>Carton board</i></p>	<p>Used for pharmaceuticals, food products, cosmetics, personal care, toiletries, matches, liquor, cigarettes</p>	<p>12.3</p>	<p>1678.927</p>	<p>Due to increase in the number of supermarkets, self-service outlets, trend for processed food and consumerism, the demand for carton boards are on the rise.</p>



<p><i>Corrugated board</i></p>	<p>Used for packaging food products and shipping containers.</p>	<p>14.1</p>	<p>728.905</p>	<p>Fastest growing segment Its domestic production is used for domestic consumption and exports. White/coloured -top boxes are replacing brown boxes. Three ply boxes and F-flute boxes are in demand</p>
<p>Rigid Plastics</p>	<p>HDPE is used to make containers for edible oil, chemicals, pharmaceuticals, cosmetics, pesticides and petrochemical products. PVC is used to make containers for cosmetics, toiletries, industrial chemicals, food and beverages.</p>	<p>12.4</p>	<p>203.232</p>	<p>HDPE and PVC is mostly used</p>



<p>Plastic Films and Laminates</p>	<p>Used for packaging for tablets, capsules, health foods, coffee powder, food items, edible oil, milk, mosquito repellants, detergents, chewing tobacco, biscuits, pharma suspensions</p>	<p>15.8</p>	<p>2755.02</p>	<p>This segment is growing rapidly</p>
<p>Metal (Tinplate/ Aluminium Sheets and Foil)</p>	<p>Since tinplate packaging is rigid, providing long shelf life due to protection from UV rays) and eco – friendly, tinplate is used for food packaging.</p> <p>Aluminium foil is also used for food packaging and industrial purposes like cable wrap and fin stock. Aluminium sheets are used for roll-on pilfer –proof caps</p>	<p>7.7</p>	<p>545.164</p>	<p>It is about 5% of India's total packaging material which is predicted to increase in near future. India's tinplate consumption is estimated to be 300,000 tonnes per year. Owing to price rise and competition from plastic caps there has been a decline in aluminium consumption.</p>

*CAGR * compounded annual growth rate*

Source: Pira International

- **Printed books, newspapers, manuscripts, typescripts, plans and other products:**
 - Import Countries: Singapore, UK, USA, Russian Federation, Germany
 - Export Countries: UK, US, Srilanka, UAE, Ghana.
- **Newsprint :**
 - Import Countries : Canada, Russian Federation, Korea, Finland, Indonesia
 - Export Destination: Nigeria, Sri Lanka, Sudan, Kenya, UK.

Table 3.2: Exports of Printed Materials from India

Products	Exports from India during 2005-06(Euro Million)	Exports from India during 2009-10 (Euro Million)
Cartons, Boxes, Cases, Bags, etc.	29.514	52.444
Registers, Account Books, Note Books, etc	49.696	75.308
Paper or Paperboard, Labels of all kinds, etc.	12.064	16.602
Printed Books, Newspapers, Pictures, etc.	126.608	192.382
Total	17.886	336.736

Source: DGCIS

- Export of printed materials from India for 2009-10 is 0.51% of the total global exports in 2009.

Table 3.3: Import of Printed Materials

Description of Goods	Total Value of Import (Euros)	
	2008-09	2009-10
Cartons, boxes, cases, bags and other packing containers of paper, paperboard, cellulose wadding or webs of cellulose fibers; box files, letter trays and similar articles of paper or paperboard of a kind used in offices, shops or the like.	904.5329	882.6379
Registers, Account books, Note books, order books, receipt books, letter pads, memorandum pads, diaries and similar articles, exercise books, blotting pads, binders (loose leaf or other) , folders, file covers, manifold business forms, interleaved carbon sets and other articles of stationery of paper, paperboard; albums for samples or for collections and book covers of paper or paper board	144.87408	98.09644
Paper or paperboard labels of all kinds whether or not printed	2083.348	1737.1357
Printed books, newspapers, pictures and other products of the printing industry; manuscripts, type scripts and plans	14315.439	14781.650
Total	17448.19533	17499.520

Source: DGCIS

Table 3.4: Imports of Coated Paper and Paperboard

Items	Year	Value of Import (Euro Million)
Paper and Paperboard, coated on one or both sides with kaolin (China clay) or other inorganic substances, with or without binder, and with no other coating, whether or nor surface colored, surface decorated or printed, in rolls or rectangular (including square) sheets, of any size.	2008	198.386
	2009	213.754

Source: DGCIS

4. PRINTING INK

- This sector has huge potential for growth due to the following factors:
 - Increased urbanization
 - Foreign publications
 - FMCG (Fast Moving Consumer Goods) sector is growing
 - Rise in literacy
 - Use of ink in packaging
 - Rise in outsourcing of jobs to India

- The expected annual growth rate of this sector is about 14%.

