

**MULTIDIMENSIONAL CHALLENGES AND OPPORTUNITIES IN SAFETY
MATCHES INDUSTRY AND PROPOSAL TO IMPROVE THE SECTOR
FOCUSING VIRUDHUNAGAR DISTRICT, TAMILNADU**

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ABSTRACT:

The origin of the safety match production in India dates back to the early 1910s. The people in Calcutta learnt the skills from the Japanese immigrants who settled in India and were doing the business learnt from the Europeans and Americans with the help of simple machines. But they were not skilled to produce quality matches and were not be able to compete with those that were imported from European countries such as Sweden, Germany. People from Tamilnadu with aspiring entrepreneur skills learned the match making process and brought the process to Tamilnadu initially to virudhunagar district. . This shift was due to the pioneering efforts of P.Iya Nadar and A.Shanmuga Nadar who learnt the process from Purna Chandra Ray, a local Businessman,in Calcutta who had learned the trade in Germany. The handmade sector produced quality matches and the industry flourished in southern districts of Tamilnadu and from there shifted to the nearby places. Virudhunagar's dry climate, cheap labour facilities and availability of raw materials needed for the industry made the place an ideal for setting up the industry. The entrepreneurial spirit of the Nadar community in these areas played a vital role in the match making business.

Safety match industry was an eye catcher to the aspiring industrialists in the last century due to its easy start up procedure and revenue yielded. The flourished industry started to decline in the early 2000 due to Government policies and intervention of mechanised sector. At present the future of 1500crore safety match industry is in a oscillation. If this pertains the industry will be burnt away by the mechanised ones.

The current article portrays the development of safety match industry in southern Tamilnadu focussing virudhunagar district. It hubs the challenges and opportunities in the sector and proposals to enhance the burning away industry.

INTRODUCTION

“It is trade that gives birth to the urge to develop the knowledge and experience that make development possible and the means to accomplish it”.

As said by Caryn cross, its trade that give birth to economy. Small scale sector places a vital role in developing the country’s economy.

“Specialization in primary production generally serves through export, as a powerful engine of domestic economic growth”. Says United Nations trade and development board. Through exports a nation can develop their domestic economy and in turn the country develops. Safety match industry an earlier added up in the small scale sector now in large scale sector due to its mechanised operations plays its own prominent role in Indian exports.

SAFETY MATCHES UNDER “OTHER CLASSIFIED ITEMS”

To build the export division further aggressive, the government provided fiscal and monetary incentives.



Indian exports include agriculture and allied products, ores and minerals, manufactured goods, crude and petroleum products and other classified items.

Safety matches being a product with meagre cost and selling price, are included in the “others & unclassified items” which constitute insignificant proportion in the total exports from India.

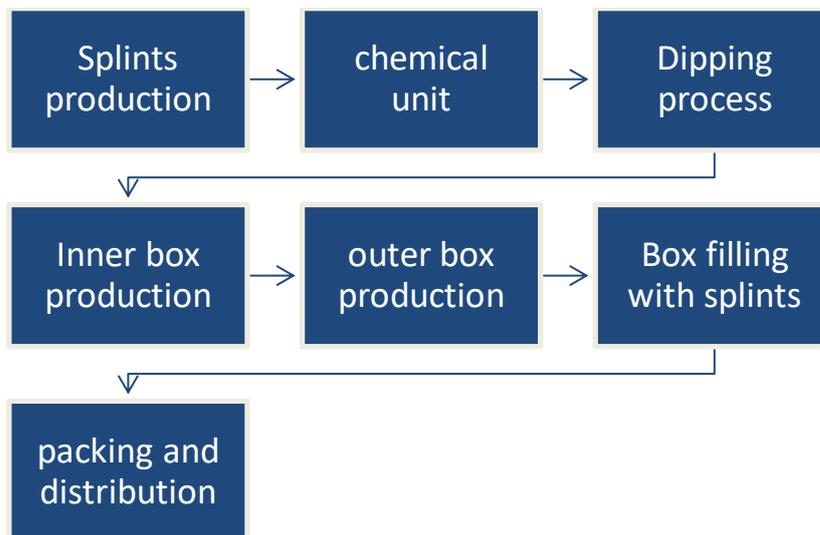
MATCH MAKING -A COTTAGE INDUSTRY:

Ancient People first learnt to produce fire by striking stones with each other. And it has undergone many changes and have formatted to safety matches as we are using today. It has become one of the needed stuff for life.

