



2015



Metal Sheet Ink Market



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Internship Report on
Metal sheet Ink Market Research

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Dec, 2015

Md.Fazla Mohiuddin

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Submission of Internship Report

Dear Sir,

With great pleasure, here I submit my internship report on “Berger Paints Bangladesh Limited” working under its Marketing division that have approved & assigned as a compulsory requirement of the BUS 400 course. I have tried my level best to do the research work that I was assigned by my supervisor on Berger Paints Bangladesh Limited.

The report contains the research work with detail information like current market, future market, competitors, importers, traders, local manufactures, and metal sheet companies.

I would like to thank you for your continuous support, guidelines & observation of my works which made it easy for me as well as provided knowledge of learning in practical.

Sincerely,

Shamiur Rahman

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Acknowledgement

First of all I would like to thank Almighty Allah to help me fulfill this report. A warm felicitation goes for me to acknowledge the people, who hold the desirability for encouraging, praising, assisting as well as believing me throughout my internship period at Berger Paints Bangladesh Limited. I would like to thank my supervisor Reina Ashfin Khan, (Marketing research manager and consumer insight) for helping me and guiding me to do what I should as I have no experience in the corporate world. I would like to thank all the other members of the marketing department as well as the other departments of Berger as they were very helpful and friendly towards me through my journey.

I would like to take the opportunity to thank Md.Fazla Mohiuddin sir for guiding me to make this report. Without his help it would never be possible.

Finally I will show my gratitude to my family, friends as well as the entire team who somehow have impact on me in completing my whole report.

Executive Summary

Ink market in Bangladesh is growing parallel to the growth of printing and packaging material industries. There is significant demand of various types of industrial ink in Bangladesh, such as Flexo Ink, Gravure, Offset, Screen Printing Ink and Letterpress Printing. In this study, focus was mainly given on metal sheet ink market and to some extent on Flexo and Gravure ink as market size of those ink are quite substantial. The study covered ink producers, annual consumption, value, importers, ink association and ink types to collect all types of information regarding this industry. From the study, the estimated annual market size of Flexo ink in Bangladesh is 5444 M.Ton in volume and BDT 188.44 Crore in value and Gravure ink is 10,509 M.ton in volume and BDT 370.65 Crore in value. Out of 15 major ink producers in the country, 5 ink manufacturers currently produce Flexo ink and Gravure ink. The big users of Flexo ink in Bangladesh are WPP bag manufacturer companies. Bengal poly and paper sacks, Paragon Limited, Khan Brothers are major WPP bag manufacturers. The major ink users of Gravure are the food packaging companies and among them Premafelx, BRAC printing, Mecca Multilayer, Arbab Poly are the bigger ones. There only five major market player in metal sheet industries and those are Abul Khair, KDS, S.Alom, PHP and Appolo ispat. Seven rings cement, Shah Cement, Desh Bondhu Polymer, and Tiger Cement etc. are some of the companies that are using Flexo ink. Some of the ink users import the raw materials from outside and hire chemist to make their own ink in Bangladesh. These metal sheet companies directly import major portion of their ink requirement. Ink and Thinner are complementary goods. Almost all of the thinner are imported from outside of Bangladesh as there are no good thinner manufactures here. From the study, the market size of Thinner for Flexo printing is 7777.14 M.ton / year in volume and BDT 145.24 Crore in value and for Gravure printing is 12892.77 M.ton /year and 232.75 Crore in value. Many big companies like Premaflex wants to inspire the local ink manufactures to make quality ink as the local ink is not yet as good as imported. They would prefer buying from local rather than import but as they really care about quality printing they still don't buy. As Berger Paints has the technological capacity, so it can explore the whole ink market in near future.

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Background of the report

We have tried to make an overall synopsis of marketing research results for the Inks that are used in the corrugated and galvanized sheet. In the study I had to explore the quality and the quantity of ink generally used in the corrugated and galvanized sheet. Moreover annual consumption of ink, monthly turnover and many other things were also covered during the research. At first we realized the fact that there are five major market players in the metal sheet industry and some small industries. However the major metal sheet industries consists the larger part of the total market share. Then I prepared different questioners on the basis of the research need such as annual consumption of steel, turn over and the type of the ink. However collecting accurate information was very difficult due to the fact that there was no such association who would provide the adequate information for the research need. Moreover most of the metal sheet industry was also reluctant to give away the information such as annual turnover or annual production but there were some industries such as Abul khair , S.Alaam and P.H.P were help full.

It was difficult to get a clear idea about the importers and suppliers who supplies ink in different metal sheet industries. Firstly, there were no formal sources like importers' association or website to identify the importers who are importing ink for trading purpose in particular. From ink users, only one such importer could be identified. However very less information could be gathered from them due to secrecy and lack of knowledge.

My aim is to get the annual consumption of metal sheet ink which is also related to annual production of metal sheet to get the total market picture and its opportunities. Information that has been gathered is mostly accurate but some are based on assumption which is also close to reality.

Metal sheet industry is more dependent on imported ink. Most of the metal sheet companies directly buys from local traders or imports them directly.

Literature review

"The systematic design, collection, analysis and reporting of data relevant to a specific

marketing situation facing an organization.

