

Production Trend of Diaries – A Study of Diary Printing units in Sivakasi

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ABSTRACT

Printing Industries have an indispensable role to play in effective mass communication, cultural development of mankind, conveying thought, words and opinions of the people at one end of the globe to other end by the printed words. Printing Industries engaged in the production of diaries, notepads, scrap books, School books, labels, notebooks etc. Diary is a notebook containing a day-to-day account of personal experiences. Also, diary is normally produced on the basis of job order production system.

Sivakasi has long been known as the printing capital of Tamilnadu and an important printing hub in India. It satisfies 60% of the offset printing units needs in India. It provides different kinds of printing services like Label printing, Board printing, Diaries, Calendars, Notebooks and other small stationary items printing etc. Production of diaries is one among the printing services provided by the leading printing units in Sivakasi.

Dairy production is an art. This involves various processes. Diary production needs various production processes such as pre-press, press and post-press operations. According to the needs and wants of the elite diary users, the diary producers are producing thousand different kinds of diaries and are distributing them to the needy people throughout India and they are also exporting from Sivakasi to different continents. Hence, the researcher made an attempt to study the growth rate of diaries and to analyze the significant relationship between actual production and trend values of production by using Trend Analysis.

Keywords: Job-shop Production, Compound Growth Rate, Correlation and Trend Analysis.

INTRODUCTION:

Diary is a notebook containing a day-to-day account of personal experiences. Diary production is an art. This involves various processes. Also, diary is normally produced on the basis of job order production system. Job order type production applies to industries where products are to be manufactured against specific requirements of the customers. Diary industry is a job shop production industry and Diaries are produced in larger varieties and high volume of Production. Diary is also a seasonal Product. Diary production needs various production processes such as pre-press, press and post-press operations. It needs imported raw materials, skilled labourers, imported machineries, and huge amount of capital.

Sivakasi is the hub of Printing units. Sivakasi is a small industrial town, having more than 263 registered offset printing units and a few of them are leading and world famous diary printing units. A very few diary printing units have their production throughout a year, those diary printing units only are taken into account for the present study. Also, those units are producing more than 30 varieties of diaries as per the client's needs and wants.

Utilization of available capacity, Experience in printing, More returns, Family business, Congenial climate for printing units, Availability of Trained labourers, Ready finance, Popular image of printing units, Automation in diary production are the various factors influencing diary production. To reach the target of stable growth and

self-sufficiency in diary production, it is essential to study the trend of diary production in Sivakasi.

GROWTH TREND AND PROSPECTS:

Diary Production is an art. Diaries had relatively good growth in volume and value in the present century. Not only more people have started using diaries, they are also willing to pay more for its glorious outlook and for its special features and usage. Since it is a seasonal product, diary producers utilize their production capacity at the best and earn profit. The growth trends definitely show positive signals about the industry prospects. Though most players see huge opportunity in this diary industry what would actually work for the players are right balance among strong brand promotion like "Nightingale", good distribution network, constant innovation and quality improvement and creative diaries. Diaries are marketed in India and at the same time in International market also. Diary Printers have the opportunity to earn probably 250 crores as yearly income and at the same time diary exporters earn more than 50 Crores as annual profit in India.

REVIEW OF LITERATURE RELATED TO DIARY PRODUCTION:

Lakshmana Swamy (1990) has highlighted the various problems of production and marketing of printed products like labels, calendars, notebooks, *etc.*, He identified some problems in the production side, i.e., shortage of raw materials, Labour and finance. He identified some printing procedures in which semi automation might be introduced. He also suggested that the commission payable to the intermediaries should be increased and he suggested some remedial measures to overcome the problems in production and marketing of printing services available in Sivakasi.¹

