RESEARCH STUDY ON PRODUCTIVITY & COMPETITIVENESS OF TOY MANUFACTURING SECTOR IN INDIA

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CONTENTS

CHAPTER 1

INTRODUCTION

1.1 Background

Toys play an important role as cultural ambassadors reflecting 5000 years of Indian civilization. Toys manufactured across the country reflect the cultural diversity of the country. India produces a wide range of Toys viz., plastic, mechanical, soft/plush dolls & animals, board games, puzzles, educational games, metal and tin, wood, Battery operated pullback Toys etc. Indian toys are made from diverse raw materials like, plastic, wood, rubber, metal, textiles etc. Toy Industry in India has witnessed a lot of changes over the last decade in terms of categories of toys, innovation, eye-catching design and other aspects. Traditionally, Toy sector is a labor intensive industry; it provides tremendous employment opportunities to over 3 million workers of which women constitute about 70 percent of workers.

The toy industry is mainly based in small and cottage sectors, with about 4000 manufacturing units comprising of micro (75%), small and medium (22%) and large (3%) units. The toy manufacturers are mostly located in Delhi, Mumbai, and Punjab, Uttar Pradesh, Haryana, Tamil Nadu and clusters across central Indian states. Manufacturing of toys in India utilize local skills of master craftsmen and creative designing. Indian toy industry comprises of large number of indigenous manufacturers and a few leading global companies.

The toy market has two broad segments such as the "organized" segment, which represents about one-third of the market, and the "unorganized" segment. Mom-and-Pop shops (also known as "Kirana") are mainly "unorganized" outside the main urban centers, and predominantly operate on a cash-and-carry basis. The size of Indian Toy industry is about Rs.8000 crores of which Rs.3000 crores accounted for by organized sector whereas about Rs.5000 crores accounted by the unorganized sector. The "organized" sector stores are available in big cities – mainly toy specialty stores such as RCS in New Delhi, Hamleys in Mumbai or Prijanka in Hyderabad. Some large MNC toy manufacturing units like Mattel and Funskool have their presence at major cities in India. Funskool is the largest toy manufacturer in India with 30% share, followed by Mattel (20%), Hasbro (9%), Bandai (4%) and Lego (4%) and Leap Frog (3%) and the others accounts for about 30%.

The Indian toy industry has shown tremendous growth and expansion potential in the domestic market that is estimated at about US $850 million and it generated 0.5 percent of the global market. The growing awareness among parents in India coupled with increasing personal disposable income led to the growth of toy market and particularly for educational toys and games that offer creativity and lead to the development of the brain of the child. Besides, there is huge demand of Toys under literacy program such as Sarva Shiksha Abhiyan run by Government of India.

According to Euro monitor study, spending on toys and games in India is set to grow at 157% between 2009 and 2014, much faster than other Asian countries such as China (84%), Taiwan (35%), South Korea (33.1%) and Singapore (17.2%). Indian parents spend an average of Rs

250-300 on a toy and this is going up with more and more innovation-driven high-end toys and games - from high-priced board games and play games to BeyBlades and remote-controlled planes -enter the market.

Internet retailing is becoming a more and more important distribution channel due to several reasons. Consumers have increasing access to the internet and online retailers often have better merchandise in terms of variety, new launches and offer of branded toys. Though the online toy market represents a mere 5%, it is growing rapidly and is unlikely to have a major influence on the overall demand in the next couple of years. India is producing quality toys, which is unmatched elsewhere and therefore, the demand for Indian toys is rising by leaps and bounds.

Dynamics of toy industry changed with the opening of the market for Chinese players. Chinese toys are destroying the Indian toy industry and small and medium manufacturers are almost on the verge of collapse due to severe comptetition. Indian toy industry is much backward in comparison to China's toy industry. Capitalizing on the advantage of the raw materials and cost of labor, China has become the largest manufacturer and exporter of toys in the world. It is estimated that about 85% of toys worldwide is produced in China. According to China Toy and Juvenile Product Association, China's toy exports totaled US$ 15.7 billion in 2015.

According to industry body ASSOCHAM, spiraling exports have also decimated India's domestic toy manufacturers. In the last 4-5 years, 40% of Indian toy companies have shutdown and another 20% are on the verge of closure. In terms of pricing, there is a huge gap between locally-made toys and international brand name toys. As such, locally-made toys still maintain a strong edge in the medium to low end segments of the market and practically monopolize sales channels like the wholesale market and individually-run retailers. Among the local manufacturers in India about 59% are still focusing on the production of cheap and unbranded toys which appeals to the price-sensitive Indian consumers. In the future it is expected that these companies will shift towards branded toys as well to stay competitive with international companies.

With the lowering of tariff barriers, melting of international trade boundaries, the domestic market is now open and the Indian toy industry is facing the challenge from the domestic distributors and multinational competitors who import cheaper products mainly from China. Only 20% of the Indian market is served by Indian toy manufacturers while the rest is served by imported toys from different countries mainly from China and Italy.