Why is Marketing Research important? For companies to provide superior value and satisfaction for customers. To provide information for senior management decisions about the direction of the business. Effective product and marketing programs begin with a thorough understanding of the consumer needs and wants in their market. They also need information about competitors, resellers and other forces in the market place.

The information needed by marketing managers can be obtained from internal data, marketing intelligence and marketing research.

Many companies hold information on internal databases, which can be easily accessed by the marketing manager to identify marketing opportunities and problems, plan programs and evaluate performance. Such data can be obtained from: -

Internal databases have the advantages of availability and no cost involved but they may also have disadvantages such as the information may be incomplete where data is concerned with specific areas, information may be in the wrong form for marketing purposes and the information may also be out of date.

External sources can be also considered as one of the important source of information for marketing research. External source include web site, written article, Journal, books and electronic document etc.

In our research I could not find any relevant research paper regarding corrugated and galvanized sheet ink market. Moreover there is no single article to cover the metal sheet ink consumption and other issues regarding this matter. In our country ink market is not that much familiar so researching about ink market is something new. However internal sources were available to gather relevant information's.

Objective of the report

The study has been undertaken with the following objectives:

- ❖ Estimated current total size of the corrugated and galvanized metal sheet ink market in terms of volume and value.
- ❖ Exploring metal sheet ink market dynamics.

- ❖ Source of the procurement of the ink (local or import, distributor etc.)
- ❖ Grades/ quality and prices of locally produced and imported metal sheet ink.
- ❖ Payment Structure and Credit Policy for the dealers and consumers of ink product

Methodology

The primary data had been collected from different sources:

- ❖ In-depth interviews were conducted with various managers, employees of different steel industries and ink suppliers, importers. Interviews covered representatives of:
 - 5 major steel companies of Bangladesh.
 - 3 local ink suppliers
 - 1 major ink importer
- ❖ Interviewed a supplier of raw materials to ink producers.
- ❖ There are ink-selling hubs in Noyabazar areas. These shops were visited for information collection. However all of these shops trade in mostly paper printing inks, a few of them trade in gravure and flexo ink.

Secondary data had been collected from following sources:

- ❖ Data collected from previous study.
- ❖ Newspaper reports on ink producers and users.
- ❖ Different online article and journal.
- ❖ Annual reports of different corrugated sheet manufacturing companies.
- ❖ Credit rating report of different corrugated and galvanized sheet companies.

Data Collecting Instruments

- ❖ Prepared structured questionnaires which have been considered as the major tool of conducting this research.
- ❖ Prepared excel sheets to give an idea about overall scenario of the industry and to forecast the future demand.

Limitations of the Study

- ❖ The ink importers/traders and metal sheet industries are informal by nature, thus data were not well organized or available.
- ❖ There was no viable source to identify the importer/traders comprehensively.
- ❖ Many of the respondents were reluctant to share information about consumption of ink as they consider it as organization secrecy.
- ❖ Respondents had to be approached several times and several visits had to be made to the same company / respondent to get information. Respondents were often busy or didn't have organized data.
- ❖ Many companies did not want to share confidential information like production volume/value, raw material consumption etc.
- ❖ There was no such association for steel sheet industries to share the relevant information.

Overview of metal sheet industries in Bangladesh

There are few metal sheet industries in our country however only five major market player such as Abul Khair ispat ltd, KDS group KYCR, PHP Arabian horse, Applo ispat and S. alam steel mills controls most of the market share . In my report I also included Alnoor steel and Galco steel because of their comparative market share then the other small industries.

However KDS annual production is much lesser then Alnoor this year but in terms of capital, production capacity and company history KDS is more structured and larger then Alnoor Steel ltd. Annual demand of corrugated and galvanized steel sheet in bangladeh is according to Munir H. Khan, Director of KDS steel (Shah, 2013, p. 2) is around 5 lakh tons moreover according to Amit kumar das plant in charge of Galco steels this figure is around 4-5 lakh tons. In my report I included seven companies and combined annual production of this seven companies is more than 3 lakh tons due to utilization of production capacity. Steel sheet companies in Bangladesh mainly import the raw materials but some of them are manufactured locally.

In 2003 the demand of corrugated coils was at around 6 lakh tons according to (Hossain, 2008) but now it is around 4-5 lakh tons as I mentioned earlier due to increase in the price of raw materials internationally and the vat imposed by the government. To bring down the price to a significant level, the duty structure on import of HR Coils needs to be re-fixed. Rajib Kumar das head of accounts of Galco steel also urged for increased (Das, 2015) government care for steel industry. According to Munir H Khan Director of KDS steel urged the government to set a separate steel policy and fix the duty structure from time to time by considering the prices of steel markets (Shah, 2013).

Short overview of printing ink in Bangladesh

Various types of printing ink are used in Bangladesh. The major printing processes are classified by the method of image transfer and by the general type of image carrier employed. Depending upon the process, the printed image is transferred to the substrate either directly or indirectly. In direct printing, the image is transferred directly from the image carrier to the substrate; examples of direct printing inks are following:

- ❖ Flexo ink
- ❖ Gravure ink

- ❖ Screen printing ink
- ❖ Letter press printing ink

In indirect printing image is first transferred from the image carrier to the blanket cylinder then to the substrate. Lithography currently the dominant printing technology is an indirect process.

Steel industries generally uses flexo ink to put the brand name in to the metal sheet however some companies uses other inks such as marking ink and even offset ink.