Gandhiji said, “a cottage industry will create a great socio economic significance in bringing the livelihood to the peoples doorsteps without their restoring to migration” . And undoubtedly developing a cottage industry will enhance the socioeconomic condition of the country. And such is the match industry. It is best suited to cottage sector.

Being a simple process, it doesn't requires skilled labours. People with no education can do this job and even the physically handicapped too.

Layout showing the simple manufacturing process in the cottage sector

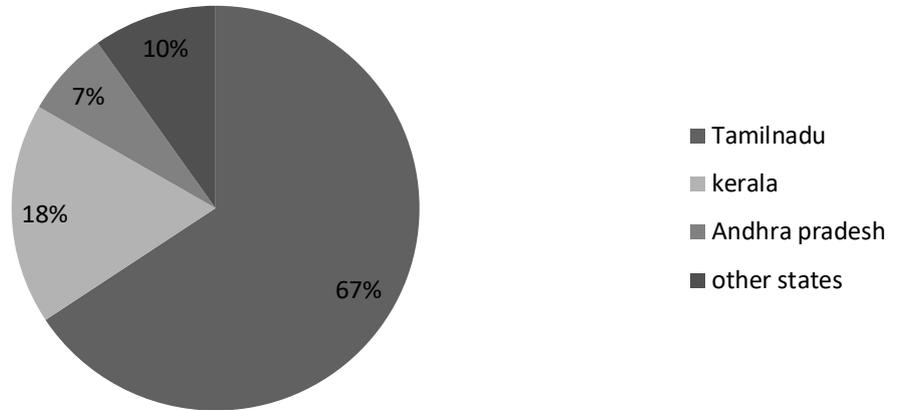


A village industry employing 1 person will make nearly 10 gross match box a day whereas an automated industry can do this employing a single person. And now most of the industry has been semi automated and some fully, this sector will provide 10 times more employment if done wholly by the cottage industry as handmade.

Now 67% of India's matches are produced in southern tamilnadu districts namely virudhunagar, tuticorin and tirunelveli with Virudhunagar ranking the first. And another 15 per cent of Match production is distributed all over the country in small production industries, although a large proportion of these are also in south India.

The non-mechanised match industries in India are concentrated in the states of Tamilnadu, Kerala, Andhra Pradesh, Orissa, Bihar, Maharashtra, Assam and Haryana.

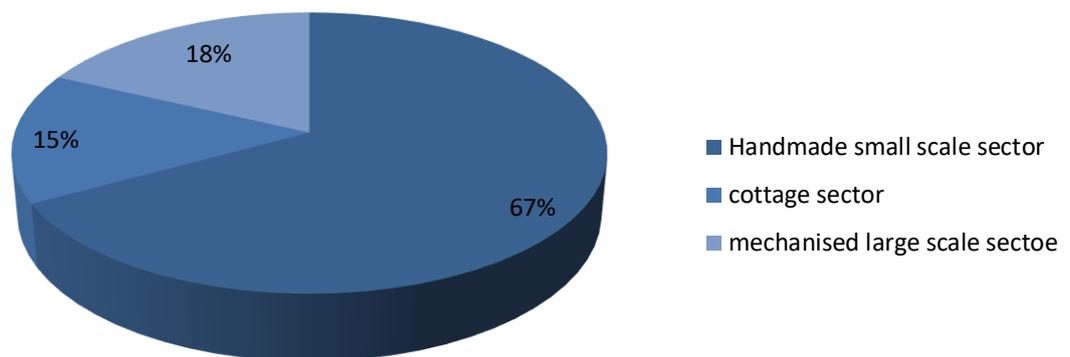
Distribution of safety match industry in southern India



THE INDUSTRY TODAY

The three layers of the match industry: fully automated, hand made small scale sectors and cottage sector meet the increasing demands of the industry. Each sector has special characteristics and limitations.