Palaneeswari (1996) in her dissertation on "A study of Production and Marketing practices of Package Printing units in Sivakasi" identified the administrative problems of package printing units in Sivakasi like more legal formalities in licensing, problems relating to taxation and problems relating to excise duty. Package printing units refer to the printing units which are engaged in the printing of package materials in Sivakasi. They do not include those printing units which are producing only calendars and diaries. She founded that majority of the package printing units in Sivakasi (59%) followed cost-oriented pricing method. 43% of the samples serve to the national market. Only 8% of the study participants produce packages for export commodities. In her study, she highlighted that the adoption of technological innovation is crucial for the growth of package printing units in the study area to surmount in the competitive world.²

Dharmer (1999), in an article titled, "Printing through ages" explored the history of printing from ancient days of history of India. Many centuries ago Indians wrote in verses, art and science on palm leaves which were copied by the same manner. The Chinese were the foremost people to use paper. He also explored that in India, during Moghul dynasty, a few families known as 'KAGZIS' kept the art of hand made paper making as secret. He described that Sivakasi, as a small industrial town, has a population of 1.5 lakh and have a printing machinery worth of 100 crores of rupees installed in 400 printing units which are big and small and more than 50,000 people are engaged in the printing, industry. They undertook printing of labels, cartons, calendars, magazines, books and notebooks by offset and packing materials such as butter paper and plastic bags by flexography and tin contains for oil, paint and food industry. He concluded that printing will remain as long as civilization exists. Hence, the printing industry will grow more and more with the advancement of printing science in future also.³

Sravanthi Challapalli, in an article on, "Nightingale aims to give stationery a makeover" a senior editor in business line interviewed Mr.V.Balasubramanian who was the company's (SFA) president. Srinivas Fine Arts (SFA), a sivakasi based company introduced Nightingale, a stationary brand; The Company would open 10 more offices throughout the company in the next one year. It has eight branches at present. The company, which focuses on the upper-end consumer, is also looking at developing stationary for specialized segments. The brand office stationery, notebooks and social stationery such as slam books. It also claims a certain a certain level of innovation in having come out recently with a slew of customized and special interest diaries and calendars. He concluded that SFA's group turnover is in excess of Rs.160 crore. Apart from stationery and printing, the group has interests in paper distribution and trading, textiles, printing, ink and hotels.⁴

An article titled, "Nightingale: Experience the finest in paper" describes the features of the brand "Nightingale".

¹ C. Lakshmana Swamy, "Problems of Printing Units in Sivakasi", M.Phil Dissertation, Madurai Kamaraj University, Madurai. May 1990

² T.Palaneeswari, "A study of production and marketing practices of package printing units in Sivakasi" M.Phil Dissertation, Madurai Kamaraj University, Madurai, 1996.

³ P.Dharmer, "Printing through Ages" *Souvenir, Sivakasi Master Printer's Association, Golden Jubilee Celebration 1948-1998* (50th Golden Jubilee Year), 1999.

⁴ Business line, Wednesday, Dec.04, 2002 referred on March 3, 2008 Sravanthi Challapalli, "Nightingale aims to give stationery a make over"

Nightingale has carefully built one of the best brands in an industry dominated by unorganized sector. Nightingale is the brand owned by Srinivas Fine Arts (SFA). SFA had a humble beginning started in 1964 by Mr.Chockalingam and brothers, as a print trading company in Sivakasi. SFA have now become a global player with a presence in 5 continents. In 1990, SFA introduced the Nightingale brand to the world. In this article, it is concluded that besides quality, Innovation is the factor that is crucial in branding a commodity. Innovations in Nightingale diaries like five year diary, undated diaries, theme based diaries, personal journals like journal to write about dreams, and Fashion diaries have made this brand a life style brand.⁵

RESEARCH METHODOLOGY:

Objectives of the present study:

- To analyse the Compound Growth rate of Diaries and Production Trend of Diaries in the Diary Printing Units in Sivakasi
- To find out the relationship between the actual productions of the diary printing units and trend values.

HYPOTHESIS TO BE TESTED:

H₀: There is no significant difference between actual production of the diary printing units and trend values.