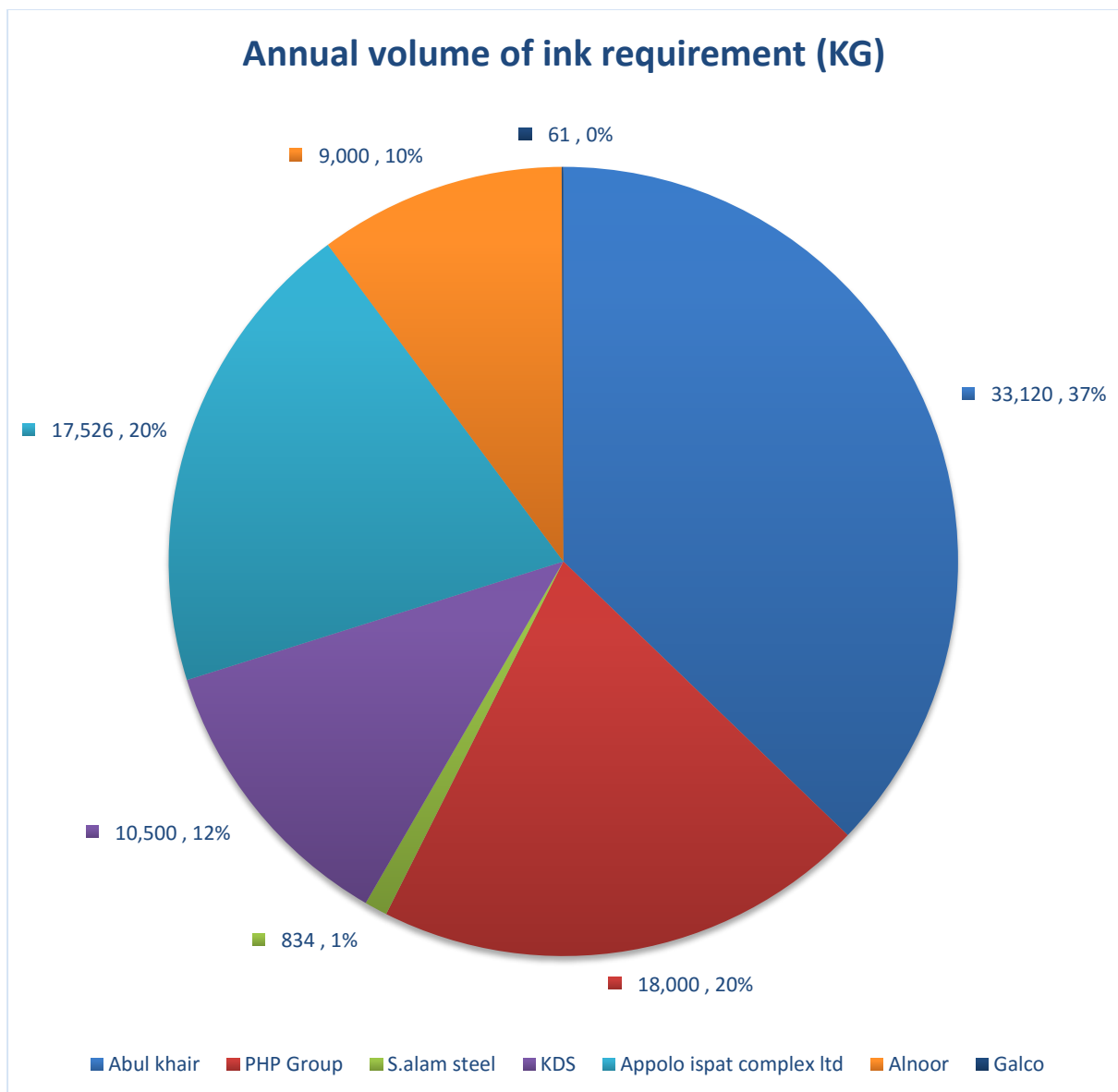
Printing inks are broadly distinguished by the printing process in which they are used. Flexographic and Gravure inks are called liquid inks and have lower viscosity. Letterpress and Lithographic inks are known as paste inks and have higher viscosity than the liquid inks.

Local producers of Flexo ink are not well established so far and their production capacity is not enough against the local demand of Flexo ink. At the same time direct importers of Flexo ink are not the major suppliers among the packaging companies. Mostly big packaging companies are using the “Bonded Warehouse” facility for importing ink from outside.

