

## PAPER IMPORTS AND CONSUMPTION PATTERNS IN GHANA

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### ABSTRACT

*This study has been undertaken to show trends in imports of pulp and paper products into Ghana from 1961 to 1994 and the amount of waste paper generated at the printing houses. The results of the imports study reveal that the total imports are intimately linked up with socio-economic growth and political stability of the country. The study shows that packaging materials are increasing in importance, so also are the speciality papers. Cultural papers continue to be the leading paper product imported into the country over the period studied. It has also been shown that the waste paper generated at the printing houses using reels is much less than that generated from sheets. The total average of waste is 11.61%.*

**Key words:** Imports, paper products, consumption, printing press, waste.

### INTRODUCTION

That paper is a commodity vital to the growth and development of every country cannot be over emphasised. Paper is important in communications, households, education and packaging. The amount of paper and paper products consumed is a vital statistics in determining the level of development of a country. Such statistics also show trends in consumption which are vital for the analysis of demand, thus helping to forecast the future level of demand which, for instance will indicate the appropriate size of mills to be built.

Ghana in the past quarter of the century has tried to look for avenues to erect its own pulp and paper mill. That this has not materialised is not because the raw material base is not available but rather, it is thought that the consumption of paper in the country is too low to support such a venture. It is also felt that the competition on the export market is too keen for Ghana to make her debut at this time. But the low level of consumption in the country is believed to be suppressed due to the following factors;

- (1) Socio-economic factors and
- (2) Poor data on imports into the country.

Thus this study was undertaken to look at the import data in the country and attempt to relate the various levels of imports to some factors that may help to explain consumption patterns. Also the consumption and waste generated in the printing houses were looked at.

### METHODOLOGY

#### A. Imports

A study of published data on paper imports and consumption in Ghana has been given by three main sources:-

- (a) Pulp and Paper International
- (b) Food and Agriculture Organisation (FAO)
- (c) External Trade Statistics of Ghana.

The data from these sources seem to be quite the same except for one or two years in the 1970's. Thus in this analysis the data from External Trade Statistics would be used. The data was therefore collected from the Statistical Services Department. It should be mentioned that the figures for the years 70, 79, 80, 81, 84, 86, 87, 88, 89, 90 and 91 were not available.



## B. Printing Houses Consumption

Sixteen printing houses were selected at random in Accra and Kumasi to analyse their consumption and waste generation over a period of two weeks (10 working days). The printing houses were selected to include big and small printing presses, government and private, newspaper printers and non-newspaper printers. At each printing press, the amount of paper and paper products used per day was recorded and at the close of the day the waste generated was weighed. The percentage of waste generated was calculated for each printing press.

## RESULTS AND DISCUSSION

### I. Imports

#### A. Total Imports

Table 1 and Figure 1 show the total imports of pulp and paper products, newsprint and percentage of newsprint to the total imports from 1960 to 1994. There are four maxima in 1966, 1971, 1975 and 1992 and thereafter a dramatic fall. The first three peaks correspond to periods of political instability in the country, (1966 - coup, 1971 - coup, 1975 introduction of Uni-Government System). After these periods the imports of paper products into the country start to go down. The lowest level of imports occurred around 1982 when the economy of the country was at its lowest ebb.

In 1983 the Economic Recovery Programme was initiated and as the economy picked up the imports of pulp and paper products also picked up. It has been noted that the economy slackened from 1993 as the exchange value of the Cedi steeply fell, reflecting in high costs to importers. This resulted in sharp decrease in imports recorded in 1994 (fig. 1).

The amounts of paper and paper products consumed are determined by several factors. While some of these factors are particularly characteristics of Ghana, they generally affect developing countries.

**TABLE 1: Total Imports of Pulp and Paper Products, Newsprint and the Percentage of News-Print to Total Imports for the Years 1960 - 1994**

Year	Total Imports (Tons)	Newsprint Import (Tons)	%
1960	6.4	4.5	70.31
1961	15.3	3.7	24.18
1962	14.7	4.7	31.97
1963	23.3	5.7	24.46
1964	30.3	12.9	42.57
1965	47.8	20.9	57.88
1966	53.9	31.2	57.88
1967	34.8	11.4	32.76
1968	27.8	6.3	22.66
1969	30.2	7.1	23.51
1971	28.8	3.9	13.54
1972	15.2	6.0	39.47
1973	25.6	7.6	29.69
1974	57.8	11.1	19.27
1975	75.6	7.2	9.52
1976	32.8	5.8	17.68
1977	31.4	6.6	21.02
1978	20.1	3.3	16.42
1983	6.3	1.0	15.87
1984	8.3	2.4	28.92
1985	12.4	1.3	10.48
89	23.7	6.1	25.74
92	143.0	106.0	74.13
93	153.0	50.0	32.68
94	50.0	35.0	70.00

Standard Deviation = 18.59

Mean = 31.94

Source: External Trade Statistics of Ghana, Statistical Services, Accra.