- Types of printing ink used in India:
 - Offset (process ink, cut color inks, commercial inks, quick set inks)
 - Flexography (packaging carton inks, multipurpose bag inks, surface printing inks, woven sack inks, poly inks, freezer pack inks, gloss finish and metallic finish inks, opaque inks, fluorescent inks, process inks)
 - Gravure, (multipurpose bag inks, surface printing inks, reverse lamination inks, high gloss inks, transparent inks)
 - Screen (metallic pearl inks, transparent inks, gloss finish inks, fluorescent inks, matt inks)
 - Digital (solvent based and UV curable digital printing ink)
 - Natural rubber and latex ink
 - Synthetic rubber ink
 - Silicon rubber ink
 - EVA (ethylene vinyl acetate) inks

- UV (ultra violet) inks are now in demand. They are mainly used in offset and flexo printing.

- Publishing and Packaging are the major consumers of printing ink.

Fig 4.1: Share of Market value by end use in terms of technology used: 2006

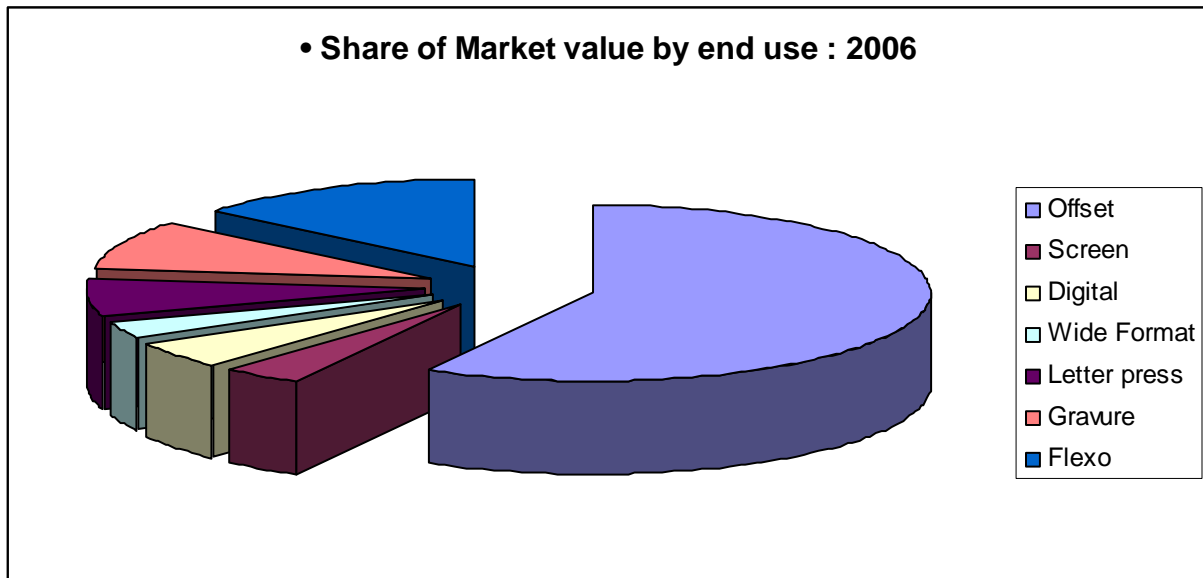


Table 4.1: Printing Ink: Imports and Exports

	2003	2004	2005	CAGR (%) 2000-2005
Import Volume (tonnes)	3865	4997	5642	15.12
Imports by value(Euro million)	34.31	42.486	41.756	17.91
Export Volume (tonnes)	21,741	34,660	36,874	33
Exports by value(Euro million)	38.763	60.006	65.408	25.3383

5. PRINTING PROCESSES OF THE INDIAN PRINTING INDUSTRY

Table 5.1: Process/Market Share and End Uses

Printing Process	Share (%)	End Use
Sheet fed offset	35.3	Commercial Printing, Books, Packaging
Cold Set web offset	20.4	Newspaper, Books
Heat set web offset	8.8	Magazines, Newspapers
Flexo	10.6	Packaging, Label
Gravure	6.5	Packaging, Label
Letterpress	7.4	Label, Commercial
Screen	4.1	Commercial, Packaging, Label
Digital	4.8	Commercial