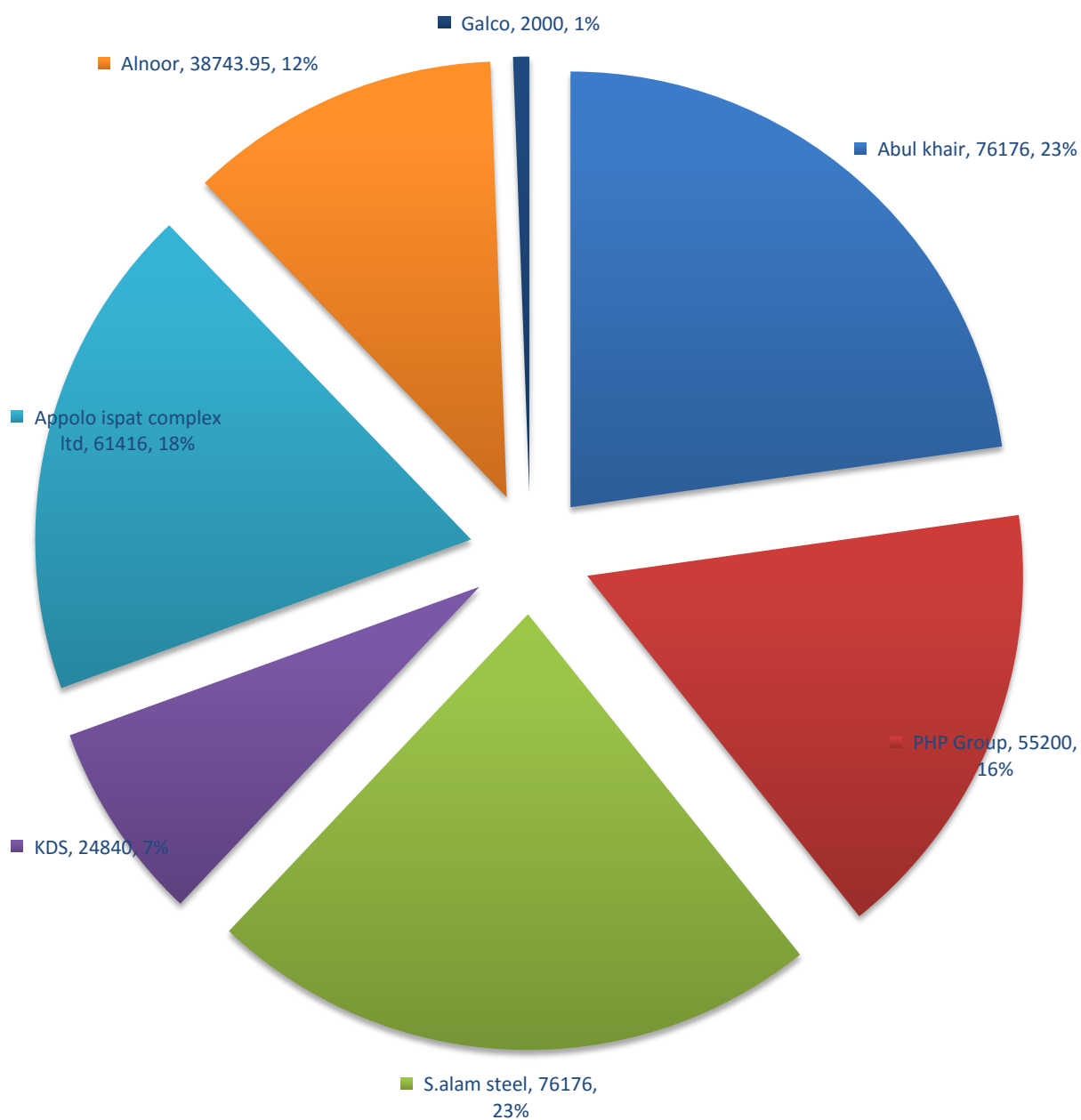
Recently some of the big cement companies are using locally manufactured ink and a good number of packaging companies those who used imported ink before, are now using local ink to ensure smooth distribution of the local producers and the quality of product is almost same. One of the biggest producers named “Danish” also gives technical support to their customers in case of any problem.

According to the market information main drawbacks of local production in Bangladesh is the lack of sufficient capital for expanding business and high interest rate against taking bank loan. Very recently Nishan Paints owner has withdrawn his capital from Crown ink limited and established his own business. Thus, it can be assumed that competition is strong in local ink manufacturing business and the local producers have confidence that this sector will grow rapidly in near future.

Market size and trends of metal sheet industries



Annual production volume



■ Abul khair ■ PHP Group ■ S.alam steel ■ KDS ■ Appolo ispat complex ltd ■ Alnoor ■ Galco

To derive the market size of ink used in corrugated and galvanized sheet in Bangladesh, seven major corrugated and galvanized sheet manufacturing companies have been considered. These are:

- Abul Khair steel ltd
- S.Alam Steel
- P.H.P Galvanized sheet ltd
- K.D.S steel ltd
- Galco steel ltd
- Appolo steel ltd
- Al-Noor steel complex ltd

In order to understand the market size of ink consumption annually by the metal sheet Companies this information's were necessary

- ❖ Annual production and Annual turnover of metal sheet companies
- ❖ Annual consumption of ink in terms of value and volume