Such factors include:

- Shortage of foreign currency for purchases in the world market.
- Low Per Capita Income
- The literacy rate.
- Level of Industrial and technological development.
- Multiple use of paper and paper products.
- Stability of the political environment.



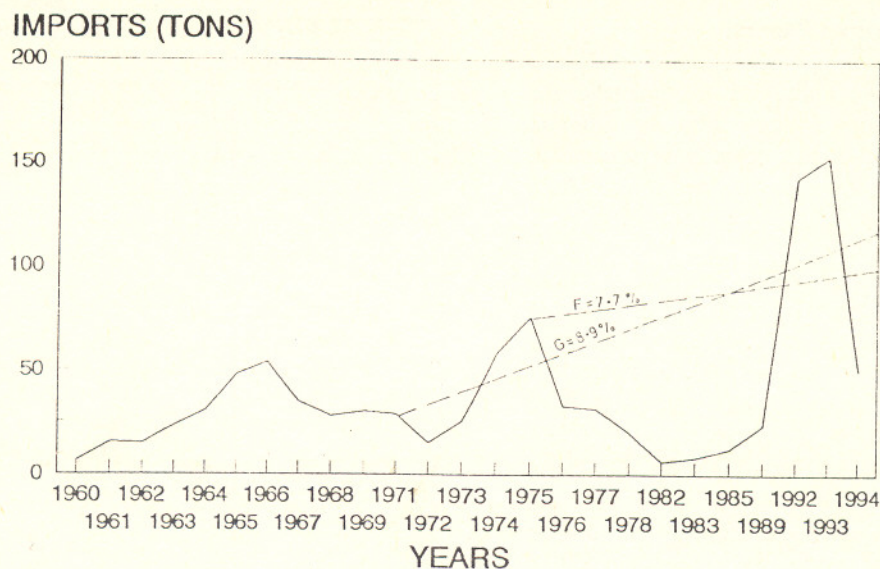


FIG 1: IMPORTS OF PULP AND PAPER PRODUCTS WITH YEARS (TONS)

F = FINCONSULT  
G = GREENACRES

The complexity of the factors in Ghana has made it difficult to rely on mathematical models as tools for predicting growth rate. In 1972 Greenacres Consultants predicted a growth rate of 8.9% based on imports up to 1969, while FINCONSULT in 1978 projected 7.7% growth rate based on imports up to 1975. Figure 1 shows that both predictions have been inoperable. Perhaps, data over a much longer period is required to make a meaningful prediction.

One product that has consistently remained constant in terms of furnish and basis weight on the world market is newsprint. Therefore we related the import of newsprint to total imports from 1960 to 1994. This varied from as low as 9.52% in 1975 to as high as 74.13% in 1992 with an average of 31.94 and standard deviation of 18.59. The high increase in newsprint in 1992 had to do with the reintroduction of constitutional rule in 1992.

Another important factor is the high import of 50% mechanical pulp (uncoated) in 1993. There was an increase from 1,350tons in 1992 to 35,364tons in 1993. This product could easily be used by the printing houses as a substitute for newsprint.

## B. Types Of Paper Products

Paper as a commodity could be grouped into four major categories:- 1. Cultural papers, 2. Packaging papers, 3. Hygienic papers and 4. Speciality papers. In Ghana cultural papers have traditionally dominated the market with newsprint occupying the topmost position. While this trend has been maintained over the years, (see Table 2), the market share of the other paper types is gradually increasing.

TABLE 2: Summary of Imports of Paper Products (Kg)

YEAR	HYGI-ENIC	PACK-AGING	CUL-TURAL	SPECIA-LITY	TOTAL
1973	3465	266620	2149760	-	2515655
1976	10649	44862	236867	31006	327795
1977	2893	18893	238311	50783	314307
1978	4958	15816	167241	10861	201037
1982	386	7748	46968	6730	63152
1983	145	18696	52152	10802	83282
1985	1248	5410	86777	16404	124339
1992	1076823	11446495	123181975	798233	142904410
1993	719598	3556241	144769757	646122	153234316
1994*	114583	13405625	30546989	1162452	50085681*

\* For first nine months of the year.

Source: External Trade Statistics of Ghana, Statistical Services, Accra.