Wooden match production sectors



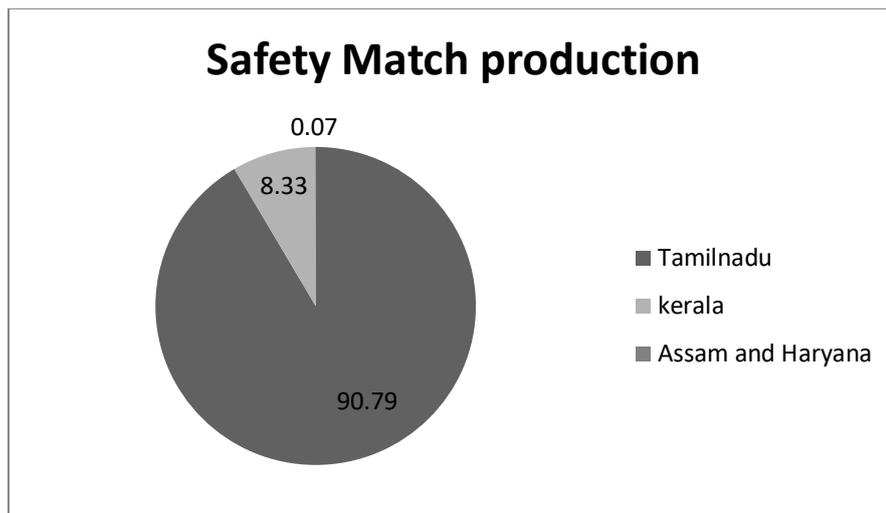
MATCH INDUSTRY IN INDIA:

India is suitable to matches manufacture as it is mainly a labour intensive process and the availability of raw materials and cheap transport facilities adds up to an added advantage. And the country's magnitude of home market makes its trade volume more in its home country.

Imports of foreign Matches from abroad are on duty imposed and it doesn't stand with those made in the home country and this makes the cottage industry to survive. The revenue duty imposed on the imported matches affords a good and safe protection to the growth of indigenous match industry in India.

MATCH INDUSTRIES IN TAMILNADU

Tamilnadu state stands first with 90.79 percent of the Match Manufacturing Industries, followed by Kerala with 8.33 percent and Assam and Haryana with 0.07 being the lowest.



In Tamilnadu, Virudhunagar district is the leading Match producing centre and most of the small scale hand made industries are concentrated in and around this area. Sivakasi, a municipality in virudhunagar district is the birth place of match industry in Tamilnadu.

Mr.P. Iyya Nadar and Mr. A. Shanmuga Nadar , entrepreneurs of Sivakasi town in Virudhunagar district initiated the industry and are responsible for the gradual growth and organized development of this industry in the southern districts of Tamilnadu .

SAFETY MATCH INDUSTRY IN VIRUDHUNAGAR DISTRICT

Virudhunagar district is the major manufacturer and exporter of safety matches in Tamil Nadu. Satisfying the domestic market, the entrepreneurs are competing in international market and grabbing new opportunities since 1981. The district has been producing safety

matches using handmade technology by which a huge number of people . The export of safety matches during the pre-liberalisation period from 1981 to 1990 was less than the export during the post-liberalisation period from 1991. In Virudhunagar district, the number of match units is more than 2,500 whereas the export oriented match units are nearly 100.

Other districts in Tamilnadu manufacture safety matches to provide to the needs of the domestic market.

By entering the foreign market, the exporters of safety matches can increase the inflow of foreign currency into India and can familiarize Indian products in international market. This makes the country flourish. This, in turn, will increase the income of individual entrepreneur and also the income and wealth of the nation.