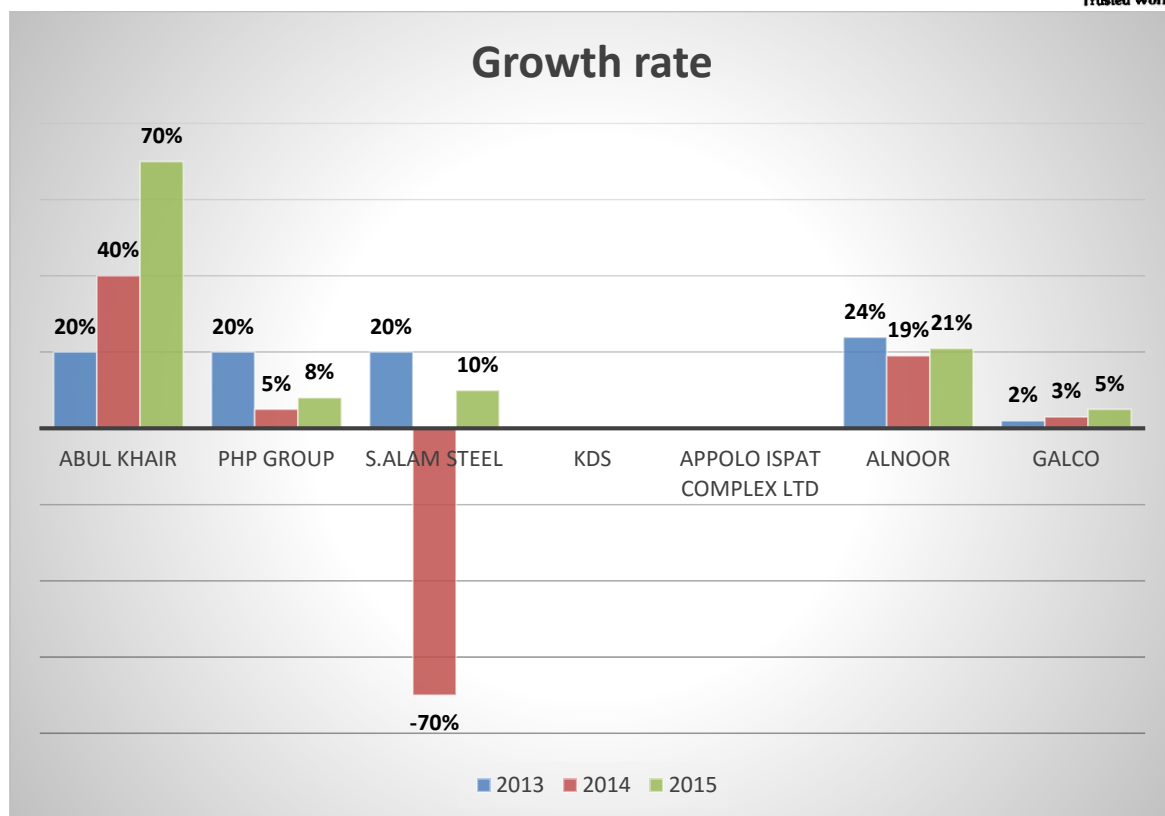
Note:

1. Detail calculations are given in the (Appendix 1).
2. The estimated market size of metal sheet is 342551.95 Ton in volume and BDT 9152.6 crore in value among the segments covered in the study.
3. Annual consumption of ink is around 71454 ton in volume.

Market Growth:

Galvanized and Corrugated sheets ink consumption is very much related with per piece of metal sheet production so our report solely focuses on the fact of annual growth or growth per year of metal sheet company. Moreover growth per year or average growth is the indication of company's annual production if a company shows positive growth rate then it will produce more on the other hand if there is no growth then production will surely decrease.

Growth rate of the companies also gathered due to forecast the market situation of the steel industry as the ink consumption is related with this.



Column1	2013	2014	2015	AVG growth
Abul khair	20.00%	40.00%	70.00%	43.33%
PHP Group	20.00%	5.00%	8.00%	11%
S.alam steel	20.00%	(70.00%)	10.00%	-13%
KDS				
Appolo ispat complex ltd				
Alnoor	23.93	19.85	21.89	21.89%
Galco	5%	4%	2%	3.67%

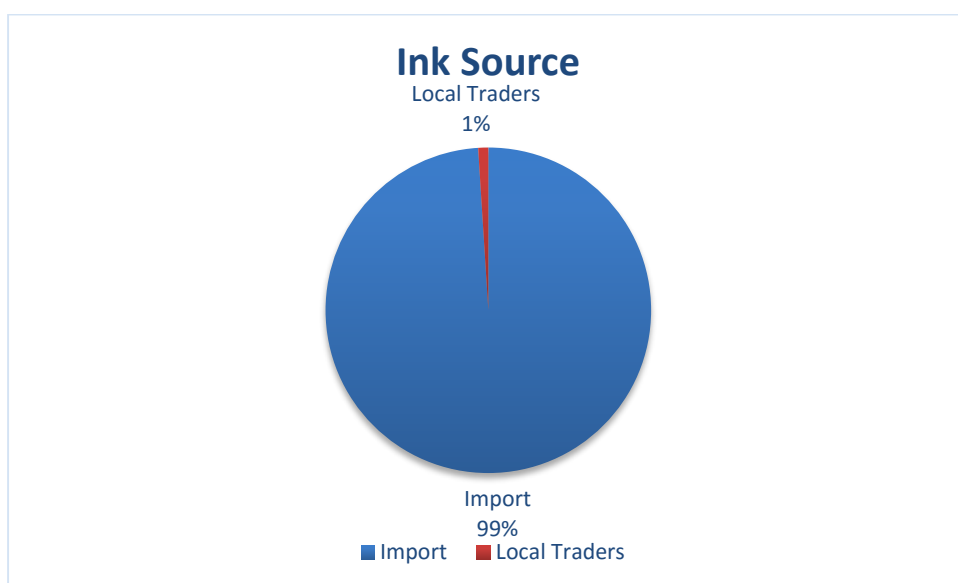
Note.