Wide format	2.2	PoS , Billboards

Offset Machines

- Offset machines are having PPF (Print Production Format) compatibility which is now going for JDF (Job Definition Format) compatibility due to reduction in start up time and wastage. Use of CTP plates (computer to plate) has reduced the cost of plate preparation with increased speed of plate processing
- India imports high end sheet-fed offset machines from Europe, USA and Japan. Small sheet fed offset presses and mini offset printing machines are gaining significance since they are economical and easy to handle. Imports are predicted to decline in the future with increase in machine manufacturers
- Greatest number of web offset manufacturers in India. Web offset segment is growing at 10-15% rate per year. Govt. is also allowing FDI up to 100% in non news periodicals which has further increased the growth of this segment with inflow of foreign players
- Web offset cold set and heat set are both gaining importance though the latter is more expensive than the former
- Book publishing is done using web offset coldest. Thus the rising growth in book publishing is pushing the demand for web offset cold set technology
- Magazine publishing and the newspapers use the web offset heat set machines. In the newspaper section the change from the usual single circumference four page machines to the web offset cold set technology is gradual though
- Small publishers are use refurbished heat set machines but the medium sized publishers import used machines mainly from Japan.



Flexography

- Low wastage and faster
- Flexo machines that run on UV inks are more in demand now
- Narrow format web machines are used in the label industry and the large format sheet fed presses are used for corrugated printing
- The growth of packaging and labels segment and a shift from the offset technology in packaging and labels have increased the demand for flexo machines
- There have been many changes in the flexo technology. For example, water based technology is replacing solvent based technology, introduction of Sleeve technology, use of hybrid presses in the label market, common impression cylinder arrangement with 8-12 printing units, use of flexo with rotary screen for hybrid printing and inline finishing, flexo with hot foil embossing, mechanical and laser die cutting
- Imports could decline in the future with many Indian manufacturers increasing the production of flexo machines

Gravure

- Oldest printing methods can be used on lower grades of paper and economical
- It is used in packaging where reprints are required, for printing on paper, leather, decorative laminated sheets and PVC flooring
- The growth of this segment is slow though positive since its demand is low in India
- Presses and Electronic engravers are imported
- This technology is more expensive than flexo and hence will be used for special jobs or where there is high volume of production.



Screen Printing

- This process has many advantages such as it can offer many formats, can print intense colors and most substrates. It can print novel ink formulation and coatings. The print quality will improve further with time
- Since it has high unit cost and problem with half tone printing, it can be used with other printing processes. This combination technology is however in demand in India. It is used for point-of-sale displays, packaging, containers, nameplates, signage, plastic cards, folders, CDs and DVDs, promotional items and other textile and industrial manufacturing markets
- High end screen printing machines are imported. There is an increasing demand for rotary screen machines in an integrated system. Imports are predicted to increase

Letterpress

- One of the oldest methods
- Its main advantage is that it provides high quality at a low cost
- It has changed from the flat bed process to rotary process which has rendered it being used for printing multiple colors, for foil embossing, die cutting and for use of adhesive
- It is mainly used for printing wet glue and self adhesive labels
- About 40 % of high speed label printing machines are letterpress in India
- UV letter press machines are now being used as well as multiple colors are introduced
- Its use may decline eventually though there are small printers who prefer letterpress for its cost benefits



Digital

- The process is economical and there occurs no paper wastage with just-in time production. The print quality is very high and is expected to improve with time
- The digital market growth rate in India was 100%
- On-demand printing, variable data printing and messaging (telephone bills, tax statements and receipts) use the digital printing technology. Personalization and customization are two trends now
- The machines using this technology are largely imported

Wide Format

- It is used for signage and poster market
- Inkjet machines are used as they are fast and good weather resistant for external use
- They are used for offset and digital printing
- Large printers purchase expensive machines but the small printers import low cost machines from China.
- There is rise in demand for these kind of machines using wide format technology, specially in the end use markets

