

Impact Of Covid - 19 On Fire Crackers' Manufacturers In Sivakasi, Tamilnadu

Vipulkumar N M¹, Dhanapal C², Dr Gokilavani S³

^{1,2,3}Assistant Professor, Department of Commerce, Kristu Jayanti College, Bangalore

Email: ¹vipulkumar@kristujayanti.com, ²dhanapal@kristujayanti.com,
³gokilavani@kristujayanti.com

Abstract: India's firecracker capital Sivakasi is watching a dark Diwali this year, with Delhi and five states banning fireworks before the annual festival of lights. Manufacturers are blindsided by the abrupt ban, announced days before Diwali, a season when the town in Tamil Nadu sells over 80% of its crackers. Most manufacturers have shipped their products to stock across the country, and are now bracing for returns (Nidheesh, 2020). The objectives of the study is to seek out the factors influencing the ban of firecrackers manufactures with special regard to Sivakasi, Tamil Nadu. And also, to analysis the impact of COVID-19 with an equivalent. The first data were collected through questionnaire and adopted with suitable statistical tools and represented in graphs. The scope of the study is to supply suggestions and proposals towards the fire crackers manufacturers located in Sivakasi. In conclusion, fire cracker manufacturers may improve the business by way of reducing the chemicals and manage their waste in an eco-friendly manner.

Keywords: Fireworks, Crackers, Impact, Data, Ecofriendly.

1. INTRODUCTION

India is a land of festivals. Diversification in our country is the basis for these varieties of Festivals. Diwali (Deepavali) and Dussehra are the major festivals celebrated in India which falls in the period of October and November respectively. Diwali is often considered as the 'Festival of lights. It is a five-day Hindu festival that celebrates the victory of good over evil. As part of the celebration, firecrackers are used by everyone. None of the Indians can think about a festival without firecrackers, it is as old as India's history. Festivals create tremendous business opportunities in our country. The first firework factory was established during the 19th Century in Calcutta, West Bengal. But after the independence, Sivakasi a city in Virudhunagar District, Tamil Nadu has emerged as the 'Fireworks capital of India'. More than 85% of the Firecrackers are produced and supplied from Sivakasi to almost all parts of India. There are more than 700 firecracker factories situated in Sivakasi to meet the huge demand for crackers all over India. These 700 factories create many direct and indirect job and business opportunities. Many families fully occupied in this business. Since it is a seasonal business many of the firecracker manufactures are borrowing money from banks and other indigenous money lenders at high-interest rates for this short-term business with an expectation to pay back the money borrowed after the season. Many of them working on this business is now turned the third generation. They are producing approximately \$360 million worth of fireworks every year. This shows the scope of this business. It's purely a short-term business they produce

firecrackers throughout the entire ten months to meet the demand of two months i.e. October and November. Earlier itself the ban of firecrackers in several states badly affected the people who are working on this business. Now, fear of the spike in coronavirus crisis in the country during the winter season increase the bad impact of firecrackers and related business. Our study is intended to know the challenges and problems faced by the firecracker manufacturers in Sivakasi, Virudhunagar District, and Tamil Nadu amidst the pandemic COVID-19.

STATEMENT OF THE PROBLEM

Several states and Union Territories (Delhi, Rajasthan, Odisha, Sikkim, West Bengal, Maharashtra, Chandigarh, Karnataka) in India have imposed a ban on firecrackers and their sale due to an increase in air pollution and fear of spike in coronavirus crisis in the country during the winter season. The National Green Tribunal (NGT) imposed a total ban on sale or use of all kinds of firecrackers in the National Capital Region (NCR) from 9th November 2020, midnight to 30th November 2020 midnight, saying "celebration by crackers is for happiness and not to celebrate deaths and diseases". Firecracker manufacturers at Sivakasi were worried that fireworks worth crores of rupees left unsold this Diwali as more states had banned the sale of crackers due to the COVID-19 pandemic.

SCOPE OF THE STUDY

This research is intended to identify the challenges and problems faced by firecracker manufactures of Sivakasi in Virudhunagar District, Tamil Nadu. Therefore, the scope of the study is limited to the area of Sivakasi only.