### i. Printing and Writing Papers:

These products have continued to dominate the market with variations coming from the different types. Figure 2 shows that there was substantial decrease in the imports of newsprint from 106,004,834Kg in 1992 to 1,549,575Kg in 1994,

while Kraftpaper uncoated increased from 6,037,704Kg in 1992 to 91,556,133Kg in 1993 but dropped to 14,978,856Kg in 1994 (Fig. 3). The other product which showed unusual behaviour is 50% mechanical paper uncoated which increased from 1,349,687Kg in 1992 to 35,363,805Kg in 1993 but decreased to 121,328Kg in 1994 (Fig 4). These fluctuations in the imports are due mainly to the importers responding to market forces. As long as there is excess in the system, the importation of that particular product falls.

### ii. Packaging

The significant change occurring in this area is the big increase in the importation of cartons, boxes and cases of corrugated medium. The imports rose from 271,668Kg in 1992 to 7,414,817Kg in 1994 (Fig 5). This big increase could be attributed to the export of agricultural produce (banana and pineapple) which utilizes these boxes and has been on the increase in these last years. The other significant observation is the gradual decrease of multi-ply papers from 5,561,429Kg in 1992 to 187,497Kg in 1994 (Fig 6). At the same time the share of the sack kraft paper has also been reduced, but not to the same extent as multi-ply papers. This is rather surprising since the cement works are still producing at the same levels if not higher. The reason for this could be that some importers are bringing them in through unauthorised routes.

### iii. Speciality Papers

The market share of these products is increasing each year, but the significant observation is different types imported each year. In 1992 only 11 items were imported under this heading. This increased to 13 in 1993 and 17 in 1994. The types appearing on the market are those that are used by specialised equipment. This is a reflection on the level of sophistication of the Ghanaian people.

Fig 2 Year vrs Newsprint(kg)

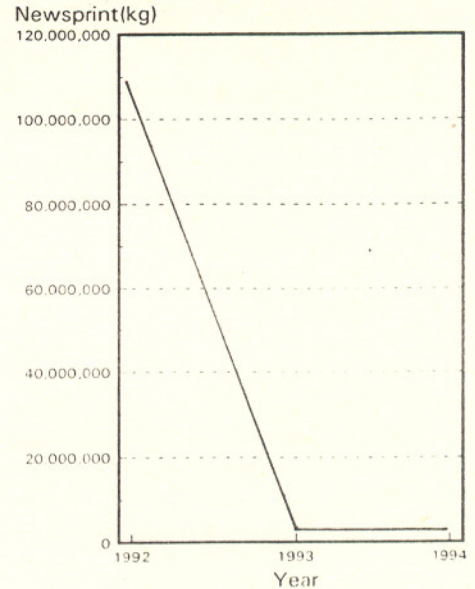


Fig 3: Year vrs Kraft paper (uncoated)kg

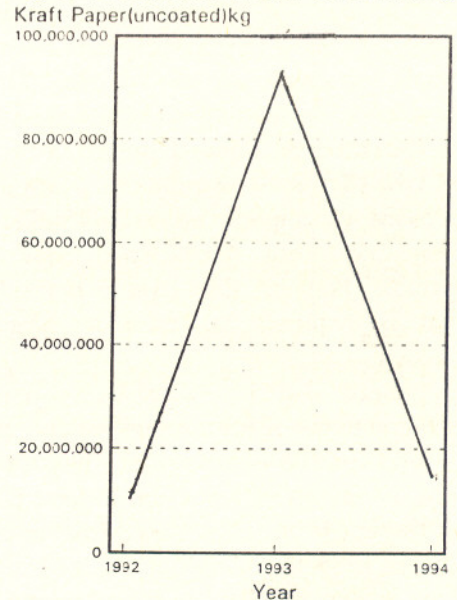
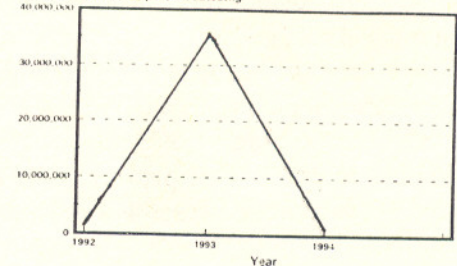