Owing to the policy measures of Government of India the match units in Tamil Nadu and Virudhunagar district have got tremendous growth and they serve both domestic and export markets

OPPORTUNITIES TO THE INDUSTRY:

➤ No Power industry:

None of the following processes is ordinarily carried on with the aid of power, namely

- i. The process of giving the surface flats or strips, the composition of a Match box including the outer surface or the inner surface with the use of match paper.
- ii. Frame filling
- iii. Dipping of splints in the composition for Match heads.
- iv. Filling of boxes with Matches.
- v. Pasting of labels on Matchboxes or veneers or card boards.
- vi. Packaging.

➤ Government Measures in Promoting the Safety Match Units

Indian Government policies have played an important role in the development of the match industry. Indian government has been encouraging and protecting the small-scale sector post independence by providing Protective tariffs, differential excise duties and sales tax exemption .And thus the match industry flourishes in India.

➤ Production Ceiling on Mechanized Sector

Wimco, an ITC company is the single largest match manufacturing unit in India .

To encourage the expansion of hand-made cottage sector, the Central Government has frozen

the capacity of Wimco, to 6,95,000 cases (1 case = 7,200 match boxes).

➤ **Availability of Human resource**

principal component of an organization is its „human resource“ or „people at work“. Human resource is important for the success of any organization, because most of the problems in organizational settings are human and social rather than physical, technical or economic. Men, women, the elderly and partially handicapped persons are employed in labour-intensive match units. It requires low level of technology and relatively small capital investments.

A number of operations in the production process can be easily undertaken at home. These factors clearly demonstrate the significant socio-economic value of small-scale match production.

In virudhunagar district alone more than 2,50,000 people are directly employed in the match making industry. The cottage sector produces less than 75 million match sticks per year, is often household-based and employs nearly 1,00,000 workers.

Since Virudhunagar district experiences scanty rainfall, people in this district cannot depend on agriculture for their survival. Hand-made and semi-mechanised safety match industry in Virudhunagar district provides job opportunities to a large population in the area.

The khadi and the village industries commission launched a scheme under “Rural employment generation programme “for financing projects with investment limits up to 25 lakhs and this enhances the growth of match industry on cottage basis.

. CHALLENGES TO THE INDUSTRY:

The Indian match industry has expanded to a much greater level that its exports are unique in the international market. There are, however, a number of important limitations that the industry has to face up . These include:

- Scarcity of Match wood
- Shortage of chemicals
- The monopoly of WIMCO and 18 other match kings.
- child labour and women exploitation
- Distribution problems

- labour shortages
- letdown of the Cottage Sector
- Changes in technology
- GST and its implications

1. Scarcity of Matchwood

The government has projected a shortfall of 900,000 m³ in the year 2000. Veneer quality wood for match boxes, which accounts for 44% of matchwood used, is in particularly short supply. Through policy decisions the government has also raised the royalty on wood many times over. There has been a virtual scramble to take whatever wood and ready splints are available between the mechanized and the handmade sectors.

Afforestation and diminishing of wood resources is the major drawback for the shortage of raw materials needed by the industry. Consumption of fuel increased as population and industry burnt more. Woodland cleared to provide more cultivated lands and constructions.

Semul, a main matchwood species has been available on a very scanty level and no steps have been undertaken to replenish the species. *Ailanthus excels*, *Ailanthus tryphysa*, *Ceiba pentandra* main wood supplying species for the industries are very expensive due to its scarcity. This growing shortage of wood manifested itself in a price inflation of astonishing magnitude.

Shortages and High Prices of Chemicals

Potassium chlorate, sulphur, starch, glue, red phosphorous, powdered glass, glue are the chemicals used in the match industry. Potassium chlorate, a major chemical compound is needed for the preparation of match heads. This material is produced nearly 15,000 tons within the country, even this; there is a shortage for this chemical. This is due to shortage of power which affects its production in turn affects the match industry. To solve this, the match manufacturers use certain varying chemical compositions with less potassium chlorate in preparing the match heads thus affecting its quality.