Research Methodology and Data Collection:

The present study is descriptive in nature. The study depended on primary data which were collected by conducting a census survey. The survey was conducted during Jan-Mar. 2018 by using a structured questionnaire

Sampling Design:

The present study is confined to Sivakasi which is a small industrial town and a municipality in Virudhunagar District in the Indian State of Tamilnadu. The town has lot of printing industries and has a major producer of diaries, contributing to 30% of the total diaries produced in India. For collecting information about diary production, census survey technique has been adopted. Table 1.1 shows the Share of printing industries and diary printing units in Sivakasi.

Table 1.1: Printing Units and Diary Printing Units in Sivakasi

Size	No. of Units	%	Diary Printing Units	Percentage
Large	15	2.42	5	55.56%
Medium	206	33.28	3	33.33%
Small	396	64.30	1	11.11%
Total	619*	100	9	100

Source: http://www.anjac.org/web_svk/front.html
Records of Master Printers Association*

Out of 619 printing units which have been engaged in printing of varieties of printing services, diary production or diary printing is done by 9 printing units only. All the 9 printing units which are engaged in the diary production throughout the year has branded diaries. Hence, all those 9 printing units (Table 1.2) have been selected for the study by adopting census survey

Table 1.2: Top Nine Diary Printing Units in Sivakasi

Name of the diary printing units	Brand Name
Srinivas Finearts Printers Ltd.	Nightingale Diaries
Lovely Offset Printers	Lovely Diaries
The Sudharsan Offset printers	Orsans Diaries
The Orient Universal Print	Flora Diaries
Orient Color Art Printers (P) Ltd	Unicornn Diaries

⁵ http://marketing_practice.blogspot.in/2006/02/nightingale-experience-finest-in-paper.html. Friday, Feb.10,2006, retrived on 09.11.2012 "Nightingale: Experience The Finest In Paper".

Name of the diary printing units	Brand Name
Orient Color crafts	Orient Diaries
The Coronation Arts Crafts	Corno Diaries
Diamondhill Printograph	Alfa Diaries
Skylork Printograph	Skylork Diaries

Source: Primary Data

For studying the production trend of diaries in Sivakasi, the entire 9 diary printing units are interviewed and the diary printers’ opinion and views are obtained to make the study worthy and meaningful.

Tools of Analysis:

The collected data are analysed with the help of the following statistical tools.

The trend and compound growth is computed for the production of diaries by adopting the Linear and Semi-log Trend Models and they are as given below:

Linear Trend Model $Y = a+bt$

Semi-log Trend $\text{Log } Y = a+bt$

Where,

Y = Variable; T= time variable and a and b are parameters

Method of Least Squares has been followed. The compound growth rate is calculated by using the following formula:

Compound Growth Rate (%) = $(\text{antilog } b-1) \times 100$

Correlation is computed to find out the relationship between diary production and trend values of Production of diaries⁶

FINDINGS AND DISCUSSION:

Production and Trend values of Nightingale diaries of Srinivas Fine Arts Private limited:

Table 1.3 explained the production and trend values of Nightingale diaries of Srinivas Fine Arts Private limited in Sivakasi from 2006-07 to 2015-16.

Table 1.3: Production and Trend Values of Srinivas Fine Arts Private Limited

Year	Production (in units)	Trend value	Linear Trend coefficient	
2006-07	7,54,000	7,48,590.9	A	15,01,000*
2007-08	8,96,000	8,99,072.8	b	1,50,481.8*
2008-09	10,47,000	10,49,555	correlation r	0.999971*
2009-10	12,03,000	12,00,036	Adjusted R square	0.987*
2010-11	13,50,000	13,50,518	Compound Growth Rate	11.29*
2011-12	15,02,000	15,01,000		
2012-13	16,48,000	16,51,482		
2013-14	17,99,000	18,01,964		
2014-15	19,51,000	19,52,445		
2015-16	21,00,000	21,02,927		

Source: Primary data, * Computed Data

It is clear from the table that there is a remarkable increase in the production of Nightingale diaries during the period under study. The production shows an increasing trend. There is a high degree of positive correlation between actual production and expected production as it reveals a value of 0.99 and its compound growth rate is 11.29.