- Growth rate was not available for Appolo ispat and KDS.
- S.alam steel shows negative growth due to 70% decrease in 2014.
- Most of the company's shows positive growth rate which also contributes to the

volume of metal sheet production.

Ink sources and types

Large companies such as Abul khair and KDS imports ink from Dicm India under the brand name of DIC. However companies like Galco and ALnoor mostly buys there ink from local traders named Solaiman Paper house.



Column1	Brand name of ink	Manufacturer importer and Suppliers	type of ink
Abul khair	DIC	DICM India Ltd	Printing ink (DIC)
PHP Group	ink paint	Vyankatesh Udyog	vyankatesh udyog
S.alam steel	Tawsin ink	MR. Anwar 01191155301	tawsin ink
KDS	DIC	DICM India Ltd and Towsin Ink (suppliers India)	Printing ink (DIC)
Appolo ispat complex ltd			
Alnoor	marking ink	solaiman paper house(local traders suppliers)	marking ink
Galco		solaiman paper house(local	Marking ink

		traders suppliers)	
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Note:

- Form the above we can clearly see the sources and type of ink. We can see the companies are not precise about the selection of ink type as we can see some are using even paper ink because of their consumption is very less in volume.
- If we calculate the percentage in volume about the direct import to local suppliers we would see 99% of companies are importing directly from outside.
- There are 7 companies in our study. Out of this 7 companies only 2 of them collect ink from local traders which is Alnoor and Galco from solaiman paper house. S.Alom steel mills importing Towshin ink through Mr. Anwar an ink supplier and KDS either directly importing from DICM India or through local suppliers however most of the time they import.

Pack size and Price

Ink pack sizes are in between 20-40 kgs and price varies according to different companies however the calculated average price per Pac is 3.5\$/kg.

Abul khair	20kg	\$2.8 per kg**
PHP Group	20kg	
S.alam steel	25kg	\$4.2 per kg (landing cost
KDS	40kg	\$4,\$3
Appolo ispat complex ltd		
Alnoor	15kg	3.5\$
Galco	15-20kg	3.5\$

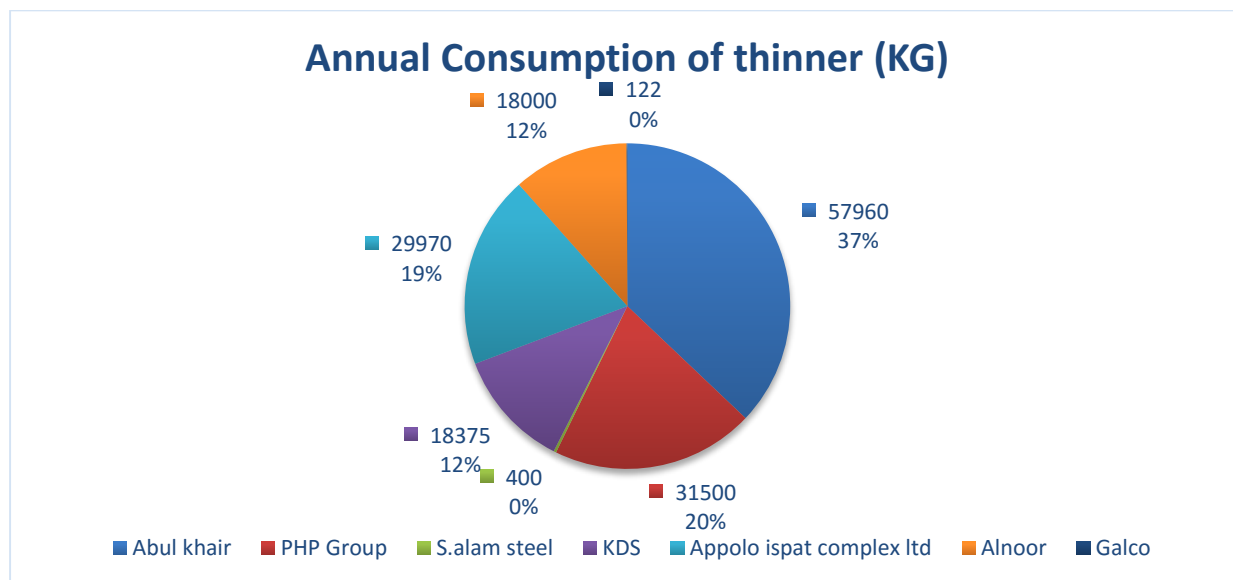
Shades and grades of ink

shade /color	grade
Red	standard
green(single shade)	standard
green	standard
Green and black	standard
	standard
red/green	standard
red3,green,black	standard

Note:

Most of the companies uses Red, Green and Black shade. However grade are similar among companies which is standard.

Thinner types and sources



Thinner market is an integral part of the Ink industry. According to our research, all of the persons that we have interviewed said that, they purchase thinner from the same seller that they buy Ink. There is a combination in the mixing of the ink and thinner. According to the purchase manager of Bashundhara Group, to manufacture one (1) bag we needs 1.05 gm ink

and 1.5 gm of thinner. So, total demand of the thinner is higher than the total demand of the ink.

Metal sheet industries mainly uses the flexo/first drying type of thinner. Thinner brand and supplier companies are very much similar to their ink manufacturer and supplier companies.