OBJECTIVES

1. To find the factors influencing the ban of firecrackers manufactures
2. To find out the impact of COVID-19 on the ban of firecrackers.
3. To offer the suggestions and recommendations

COVID-19 AND FIRE CRACKERS

COVID-19 had affected most of the business all around the World. Firecrackers manufacturing purely a short-term business they produce firecrackers throughout the entire ten months to meet the demand of two months i.e. October and November. On 5th November 2020, the Maharashtra Government declared that people should avoid bursting firecrackers during this Diwali as air pollution could pose a problem for coronavirus patients. Firecrackers are burst on a big scale every year during the festivals. This causes a rise in air and sound pollution levels and its effects on the health of people and animals are visible for a considerable period after Diwali. Those affected by COVID-19 are likely to be troubled directly due to the air pollution caused by bursting of firecrackers. Considering this, people should avoid bursting firecrackers this year. Instead, they can light lamps on a big scale and celebrate the festival. Sivakasi is the sole place where 85% percentage of manufacturing of firecrackers take place. Over 5 lakh people are employed directly or indirectly on this business. Moreover 80 lakh people are engaged in selling and allied activities only to meet the firecrackers demand of one of the India's biggest festival Diwali. Earlier the entrance of Chinese Firecrackers had affected the firecrackers business. A loss of Rs.1000 Crores per year due to the sale of Chinese firecrackers in India. Supreme Court permitted to Produce Green Crackers earlier. Hence the manufacturer had produced Green Crackers as per the guidelines of the Supreme Court Order at the beginning of 2020, but the ban of firecrackers due to COVID-19 miserably affected the industry as a whole.

2. DATA ANALYSIS AND INTERPRETATION

Factors influencing the ban of firecrackers manufactures

Factors	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total	Mean	Mean2	SD
Air pollution	29	31	9	1	0	70	4.257143	18.65714	3.794733
Health related issues	46	22	2	0	0	70	4.628571	21.71429	4.133487
Noise pollution	27	12	15	4	12	70	3.542857	14.71429	3.342369
To avoid social gathering	43	24	2	1	0	70	4.557143	21.15714	4.07431

Mean - ΣX_i

Mean² - $(\Sigma X_i)^2$

Standard deviation - $\sigma = (\Sigma X_i)^2 - \Sigma X_i$

$$= 21.71429 - 4.628571$$

$$= 4.133487$$

Interpretation

From the above table it is evident that the Standard Deviation of health-related issues, would be the main reason for the ban of firecrackers in Sivakasi, Tamil Nadu. Hence it is proved that manufacturers knows the real pandemic situation and fire crackers should not affect the people's health. Therefore, the manufactures are aware about the reason health related issues and to avoid social gathering would be a main reason for ban of fire crackers in India.

THE IMPACT OF COVID 19 ON BAN OF FIRECRACKERS.

GARRETT'S RANKING

Respondents have ranked the priorities based on challenges faced by the fire crackers manufacturers due to ban in Sivakasi, Tamil Nadu. The following are the items considered in this study for Garrett's ranking analysis.

1. Unemployment / labor issues – F1
2. Unexpected Loss- F2
3. Non-Repayment of Loan & Advances – F3
4. Capital Loss – F4
5. Loss of Investments in Raw Materials - F5
6. Not able to cope up the Fixed Cost / Variable Cost – F6
7. Returned Goods/Unsold Goods - F7

To find out which are most important / preferable reasons Garrett's ranking technique is followed. The respondents were asked to rate the above said items and these ranks are converted into percentile scores as follows.

$$P = \frac{100(R - 0.5)}{N}$$

P = Percentile Position

R = Rank assigned by the respondents

N = Number of ranks assigned

For these percentile positions (P) the percentile scores are taken from Garrett's table and denoted by 'X'. Then taking the number of respondents assigning ranks 1, 2, 3, 4, 5, 6, 7 & 8 to the items as frequencies (F) the product 'X.F' and its sum is ' $\sum X.F$ ' is found and given in the following table.

The impact of COVID-19 on ban of firecrackers.

Garrett's Ranking for priorities based on Challenges faced by the fire crackers manufacturers due to ban in Sivakasi, Tamil Nadu.