Production and Trend values of Lovely Offset Printers Private Limited:

Table 1.4 points out the production and trend values of Lovely Offset Printers Private Limited in Sivakasi from 2006-07 to 2015-16.

Table 1.4: Production And Trend Values Of Lovely Offset Printers Private Limited

Year	Production (in units)	Trend value	Linear Trend coefficient	
2006-07	81,000	-88,136.4	A	4,60,454.5
2007-08	96,000	21,581.7	b	1,09,718.2
2008-09	1,00,000	1,31,299.9	Correlation(r)	0.976665
2009-10	1,52,000	2,41,018.1	Adjusted R Square	0.949
2010-11	2,01,000	3,50,736.3	Compound growth rate	34.40
2011-12	3,50,000	4,60,454.5		
2012-13	4,78,000	5,70,172.7		
2013-14	6,95,000	6,79,890.9		
2014-15	8,82,000	7,89,609.1		
2015-16	10,01,000	8,99,327.3		

Source: Primary data

The lovely Offset Printers in Sivakasi has a slow and steady growth in its production. The production is increased from 81,000 diaries in 2006-07 to 10,01,000 diaries in 2015-16. In the year, 2006-07, it has a negative trend. After that, this position is changed into positive trend. The correlation value is 0.976 and the compound growth rate is 34.40.

Production and Trend values of Orsons Diaries of The Sutharsan Offset Printers:

Table 1.5 shows the production and trend values of Sudharson Offset Printers Private Limited in Sivakasi from 2006-07 to 2015-16.

Table 1.5: Production and Trend Values of Sudharson Offset Printers Private Limited

Year	Production (in units)	Trend	Linear Trend coefficient	
2006-07	2,50,000	2,96,545.5	A	5,38,363.6
2007-08	3,00,000	3,44,909.1	b	48,363.64
2008-09	4,60,000	3,93,272.7	Correlation(r)	0.978666
2009-10	4,70,000	4,41,636.3	Adjusted R Square	0.953
2010-11	5,00,000	4,90,000	Compound growth rate	10.54
2011-12	5,35,000	5,38,363.6		
2012-13	6,00,000	5,86,727.2		
2013-14	6,50,000	6,35,090.9		
2014-15	6,95,000	6,83,454.5		
2015-16	7,05,000	7,31,818.1		

Source: Primary data

It is clear from the table that the production of Orsons diaries in Sivakasi has an steady growth and increasing trend. The trend values shows increased trend. The trend co-efficient of production of Orient diaries is statistically significant at 5 per cent level. There is a high degree of positive correlation between actual production and estimated trend values. It reveals that the average production of 48,363.64 units. The compound growth rate is 10.54 and the value of adjusted 'R' square is 0.953.

Production and trend values of Orient Color Art Printers Private Limited:

Table 1.6 shows the production and trend values of Unicorn diaries of Orient Color art Printers Private Limited in Sivakasi from 2006-07 to 2015-16.

Table 1.6: Production and Trend Values of Unicorn Diaries

Year	Production (in units)	Trend	Linear Trend coefficient	
2006-07	1,25,000	1,38,111.1	A	4,39,444.4
2007-08	2,00,000	2,13,444.4	b	75,333.33
2008-09	2,75,000	2,88,777.7	Correlation(r)	0.989499
2009-10	3,50,000	3,64,111.1	Adjusted R Square	0.976
2010-11	5,00,000	4,39,444.4	Compound growth rate	23.09
2011-12	5,50,000	5,14,777.7		
2012-13	6,00,000	5,90,111.1		

Year	Production (in units)	Trend	Linear Trend coefficient	
2013-14	6,50,000	6,65,444.4		
2014-15	7,05,000	7,40,777.7		
2015-16	8,10,000	8,16,111		

Source: Primary data

There is a remarkable increase in the production of Unicorn diaries during the period under study. The production was 1,25,000 in the year 2006-07 and it was increased 8,10,000 in the year 2015-16. The level of production shows an increasing trend because of dealer network. The co-efficient of production of Orson diaries is statistically significant at 5 per cent level. There is a high degree of positive correlation between actual production and estimated production. The compound growth rate is 23.09.