Fig 4: Year vrs 50% Mechanical paper(uncoated)kg





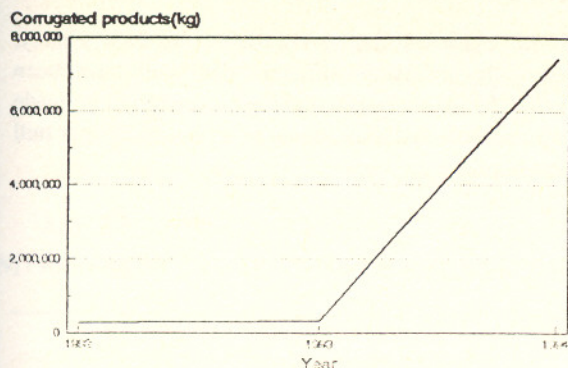


Fig 5: Year vrs Corrugated paper(kg)

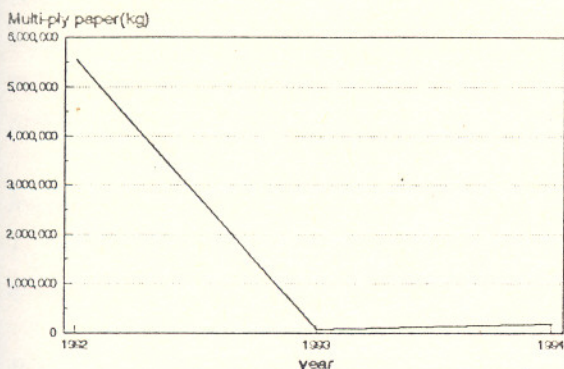


FIG. 6: IMPORT OF MULTI-PLY PAPER

## II. Consumption by the Printing Houses

Table 3 shows percentage waste generated at various press houses. These varied from 2.22% to 33.62% with an average of 11.61% and standard deviation of 8.19%.

**TABLE 3: Consumption and Waste Generated at Printing Houses**

NAME	CONS. (TONS)	WASTE (TONS)	WASTE (%)
Ghana Publishing Corp.(Tema)	33.50	0.75	2.22
Victoriaborg	10.93	0.31	2.83
Best Time Press	2.44	0.099	4.04
Graphic Corp.	52.00	2.25	4.33
New Times Corp.	24.78	1.42	5.74
CITA	0.97	0.061	6.25
Adaase Comm. Printers	0.53	0.043	8.14
Bethesda Printers	0.63	0.059	9.55
Presbyterian Press	7.37	0.94	12.77
Catholic Press	0.54	0.067	12.53
University Press	0.47	0.067	14.38
New Era Press	0.54	0.077	14.39
Hi-Tech Press	0.47	0.072	15.20
Yarsarko Printers	1.97	0.38	18.98
IKAM*	209.56	43.48	20.75
Advent Press	3.17	1.065	33.62

\* Period of nine months

Mean = 11.61

S.d. = 8.197

The data from the different printing houses reflect on the manner of operation at the press. Ghana Publishing at Tema and Victoriaborg in Accra use mostly reels for their operation. So also are Graphic Corporation and New Times Corporation, except that the dailies producers utilize newsprint which is weaker, for their production, leading to a slight increase in waste over the two Government Printers. Best Time Press had an unusually low figure because of the type of printing job that they were undertaking at that time. They were producing a standard form for a manufacturing firm and the commercial manager had designed the set-up so as to utilize the whole sheet with minimal off-cuts.

The other figures that need comment concern IKAM and Advent Press. The IKAM figures were provided by the management since outsiders are not allowed into the printing house to see their operation. Under the circumstances, it is very difficult to comment on the figure. The high value at Advent Press is probably due to the production lines at that time. They were printing textbooks and other stationery. Textbook printing takes a long time. Thus during the period that we were there, they had already taken the supplies for the books and therefore the supplies were not reflected in the intake of the period but their waste reflected on the general operations of the press at the time of the exercise.

## CONCLUSIONS AND RECOMMENDATIONS

This paper has looked at the statistics of the imports of pulp and paper products into the country and attempted to relate them to the various socio-economic factors within the country. While attempts have been made in the past to calculate a growth rate of pulp and paper consumption from these import statistics, it is realised that the trends are such that no meaningful deductions could be drawn from them. Therefore no growth rate has been calculated. But it is hoped that as more import data are collected, a meaningful growth rate can be estimated.

It is, however, evident from the statistics that the 60,000 tons per annum of cultural papers advocated by all the Feasibility Studies Commissioned to look into the paper needs of Ghana is adequate for the cultural paper needs of the country.

The analysis of the waste generated from the printing houses indicates that large amounts of good waste



exist in the country from this source. And therefore Super Paper Products Company and other companies manufacturing egg trays should intensify their collection efforts rather than engaging on imports of waste. What is needed is co-ordination between them.

It is expected that after the household survey, currently underway sufficient data will have been collected for analysis to enable a decision to be made with respect to the setting up of a pulp and paper mill in Ghana.

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