6. END USE SECTORS OF THE INDIAN PRINTING INDUSTRY

Fig 6.1: Share of Market Value by end use in terms of end use sectors, 2006

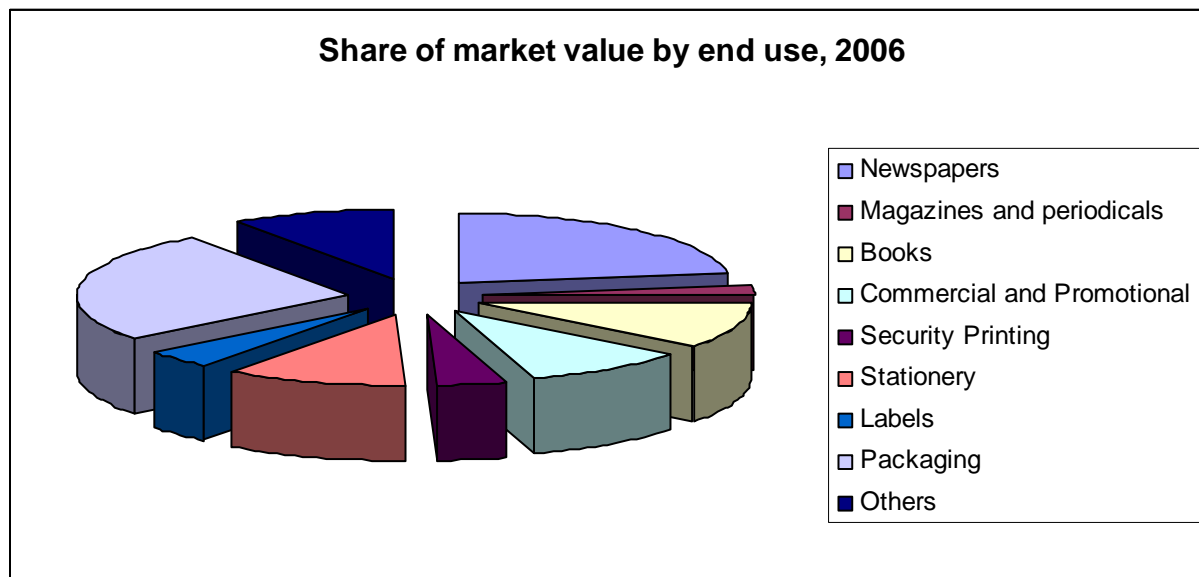
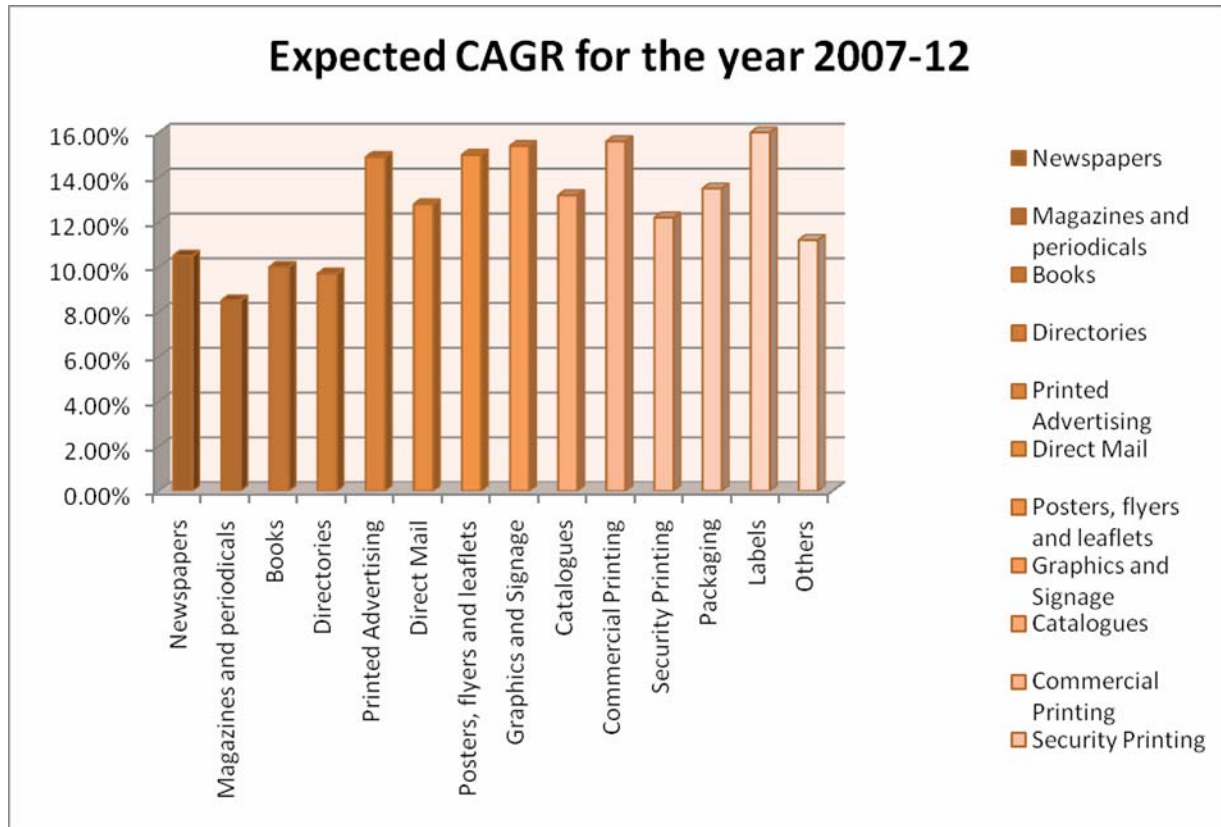