➤ **Distribution problems**

Mainly match production is concentrated in the southern states of India mainly Tamilnadu. The match production in Tamilnadu is concentrated in and around the district virudhunagar. Nearly 90% of the matches are produced here. As the labour availability is very cheap in these areas and due to the initiation of entrepreneurs in these areas the industry has been concentrated here. This paves way for transportation and distribution problems.

➤ **Labour shortages:**

Even then the labours availability in the match making areas are cheap, the labours available have been diversified in the recent era to fire work industry and printing industry. As the climate in the virudhunagar area is arid and dry agriculture is mainly dependent on monsoon. And also it receives very low rainfall from the monsoon, people depend on alternate life surviving works. The industry has been diversified in to many similar ones and so the labour intensity has been reduced significantly in match industry. Due to labour shortage, many units in these areas are unable to utilize their installed capacities fully. In some cases, production levels are as low as 40% of capacity.

➤ **Child Labours and women exploitation:**

Since the women in the places where the industry flourishes are mostly illiterate they have been paid very low wages and were given only few benefits. They also lack proper working conditions and sanitary condition is also very low.

Due to non mechanised operations in the hand made sector, it employs more child labours as the wage can be considerably given low .moreover the child labours can be employed without any fringe benefits. And mainly poverty continues to remain a major cause of these women and child exploitations and severe hardships faced by the families. Child labour is still prevalent in the informal sectors of Indian economy .

International labour organization(Article 32, convention rights of the child) says, about one third of the children of the developing countries are failing to complete even 4 years of education. Indian population has more than 17.5million working children in different

industries, and incidentally maximum are in agriculture, leather industry and **match making industries**.

This affects the cradle of our civilization- The women and our future generations physiologically and psychologically thereby affecting our nation's progress and pride.

➤ **Letdown of the Cottage Sector**

Due to easy start up procedure of the hand made cottage industry many small industries have been opened up by many personalities. Most of them were less educated. They lacked proper knowledge about the sector thus producing less quality products and also in finding out the markets for their finished product.

Many such factories were formed in unsuitable working places, mainly in sheds, in houses that lacked spaces for storing raw materials and finished products. Moreover storing up of finished products without proper procedure have caused many small accidents. It lacked quality control. These factors laid to the failure of the cottage industry in certain areas.

➤ **Changes in Technology**

Wimco, the largest match manufacturer in India produced superior quality matches and consumer friendly ones. It is the first company in India to introduce "kaborised" safety matches which leave "no afterglow" .thus wimco produced technologically superior matches . this innovation in turn affected the small scale hand made industry resulting in diminishing the employment rate. Thus the concept of employment oriented technologies concept by the government has been eradicated.

➤ **GST and its implications:**

The current rise in the goods and service bill by the government on safety matches from twelve percent to eighteen percent for semi mechanised and fully mechanised units has affected the prospects of the stakeholders relying on the traditional industry. The higher tax rate will affect the industry wholly if the GST is not lowered. If this has not been reduced, the box which is sold at Re.1 will be increased twice and will be sold at Rs.2 in the next year.The

industrialists are stressing up the government to lower the tax rate to twelve,. If done, this will enhance the revenue six times fetching 300 crore annually. With a meagre profit of 2-3% from sale, the manufacturers will have been availing an input benefit of 9%. Thus if GST reduced to twelve will not be a burden to the manufacturers.

➤ **Further limitations**

In addition to raw material shortages the ancillary veneer and splint industry faces a number of constraints including:

- inadequate supply of electric power
- lack of training facilities for skilled works and quality control
- failure of research and development to undertake systematic development of raw materials mainly wood; and
- lack of marketing and institutional support.

PROPOSAL TO IMPROVE THE SECTOR:

❖ **Replacement of Wooden Matchboxes with Cardboard**

To meet the shortage of timber based raw materials, substituting it with cardboards provides a far better choice. Even though cardboard production also requires fibrous raw materials from woods but it has a wider choice of raw material species such as eucalyptus, bamboos, grasses and from agricultural residues. Wimco has converted 70% of its wooden box production to cardboard.