1.2 Objectives of the study

- To study and document the overall structure of Indian Toy Industry.
- To measure the productivity and competitiveness of the toy industry in India vis a vis China with a view to identify the factors responsible for the success of the toy sector in China and to recommend adoption of relevant factors in India.

- To develop a SWOT profile for the Indian Toy industry.
- Identify the major problems faced by Indian Toy Industry after the liberalization of the economy through an all India field survey of manufacturing units.
- To study and analyze toxic aspects of some of the common raw material such as Nickel, Lead salts, etc. used in the production of Toys.
- Identify the aspects and measures required for showcasing traditional toys in national and international markets.
- Traditional toys like terracotta, wooden toys, paper toys, cane and stick toys, traditional tin toys and collectables etc., having sizeable and up-gradation shall be covered in the study.
- Study of export potential for traditional Indian toys and other toys manufactured also shall be included.
- To undertake a wider interaction with various stake holders including Toy Industry Associations to find out major problems and suggest policy recommendations.
- To suggest areas where further interventions are urgently required to improve productivity and international competitiveness of the toy industry.

1.3 Methodology

The research study has been undertaken in three broad phases:

First phase of the study focused on secondary sources of data and literature. The data and literature have been compiled from both published and unpublished literature sources for the last six years with a view to understand the growth and development of toy manufacturing in the country during XII Plan. The published data on toy industry is mainly compiled from Director General Foreign Trade (DGFT) and Annual Survey of Industries, as per NIC 2008 classifications (three digit industries *i.e.* 324 - Manufacture of games and toys).

Second phase of the study includes a detailed field survey with structured questionnaires across **137 Toy Manufacturing Units** randomly selected from both traditional and modern segments spread across various toy manufacturing clusters (55 from traditional toy segment and 82 from modern toy segment) **(Table 1.1 and Table 1.2)**. Field Survey has been undertaken through specially structured questionnaires for Modern Toy Segment **(Annexure 1.1)** and Traditional Toy segment **(Annexure 1.2).**

Table 1.1. Field Survey of Traditional Toy Manufacturing Units

Sl. No.	States	Name of Clusters/ Locations	No. of Units (Nos)
1.	Andhra Pradesh	Adilabad and Kondapalli	08
2.	Gujarat	Patan and Kutch	09
3.	Karnataka	Bangalore, Bangalore Rural, Belgaum, and Bellary	11
4.	Uttar Pradesh	Agamgarh, Lucknow , Varanasi and Agra	15
5.	West Bengal	24Pargana North, Burdwan, Hoogly, Murshidabad, and Shantiniketen	12
	Total		**55**

Table 1.2: Field Survey of Modern Toy Manufacturing Units

Sl. No.	States	Name of Clusters/ Locations	No. of units (Nos)
1.	Karnataka	Bangalore	11
2.	Telengana	Hyderabad	01
3.	Tamilnadu	Chennai	01
4.	Maharashtra	Mumbai	14
5.	Uttar Pradesh	Meerut	14
6.	Delhi	Delhi/NCR	27
7.	Gujarat	Ahmadabad	05
8.	West Bengal	Kolkata	09
Total			**82**

The field data has been analyzed using Standard Statistical Software's such as SPSS for arriving at meaningful analytical tables for both traditional and modern toy segments separately.

Third phase of the study included a one day National Seminar convened at Delhi on 17th February 2016, involving all major stakeholder categories such as Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry, Ministry of Micro, Small and Medium Enterprises, Bureau of Indian Standards (BIS), IIT Delhi, Sports Goods Export Promotion Council (SGEPC), Toy Industry Associations, Modern Toy Manufacturers, Traditional Toy Manufacturers etc., The National Seminar was organised under the title **"Repositioning Indian Toy Industry under MAKE IN**

INDIA initiative for Global Competitiveness" where the stakeholders came together and deliberated on various issues confronting the Toy sector and the outcome of the national seminar has been included as a separate chapter in this report.

1.4 Chapter Scheme of the Report

The study report has been divided into ten chapters. Introduction has been presented in chapter one. It includes background, objectives of the study, data source and methodology followed for undertaking the study. Chapter two explains structure of Indian toy industry. This chapter explains traditional toy industries and modern toy industries. Chapter three discusses productivity and growth of registered toy manufacturing sector based on the secondary data compiled from Annual Survey of Industries (ASI) registered toy manufacturing units. Global toy market and India's trade with world is analyzed in chapter four. It shows position of India with respect to other countries in terms of market share spending per kid etc. Chapter five provides toy industry in China. Chapter six explains SWOT analysis of Indian toy industry. Toxicity and Safety of toys are discussed in chapter seven. Chapter eight analyses field survey findings of the toy manufacturing units for both categories of toy sector *i.e.* modern and traditional toy sector. Concerns of the Indian toy industry based on the feedback received during the National Seminar are given in Chapter nine. Chapter ten includes summary and recommendations emanating from the study.