Fig 6.2: Growth Statistics for End Use Sectors:



- India is one of the largest markets for newspapers. 17 newspapers out of the world's top 100 newspapers (based on circulation) are published in India. Hindi newspapers have a wider circulation than English newspapers.
- Most popular magazines in India are that on news and current affairs. Hindi magazines hold a major share among the 5350 magazines published in India during 2004-05. Online subscriptions for magazines are increasing

Table 6.1: Magazines: circulation by category, 2004-05

Types	Number of magazines	Circulation (million)
News and current affairs	4,645	64.8
Literature and culture	60	2.8
Women's	21	1.5
Religion and Philosophy	63	0.9
Medicine and Health	37	0.5
Education	20	0.5
Children's	10	0.3
Agricultural and animal husbandry	30	0.3
Science	21	0.2
Finance and Economics	26	0.2



- There are 16,000 publishers which publish books in 30 languages. 40% of the books are published in English. India is the third largest publisher of English books in the world after US, UK. Books worth (\$108.8 million) were exported to over 80 countries in 2005. FDI of 75% in non-news sector and 100% in trading companies which export books is permitted. Electronic and digital publishing is used. India serves as a major back-office hub for outsourcing-digital conversion, content management, type setting, design and layout, high quality copy editing, proof reading indexing and translation services
- Outdoor advertising is one of the most economical forms. It includes static billboards and signs. It is an alternative to satellite television channels and print. Small firms are usually involved with this segment
- The rural part of India uses a lot of hoardings and signage along with film industry and the political segment. Metropolitan cities, malls and large cities use this kind of outdoor advertising. Digital printing technology is used now
- There has been rapid growth of holograms in India with many manufacturers using sophisticated equipments.
- There has been a shift from UV coated cartons and lamination from varnish coated cartons especially in the FMCG sector. In house printing on corrugated board is gaining popularity in India
- New film structures and coatings for high barrier films are gaining significance. Silicon oxide and aluminium oxide are economical to use for barrier in stand-up pouches. Stand up pouches and pilfer proof attachments are introduced.
- Use of metal cans have decreased and rigid and flexible plastics are being used instead. The metal can industry is now using faster printing machines and high speed can



making lines and other modern technologies to cater to the demand of the industries that use metal cans.

- Commercial Printing has a competitive market in India. It has extremely good growth rate. The following table gives a look into its components. Since the cost of production is lesser in India for diaries, the exports are expected to increase as developed countries want the diary production to take place in India. Digital imaging is replacing the designing pattern in calendars which was done by hand printing. Calendars have a key role in this sector. Southern India has a major centre for Calendar printing. Small printers are associated with calendar printing in India. The demand and hence production for greeting cards are on the decline due to the introduction of cell phone messaging and e-greetings

Table 6.2: Commercial Printing

Types	CAGR (%) 2007-12
Brochures and Catalogues	16.1
Transactional	15.0
Product Manuals	15.7
Diaries	16.2
Others	14.3
Total	15.6



- Security Printing has two parts: financial and non-financial. Intaglio printing is used in Indian bank notes. Magnetic ink character recognition (MICR), water soluble ink, micro letters and invisible ink are some of the security features used in cheques and demand drafts. Personalized bills and prepaid scratch cards in mobile phones provide the market for security printing in the telecom sector. Education and transportation sector uses security printing for example in examination question papers, mark sheets and certificates, tickets and smart cards for citizens ID. The Indian industry is trying to adopt RFID (radio frequency identification) in the shipping, defense, aircraft, pharmaceuticals, automotive and information technology

Fig 6.3: Security Printing: Market Value, 2006 (Euro million)