Rank	1	2	3	4	5	6	7		
Score (X)	79	66	58	50	43	35	22	Total	Rank
F1	6	7	15	7	11	20	4	70	
XF1	474	462	870	350	473	700	88	3417	7
F2	25	16	22	4	0	1	2	70	
XF2	1975	1056	1276	200	0	35	44	4586	2
F3	5	11	6	6	5	23	14	70	
XF3	395	726	348	300	215	805	308	3097	6
F4	8	7	13	9	15	7	11	70	
XF4	632	462	754	450	645	245	242	3430	5
F5	13	14	20	4	6	12	1	70	
XF5	1027	924	1160	200	258	420	22	4011	3
F6	6	11	16	24	7	6	0	70	
XF6	474	726	928	1200	301	210	0	3839	4
F7	35	7	16	5	4	1	2	70	
XF7	2765	462	928	250	172	35	44	4656	1

Interpretations

From the Garrett's Ranking for priorities based on Challenges faced by the fire crackers manufacturers due to ban in Sivakasi, Tamil Nadu, it is found that returned goods and unsold goods were ranked first by majority of the respondents, while unexpected loss and loss occurred due to huge investment of raw materials were ranked second and third respectively. From this it can be concluded that the above were the first three main problems and challenges faced by the respondents due to Covid-19.

SUGGESTIONS AND RECOMMENDATIONS

In India, we have a rich cultural heritage and celebrations are part of our life. In one way or other way firecrackers bring happiness to people during the celebration. Hence firecrackers are inevitable item during any celebrations or festivals. Firecrackers are not only used for Diwali and Dussehra it is used for all the festivals and celebrations like small Festivals, Inauguration, Political party meeting, Celebrating the victory, Marriage functions, Funeral etc.

MANUFACTURER OPINION

- The Supreme Court had ban the firecrackers due to pollution and health issues and advised to produce Green Crackers.

- The Crackers are sold during the month of November and October for the Diwali and Dussehra Celebrations nonetheless the manufacturers are spending the rest of the month for manufacturing and keep ready for the sale.
- Already they are facing many problems due to the lockdown for more than 6 months.
- Many of them, lost their jobs, businesses because of this ban and Covid-19.
- Due to the ban of firecrackers manufacturer are not in a position to meet their fixed costs like salary, rent, interest and other miscellaneous expenditure.
- Firecrackers manufacturers had invested their capital in this business. Because of the ban on firecrackers, the products were returned by the retailers as they were unable to sell the firecrackers. Most of the Firecrackers manufacturers had borrowed loans either from banks or from indigenous money lenders at a high-interest rate with an expectation to repay the amount after this season.
- Vehicles and factories are producing more pollution and health-related issues as compared to firecrackers but the Government is not taking any actions against such things.
- 85% of the firecrackers are manufactured in Sivakasi, millions of people's lives are based on this business alone.
- The ban of firecrackers in many states in India has badly affected the livelihood of people.
- Many people living in Sivakasi are below the poverty line. In Tamil Nadu. Many people are depending on this firecrackers business and it creates more employment opportunities for the people not only living in Sivakasi but also in other places in Tamil Nadu.
- Due to the scarcity of water, neither agriculture nor other allied business is not possible in Sivakasi.
- The government must take remedial actions to protect the life of the people related to this business and safeguard their livelihood.
- Supreme Court permitted to Produce Green Crackers earlier. Hence the manufacturer had produced Green Crackers as per the guidelines of the Supreme Court Order at the beginning of 2020, but the ban of firecrackers miserably affected the industry as a whole

3. CONCLUSION

Supreme Court had already permitted to produce green crackers. Hence the manufacturer had produced green crackers as per the guidelines of the Supreme Court Order. The firecracker manufactures are aware of health related issues of firecrackers burst during this pandemic. They don't even know any other work or business, they solely depend on this business. Over 700 manufacturing units are there in Sivakasi to meet the demands of Firecrackers in India. Most of them are doing their business with borrowed capital because it's a short-term business and they will be able to repay the interest and capital after the season. Sivakasi is facing heavy water scarcity so they are not in a position to do agriculture or allied activities in Sivakasi. This pandemic had affected most of the businesses around the World. But the Government could have given some financial support to the people related to this business for a short period of time.

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