Production and Trend values of Orient Diaries of Orient Colour Crafts:

Table 1.7 shows the production and trend values of Orient diaries of Orient Colour Crafts in Sivakasi from 2006-07 to 2015-16.

Table 1.7: Production and Trend Values of Orient Colour Crafts

Year	Production (in units)	Trend	Linear Trend coefficient	
2006-07	3,00,000	2,81,163.6	A	3,97,090.9
2007-08	3,01,000	3,10,145.4	b	28,981.82
2008-09	3,12,000	3,39,127.3	Correlation(r)	0.980137
2009-10	3,60,000	3,68,109.1	Adjusted R Square	0.956
2010-11	3,80,000	3,97,090.9	Compound growth rate	7.56
2011-12	4,00,000	4,26,072.7		
2012-13	4,70,000	4,55,054.5		
2013-14	4,90,000	4,84,036.4		
2014-15	5,10,000	5,13,018.2		
2015-16	5,65,000	5,42,000		

Source: Primary data

There is a steady increase in the production of Orient diaries during the period under study. The production was 3,00,000 units in the year 2006-07 and it was 5,65,000 units in the year 2015-16. The level of production shows only moderate increase because of their qualitative features of diaries. The trend values shows increased trend. The trend co-efficient of production of Orient diaries is statistically significant at 5 per cent level. There is a high degree of positive correlation between actual production and estimated trend values. It reveals that the average production is 28,981.82 units. The compound growth rate is 7.56.

Production and trend values of Flora diaries of The Orient Universal Print:

Table 1.8 shows the production and trend values of Flora diaries of The Orient Universal Print in Sivakasi from 2006-07 to 2015-16.

Table 1.8: Production and Trend Values of Flora Diaries

Year	Production (in units)	Trend	Linear Trend coefficient	
2006-07	2,55,000	2,56,727.3	A	3,76,181.8
2007-08	2,70,000	2,86,590.9	b	29,863.64
2008-09	2,90,000	3,16,454.5	Correlation(r)	0.96319
2009-10	3,00,000	3,46,318.2	Adjusted R Square	0.920
2010-11	4,00,000	3,76,181.8	Compound growth rate	8.61
2011-12	4,50,000	4,06,045.4		
2012-13	4,65,000	4,35,909.1		
2013-14	4,70,000	4,65,772.7		
2014-15	4,85,000	4,95,636.3		
2015-16	5,03,000	5,25,500		

Source: Primary data

There is a steady increase in the production of Flora diaries during the period under study. The production was 2,55,000 units in the year 2006-07 and it was 5,03,000 units in the year 2015-16. The level of production shows

only moderate increase because of their better practices of distribution methods. The trend values shows increased trend. The trend co-efficient of production of Flora diaries is statistically significant at 5 per cent level. There is a high degree of positive correlation between actual production and estimated trend values. It reveals that the average production is 29,863.64 units. The compound growth rate is 8.61.

Production and trend values of Corono diaries of The Coronation Arts Crafts:

Table 1.9 shows the production and trend values of Corono diaries of The Coronation Arts Crafts in Sivakasi from 2006-07 to 2015-16.