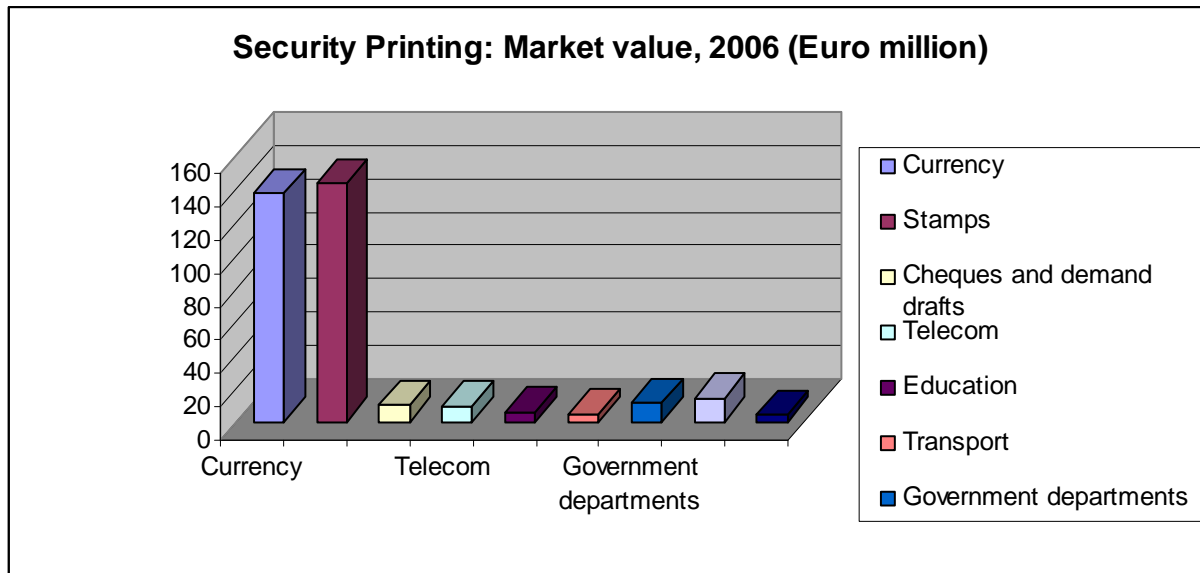
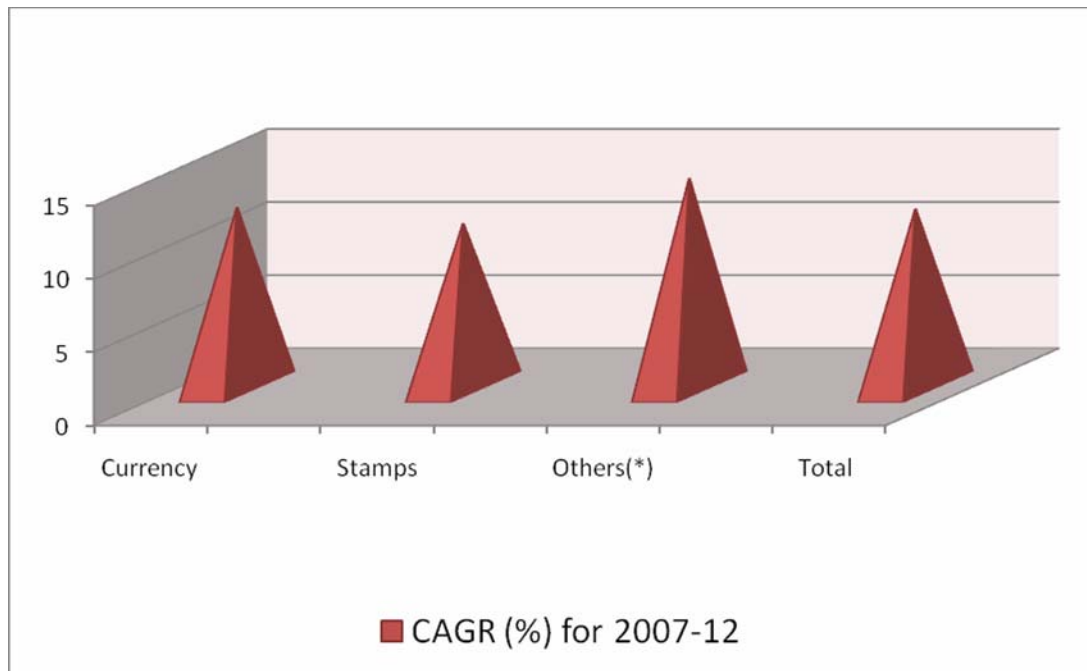


Fig 6.4: Growth Representation of Types of Security Printing



Others (*): Cheques and demand drafts, Telecom, Education, Transport, Government departments, Barcode and others