Mixing ration

Mixing ration varies according to the type of ink and their usage for example for first drying, companies uses more thinner. Moreover there was no precise information about the usage of thinner such as annual consumption as a whole. However most of the companies thinner usage ration falls in between 125%-200% for this reason we took a conservative approach to measure the total annual consumption of thinner by setting the base point of thinner usage to 175% against the Ink usage for the companies such as Abul khair ,Php and KDS.

Note:

- Detail calculation of thinner are given in Appendix.
- Flexo/First drying thinner is dominant in galvanizing sheet.

Pack size and price

Most of the respondents was not sure about the pack size and price of the thinner only two companies told us about the pack size and only one company informed us about the price. However when I visited to Nayabazar where different ink and thinner traders exist all of them said thinner price falls somewhere round 2-2.5\$ and average pack size is 180ltr although these information were accurate but our research was about metal sheet thinner consumption so without knowing from the metal sheet companies it is not possible to say whether it is accurate or false because only metal sheet companies can say what is the thinner pack size they buy and what is the exact cost of it.

In order to sum up the total consumption and to have a clear idea about the thinner market we took a conservative approach and set the average pack size 180ltr and price is 2.5\$.

Issues considered

Metal sheet companies consider many things when they select a particular vendor of ink and thinner supplier, however in our research we found that most of the companies want fast delivery. This is very much clear as we can see that annual consumption of ink by the metal sheet companies is very low so all they want is fast delivery which is also related with the lead time. However there are some companies who are concerned with the quality factor.

Metal sheet companies	Issues considered selecting ink from a particular vendor
Abul khair	fast delivery
PHP Group	quality and fast delivery
S.alam steel	quality and fast delivery
KDS	fast delivery
Appolo ispat complex ltd	quality and fast delivery
Alnoor	fast delivery
Galco	fast delivery

From the above table it is clear that companies are more concerned with replenishment time rather than the quality of it.

Benefits from ink supplier

Metal sheet companies were also looking for certain benefits when selecting a certain vendor or trader. Many companies want credit term as the main benefits however in my research I found out that fast delivery and competitive price is the main issue. I already have mentioned in “issues considered” sector that metal sheet companies are not that much concerned about the quality of ink so only they want is fast delivery as this is not dominant raw material in their production process.

Metal sheet companies	any benefits from ink supplier
Abul khair	fastest delivery with

	competitive price
PHP Group	fastest delivery with competitive price
S.alam steel	fastest delivery with competitive price
KDS	fastest delivery with competitive price
Appolo ispat complex ltd	
Alnoor	Quality
Galco	fastest delivery with competitive price

From the above table it is clear that among the six companies only Alnoor said about the quality factor and rest of it wants fastest delivery with competitive price.

Other information's

In order to aid our research more I had to gather other information's from the respondents which were also necessary for the research project for example total number of metal sheet Companies in our country, total industry turnover(volume), total industry turnover (value), number of large producers, number of medium producers, number of small producers.

Metal sheet companies	total number of metal sheet Companies	total industry turnover(volume)	number of large producers	number of medium producers	number of small producers
Abul khair	9		3	3	3
PHP Group	8		2	2	3
S.alam steel	7		3	2	2
KDS	9		3	2	3
Appolo ispat complex ltd	5	400000	3	3	2
Alnoor	9		3	4	3
Galco	8	500000	3	3	2

Note:

- Total number of metal sheet companies varies according to different companies respondents.
- According to Galcos plant manager total industry turnover in our country is around 500000 ton.
- Most of the companies considered Abul khair, PHP and KDS is the main producers.
- Small and medium number of companies varies according to different respondents.

Total industry consumption of ink and thinner

Annual demand of corrugated and galvanized steel sheet in Bangladesh is according to Munir H. Khan, Director of KDS steel (Shah, 2013, p. 2) is around 5 lakh tons moreover according to Amit kumar das plant in charge of Galco steels this figure is around 4-5 lakh tons.

Total industry turnover is necessary as we were looking for annual ink consumption of our country as we did not have any reliable source of information for total volume of metal sheet industry ink consumption so we had to rely on total volume of annual productions of the listed seven companies to get the total volume of ink consumption of our country.

Total industry production of metal sheet according to our research is 334552 tons and Total industry ink consumption is 89041 kg.

Detail calculations are given in appendix.

Flexo Ink

Market Size (Volume & Value)

To derive the market size of Flexo ink in Bangladesh, four segments have been considered. These are:

- Local Production for Flexo ink in Bangladesh
- Import by traders for supplying to packaging industries and cement pack printing plants.
- Direct import by packaging industries.
- Direct import by cement pack printing plants.

Combined volume and value of these four segments will give the market size of Flexo ink

within the scope of our study.

- ❖ The study covered 5 local producers of Flexo ink who contribute almost all of the local production. These producers are supplying to industries and cement pack printing plants.
- ❖ Import volume of three (3) importers (Traders) have been obtained. Although holistic information on this sector could not be obtained, Information from industry insiders suggests that these importers cover nearly 60% of the import of Flexo ink by the trading business.
- ❖ The study covered almost 80% of the direct import by the Cement industry for its own packaging material plant.
- ❖ The study directly interviewed representatives of 7 packaging production companies and collected information on ink requirement of 4 other packaging companies. The combined contribution of these 14 companies is around 60% according to industry representatives.