But the higher cost of cardboard Rs.400 per case is the major problem faced by the industrialists in converting to this resource. Moreover switching to cardboard will involve mechanisation thereby reducing the employment. And this has to be noted thereof. The problem According to projections by Wimco and the KVIC 500,000 m³ of matchwood have been saved in the year 2000 by substituting cardboard for all wooden boxes.

❖ **Substitution of Wooden Matches with Wax Matches**

Another approach to the raw material problem is to substitute wax instead of wood for the match splints themselves. The splints are made from a special type of wax paper. The production of wax matches has so far remained restricted due to the high cost of wax paper, about Rs 20,000 per ton at present, and the very high ad valorem excise on wax paper of 31.5%. If wood shortages continue to be as severe as projected, the problem can be partially solved through government rebates in excise levied on wax paper to encourage the production of wax matches. Wax is, however, a petroleum by product and it is unlikely to become readily available in sufficient quantities to replace wood in match splints.

❖ **Conservation of Available Wood Resources and Increased Imports**

❖ **Regeneration Through Plantations and Agro forestry**

The permanent and only solution to solve the shortage of raw materials lies in regenerating the timber yielding species mainly semul thereby maximising timber production. *Ailanthus malabarica* a short term rotation species mainly grown in northern India should be cultivated more and researches have to be done by producing a hybrid variety of the species suitable to be grown in southern India.

Even if all of the radical measures to solve the matchwood shortages mentioned above are implemented by the government and the industry, the only lasting solution to the matchwood shortage lies in regenerating the trees and maximizing timber production. This can be accomplished by the government and private tree farmers through more intensive management of existing plantations of softwood trees like semul. Widespread adoption of tree farming, particularly of short rotation species suitable for matchwood such as hybrid poplars in northern India and *Ailanthus malabarica* in South India should also be promoted.

Due in part to the great success of poplar farming in Pakistan, which is now self sufficient in match production, there is increasing activity and considerable potential in private matchwood production through agro-forestry. In northern India, where there has been a tradition of poplar growing, especially in Kashmir, Wimco has pioneered tree farming of poplar woodlots and inter-cropping of poplar with cash crops like turmeric. Poplars will grow above 28° latitude in north India and do particularly well under optimum soil conditions with irrigation when grown in compact plantations. There are several species of poplars

indigenous to the Indian Himalayas including *Populus euphratica*, and many ornamental and hybrid poplars were introduced over the last 50 years.

Research is being done on inter-cropping semul with a number of crops by the University of Tamil Nadu Research Station .

Some state government social forestry programs are already undertaking matchwood production on a limited scale, by including species like poplars and *Ailanthus malabarica* in their seedling distribution.

❖ **Additional support:**

Appropriate supports such as providing non interrupted power supply, training and awareness programs to preserve, protect, regenerate the needed timber by practising agro forestry, providing education on quality control measurements should be provided by the government directly or its agency such as khadi and village industries commission(KVIC) or through NGO's.

❖ **100% Marketing by KVIC**

KVIC presently procures 45% of the production of the handmade match factories under its purview and leaves 55% to the unit to market at its own discretion. It is recommended that KVIC procure 100% of the production to market and leave the unit to concentrate on production only. By doing so, the unit will be able to put a larger quantity to market and the consumer will be benefitted by paying lower prices. In order to do this, the KVIC may need more financing from the Central Government.

❖ **Diversification of the production industry**

The industry can be developed in any part of the country as it doesn't require any specific factors to cater in to. By doing so, it generates employment to the unemployed in other parts of the nation.

CONCLUSION:

Since the cost of production is higher in semi- mechanised industries than it is in the fully automated ones, due to labour component, there is a demand for lowering the GST. A balanced taxation is necessary to safeguard the declining industry.

It is to be remembered that the match industry provides the bread and butter for thousands of cottage unit owners. In virudhunagar district alone six lakh direct as well as indirect employees are engaged in this sector.

It is high time for both state and central governments to step in to the field of cottage industry to devise suitable measures to tide over the problems faced by the match manufacturers.

APPENDIX:

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