Table 1.9: Production and Trend Values of The Coronation Arts Crafts

Year	Production (in units)	Trend	Linear Trend coefficient	
2006-07	3,32,000	3,23,745.5	A	412000
2007-08	3,50,000	3,45,809.1	b	22063.64
2008-09	3,68,000	3,67,872.7	Correlation(r)	0.996586
2009-10	3,87,000	3,89,936.4	Adjusted R Square	0.992
2010-11	4,07,000	4,12,000	Compound growth rate	5.56
2011-12	4,28,000	4,34,063.6		
2012-13	4,50,000	4,56,127.3		
2013-14	4,75,000	4,78,190.9		
2014-15	5,00,000	5,00,254.5		
2015-16	5,35,000	5,22,318.2		

Source: Primary data

It is clear from the Table 1.9 that The Coronation Arts crafts in Sivakasi achieved nearly a twofold increase in its production from 2006-07 to 2015-16. The production shows an increasing trend. There is a high degree of positive correlation between actual production and expected production as it reveals a value of 0.99 and its compound growth rate is 5.56. The trend co-efficient of production of diaries of The Coronation Arts Crafts is statistically significant at 5 per cent level.

Production and Trend values of Alfa diaries of DiomondHill Printograph:

Table 1.10 shows the production and trend values of Alfa diaries of DimondHill Printograph in Sivakasi from 2006-07 to 2015-16.

Table 1.10: Production and Trend Values of Alfa Diaries of Diamond Hill Printograph, Sivakasi

Year	Diamond	Trend	Linear Trend coefficient	
2006-07	2,15,000	2,12,333.3	A	2,81,666.7
2007-08	2,30,000	2,29,666.7	b	17,333.33
2008-09	2,45,000	2,47,000	Correlation(r)	0.997972
2009-10	2,60,000	2,64,333.4	Adjusted R Square	0.995
2010-11	2,85,000	2,81,666.7	Compound growth rate	6.42
2011-12	3,00,000	2,99,000		
2012-13	3,15,000	3,16,333.4		
2013-14	3,30,000	3,33,666.7		
2014-15	3,55,000	3,51,000		
2015-16	4,28,650	3,68,333.3		

Source: Primary data

It is clear from the Table 1.10 that Alfa diaries produced 2,15,000 units in the year 2006-07 and it was increased to 4,28,650 units in the year 2015-16. The production shows an increasing trend. There is a high degree of positive correlation between actual production and expected production as it reveals a value of 0.99 and its compound growth rate is 6.42. The trend co-efficient of production of Alfa diaries is statistically significant at 5 per cent level. The value of adjusted 'R' square is 0.995.

Production and Trend values of Skylark diaries of Skylark Printograph:

Table 1.11 shows the production and trend values of Skylark diaries in Sivakasi from 2006-07 to 2015-16.

Table 1.11: Production and Trend Values of Skylark Diaries

Year	Skylark	Trend	Linear Trend coefficient	
2006-07	43,000	37,772.73	A	75,000
2007-08	49,000	45,618.18	b	7,845.455
2008-09	53,000	53,463.64	Correlation(r)	0.989864
2009-10	59,000	61,309.09	Adjusted R Square	0.978
2010-11	65,000	69,154.55	Compound growth rate	10.98
2011-12	73,000	77,000		
2012-13	82,000	84,845.45		
2013-14	91,000	92,690.91		
2014-15	99,000	1,00,536.4		
2015-16	1,10,000	1,08,381.8		

Source: Primary data

It is clear from the Table 1.11 that Skylark diaries produced 43,000 units in the year 2006-07 and it was increased to 1,10,000 units in the year 2015-16s. The production shows an increasing trend. There is a high degree of positive correlation between actual production and expected production as it reveals a value of 0.98 and its compound growth rate is 10.98. The trend co-efficient of production of Skylark diaries is statistically significant at 5 per cent level. The value of adjusted ‘R’ square is 0.978.

CONCLUSION:

Diary is one among the printed stationery products. Printed stationery products constitute an important portion of the export products of India. Today, in India, exports of printed stationery products are gradually increasing. Daily diary writers expect elite and innovative diaries from diary manufacturers.

In the light of present empirical study, an honest attempt has been made to study the production trend of diaries of the diary printing units in Sivakasi. Since the production trend is favourable, it is imperative that diary production units should produce the diaries at the cheapest cost and go for global market. With the advent of technological and global changes, the diary producers produce innovative diaries as per consumer wants and needs and they can win the competitive advantage.

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