	Survey Data		Extrapolated Data	
Industry	Amount(Collected in ton yearly)	Amount value in TK (Cr)	Amount(volume in ton yearly)	Amount value in TK (Cr)
Local Producer	2178	91.74	2178	91.74
Importer(Trader)	450	15.75	750	26.25
Import in Cement Industry	189	5.29	236	6.61
Import by Packaging	1368	38.3	2280	63.84
Total	4185	151.08	5444	188.44

Market Growth:

There has been a massive increase in the use of Flexo ink over the past five years and there is every indication that this will continue. According to Monir Hossain, CEO of Danish Private limited, the use of Flexo ink would increase 25% in Bangladesh in next 5 years and according to Biplob Dey, Manager (Sales and Marketing) of Access BD (Importer) the use of Flexo ink would increase 15%-20% within next five years.

Gravure Ink

Gravure ink is used vastly in Bangladesh for packaging materials of consumer products that produced by big consumer companies like Unilever, Nestle, ACI, Pran, etc. Gravure ink is used to print on polyester sheets of different types- PP, LDPE, HDPE, LLDPE, BOP. These packages are used for dry food items, washing powders/detergents, non-food items, pharmaceuticals, cosmetics, chemicals.

Reverse lamination printing is used for foil packs, or three-layer/ two layer packs, Gravure printing ink is used. Reverse lamination printing is being done by around 25 companies; among these 9-10 are large scale, while rest are medium and small.

Gravure ink is also used for surface printing on single layer polyester packaging. There are around 45-50 established packaging manufactures who use Gravure surface printing.

Moreover there are 700-800 entrepreneurs who are involved in packaging production using Gravure printing. This is an informal sector which operates illegally, without government regulatory and environmental permits. These businesses do not have full printing set-up, rather they share their resources, and around 7-8 of them would share machinery like one composite unit. Thus, total output of this sector may be considered as that of around 100 small scale printing units.

Market Size (Volume & Value)

To derive the market size of Gravure ink in Bangladesh, three segments have been considered. These are:

- Local Production for Gravure ink in Bangladesh
- Import by traders for supplying to packaging
- Direct import by packaging industries.

Combined volume and value of these three segments will give the market size of Gravure ink within the scope of our study.

Gravure Ink Market:

Gravure Printing Ink Companies	Surveyed	Ink Consumption of surveyed companies	Total Number	Total annual Ink Consumption in Metric Ton	Price	Total Value
Large Reverse lamination printing units	9	4920	9	4920	330-350/kg, 420/kg	1,751,520,000
Medium Reverse lamination printing units	12	1482	17	2,100	330-350/kg, 420/kg	747,422,000
Surface printing units	27	1037	44	1,690	330/kg, 410/kg	584,714,370
Informal sector			100	1,800	330/kg, 410/kg	622,800,000
Total	48	7439	170	10,509		3,706,456,370

Interpretation and conclusion

Berger is the market leader in the paint industry of our country controlling over 66% market share as a dominant leader of a certain product they want to expand in a new horizon which is ink market. Ink market consist of many variables as I have mentioned all of them already. Ink can be divided in to many categories however gravure, flexo and offset is the most used.

Berger wants to enter in to flexo and gravure ink market. However in the metal sheet industries companies also uses ink to sill there name on a particular sheet.

I was involved in the part of metal sheet ink consumption research annually and to some extant in gravure ink market.

According to the information of the report it is clear that metal sheet company's uses very less ink which is not more 100 ton value is less somewhere around 2 million which is not very feasible considering the fact that Berger is a big company and the product they will produce will also be premium in price so going for such a low value market will not cover their production cost as a whole according to Md. Jahidur Rahman assistant manager in research and development of Berger. However if we consider the gravure and flexo ink market we would see large amount of annual consumption volume and value in money so if Berger enters into this market they will have a huge opportunity to create another strong product line.

Berger can focus in metal sheet market as they can segment it as a part of ink market rather than a complete new market.

Appendix

Market size and trends

Column1	Annual production Volume(in tons)	annual value turnover BDT(CR)	annual volume of ink requirement (KG)
Abul khair	76,176.00	2484	33120
PHP Group	55,200.00	1800	18000
S.alam steel	76,176.00	72	834
KDS	24,840.00	810	10500
Appolo ispat complex ltd	61,416.00	494	17,526
Alnoor	38,743.95	3278.6	9000
Galco	10,000.00	214	61
	334552	9153	89041

Thinner types and sources

Column1	Mixing ratio=ink: Thinner	Annual consumption of Thinner(KG)	supplier company	type of thinner used
Abul khair	175%	57960	DICM India ltd	Flexo/first drying
PHP Group	175%	31500	DICM India ltd	Flexo/first drying
S.alam steel	1:2 (50% thinner)	400	MR.Anwar	Flexo/first drying
KDS	175%	18375	DICM India ltd	Flexo/first drying
Appolo	175%	29970		

ispat complex ltd				
Alnoor	200%	18000	solaiman paper house	
Galco	200%	122	Berger	Berger

156327(sum)

Total industry consumption of ink and thinner

AVG price of ink = 3.5\$*89041*79doller rate

Total industry(Ink consumption)	number of companies	Production volume of Metal Sheet (M.Ton)	Ink consumption Volume (Kg)	Ink Consumption Value BDT
Surveyed Companies	7	334,552	89,041	24,619,824
Total Industry	9	400,000	116,000	32,074,000

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