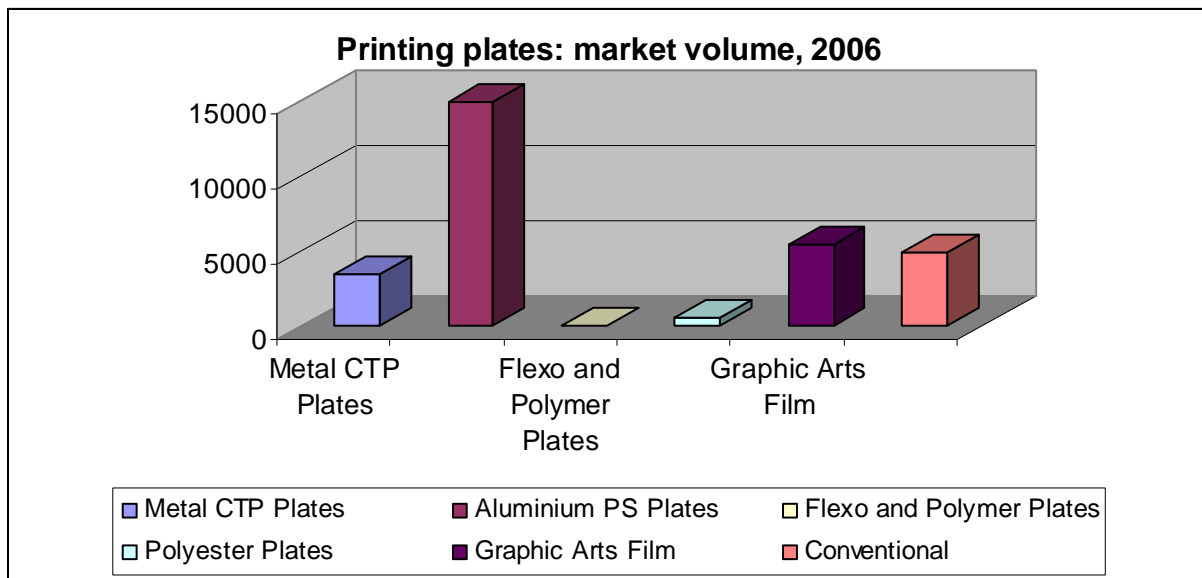
7. MACHINERY OF THE INDIAN PRINTING INDUSTRY

Pre Press Machinery

- CTP technology is being introduced mainly by large printers. Small printers are following but slowly. Newspaper printers and a few commercial printers use CTP technology.
- Flat bed scanners are used usually. Few high end scanners are used especially for jobs that need high production quality
- Conventional plate making system, cameras, exposing units, etc. are used though that of conventional plate making systems is declining
- Digital storage and transmission processes are used for all reproductions
- Use of image setters and graphic arts film have decreased in many developed countries but Image setters are used significantly in India though CTP technology is replacing it slowly. However printing odd jobs that might be expensive on CTP might use image setters
- Films (photographic films, CMYK, films and master films) are still being used and will continue for next few years. Small printers use them.
- India is one of the largest users of printing plates. CTP plates, presensitised aluminium plates, flexo or photopolymer plates and polyester plates are commonly used
- Photopolymer plates are not manufactured and hence are imported from Europe, US and Japan



Fig 7.1: Printing Plates: Market Volume, 2006





Post Press Machinery

- There are many manufacturers of machinery in India for the post press sector. For example, folding machines, perfect binding machines, stitching machines, programmable cutting machines, exercise book making machines, spiral binding machines, lamination machines, cutting and creasing machines, corrugated board making machines, high speed carton machines and sewing machines
- Traditional machinery is used in the post press sector
- Hard case binders are in more demand now

Table 7.1: Post press Machinery: Import and Export Values, 2005-06 (\$ million)

	Export	Import
Wire-stitching machinery, single-headed for book binding	0.146	0.876
Other book-binding machinery	0.584	2.482
Parts of bookbinding machinery and book sewing machines	0.876	0.657
Book binding machinery	1.606	4.015



including book sewing machines		
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Printing Machinery

- There are about 70 printing and allied equipment manufacturers in India
- There is significant growth in the offset and flexo presses as compared to stagnant growth in the letterpress and gravure presses
- Digital and wide format printing machines are in great demand now. Southern India offers the fastest growing market for digital printing
- Many machines are imported from Germany and Japan. India is the third largest importer of printing machines after US and Japan
- Out of the label printing machinery in India almost 98% are imported. Remaining is manufactured in India. Most of the label printing machines are letterpress (45%) and flexo (45%) and remaining are offset
- Gravure machines are slowly growing in India
- Rotary machines are all imported
- Letter press machines are changing to UV inks
- Spares of machinery are also imported from abroad and very few manufacturers in India produce them

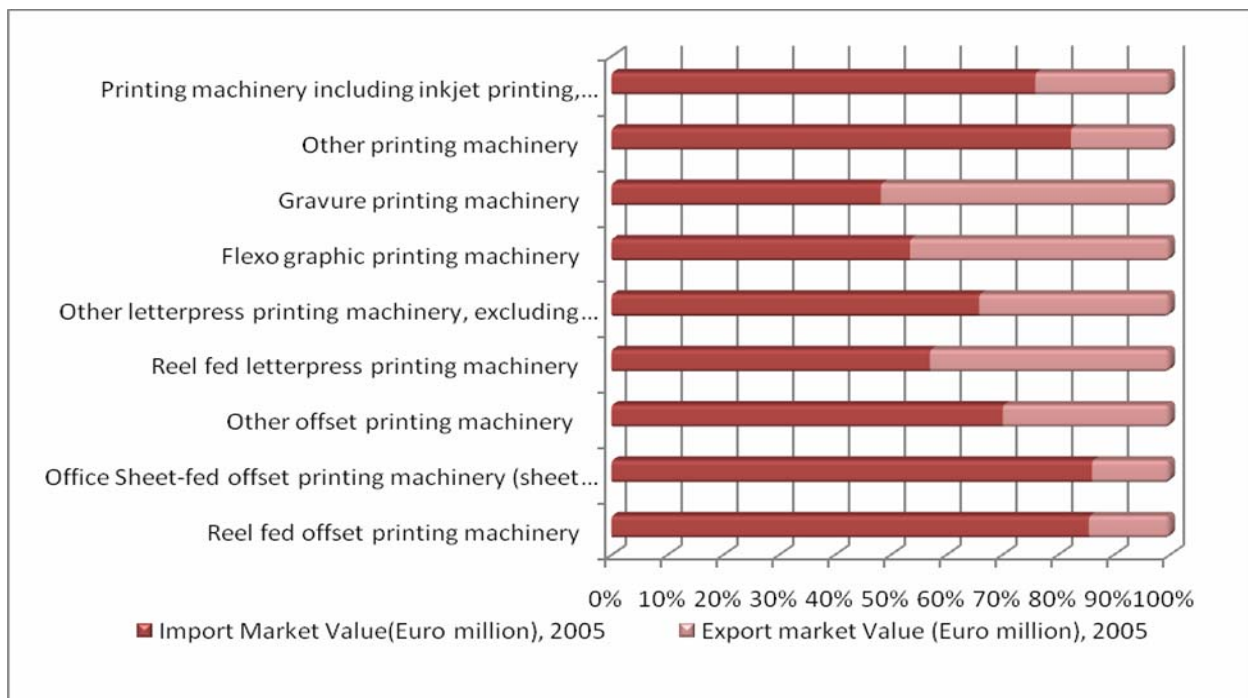
Table 7.2: Export and Import Value of Different Types of Printing Machinery

Types	Import Market Value(Euro million), 2005	Export market Value (Euro million), 2005
Reel fed offset printing machinery	52.852	8.906
Office Sheet-fed offset printing machinery (sheet < 22cm*36cm)	4.088	0.657
Other offset printing machinery	32.923	14.016
Reel fed letterpress printing machinery	0.292	0.2194
Other letterpress printing machinery, excluding flexo	4.234	2.19
Flexo graphic printing machinery	2.774	2.409
Gravure printing machinery	2.044	2.19
Other printing machinery	17.739	3.796



Printing machinery including inkjet printing, ancillary printing, etc.	174.105	55.042
Total	291.051	89.425

Fig 7.2: Export And Import of Different Types of Printing Machinery: Diagrammatic Representation



Annexure 1: List of Tables

Sr No	Title	Pg No
1	Performance of Printing Industry Region wise	5
2	Printing of Market Value by Region , 2005-12	6
3	Share of Printing Market Value by End Use, 2006-07	7
4	Overview of the Status of the Sub Sectors	8
5	Exports of Printed Materials from India	12
6	Import of Printed Materials	13
7	Import of Coated Paper and Paperboard	14
8	Printing Ink: Imports and Exports	16
9	Process/Market Share and End Uses	17
10	Magazines: Circulation by Category, 2004-05	24
11	Commercial Printing	26
12	Post Press Machinery : Import and Export Values, 2005-06	31
13	Export and Import Value of Different Types of Printing Machinery	33



Annexure 2: List of Figures

Sr No	Title	Pg No
1	Share of Market value by end use in terms of technology used ; 2006	16
2	Share of Market Value by end use in terms of end use sectors, 2006	22
3	Growth Statistics for End Use Sectors	23
4	Security Printing: Market Value, 2006 (Euro million)	27
5	Growth Representation of Types of Security Printing	28
6	Printing Plates: Market Volume, 2006	30
7	Export And Import of Different Types of Printing Machinery : Diagrammatic Representation	34