CHAPTER 2

STRUCTURE OF INDIAN TOY INDUSTRY

2.1 Overview

History of Toys is as old as human civilization. Early humans made toys from materials found in nature such as rocks, sticks and clay. In the modern era, toys are made from a wide range of materials such as plastic, metal, clay, glass, cloth, woods etc. Toys excavated from the Indus valley civilization (3000-1500 BC) include small-carts, whistles shaped like birds and toy monkeys which could slide down a string. Use of new materials and technologies have added value to a variety of toys.

Selling a toy often involves selling to three individuals simultaneously, namely the child, who will use the toy, the mother, who is concerned about safety, space to play, etc., and the father who controls the purse strings. The target market for the toy selling firms is middle class and upper income group.

According to Dale Hoiberg and Indu Ramchandani, (2000) Indian toys can be categorized into four groups:

1. Toys developed and produced by craftspeople
2. Mela toys, dynamic folk toys developed and produced by the artisans (skilled and semi-skilled person)
3. Toys developed by the layperson or invented by children themselves for their own unique purposes.
4. Factory made toys

A brief discussion on various toys made from a variety of materials is given below:

a. Metal Toys: Copper and bronze were the earliest non-ferrous metals which man shaped into tools. References to the casting of bronze images were found in ancient texts like the MatsyaPurana. Gujarat and Uttar Pradesh in the north and Tamil Nadu and Andhra Pradesh in south India are known for their bronze and copper items.

b. Wooden Toys: Workmanship on wood has flourished in India over the centuries. Dolls made from wood are very popular. Sikkim is known for its carved objects and dolls. Traditional designs are carved on wood and then painted for giving the whole object a rich effect.

c. Clay Toys: Terracotta is the most ancient and original form of expression of clay-art. Terracotta figurines in India, ranging over a period of 3,000 years, belong to times both before and after the use of stone in sculpture. Though it is fragile and disintegrates quickly, a continuous stream of art throughout different stages of civilization can still be found. Pottery in India has deep religious significance. Figurines of Gods and Goddesses are made of clay during festivals like Durga Puja in Bengal and Ganesh Chaturthi in Maharashtra. Also popular are the gram devtas (village deities) regularly created by local craftsmen.

Delhi is known for its blue pottery which is almost translucent. The Jaipur Blue pottery is even more unique with its arabesque.

d. **Toys made of Stone:** Orissa was traditionally known as "Utkal", land of excellence of art, because of the vast communities of painters, potters, weavers and other artists who were attached to the major temple complexes. In fact the art of stone carving in Orissa dates back to Kalinga (previous name of Orissa) period. Stone carving is carried out on sandstone, Nilgiri stone, soft stone (Kochilla) and serpentine stone. Popular themes include the images of Hindu gods and goddesses and dancers. Makrana in Rajastan produces fabulous marble dolls and figurines.
e. **Glass Toys:** It was the Mughals who discovered the decorative potential of glass - the fact that when it is cut, it has the opalescence and the glitter of a myriad diamond. Glass engravings from India, exported to Europe till the 16th century, are said to have influenced the Venetians. Today this art has declined but glass items are still part of everyday life. Saharanpur of Uttar Pradesh makes glass dolls and toys filled with colored liquid called panchkora.
f. **Paper Mache Toys:** Paper Mache is a comparatively new craft in India, which has caught on very well in many parts of the country, since the raw material is easily available and inexpensive. Kashmir is famous for paper mache craft. Kashmir produces some of the most beautifully handcrafted paper mache items. Gwalior in Madhya Pradesh makes paper mache toys, while in Ujjain figures of popular deities are made of this material. Jaipur (Rajasthan) and Chennai are also famous for their paper mache crafts.
g. **Shola-Pith Toys:** Figurines of Shola pith are another popular form of handicraft in certain parts of India. Shola pith is a herbaceous plant growing wild in marshy and water-logged areas. This material is used in West Bengal for making figurines, artistic decorations and headgears for deities during festivals. Craftsmen of Tiruchirapalli in Tamil Nadu make remarkable reproductions of well known temples in pith.
h. **Cloth Toys:** The cloth doll has been in existence for almost as long as cloth itself. Dolls were made of cloth in ancient Egypt and cloth-dolls have been made ever since. They have been more popular in some periods of history than others, but they have never been forgotten. The main reason for this is that cloth is the easiest of all materials for a woman to find. A mother could always use at least an old rag to fashion a doll for her child. Besides the fact that it is always available, cloth is easy to work with and requires practically no tools.
i. **Electronic & Mechanical Toys:** With the advent of modern technology such as electronics and mechanics, the toy industry also has become highly sophisticated. All toys whether electronic or mechanical have either educational or recreational value or both.
j. **Tin Toys**: Tin toys are the toys made out of tin metal.

All over the world, toys are classified according to their end use:

Toys and Board Games can be further classified into three broad categories.

a) **Educational Toys and Board Games**: Toys those demonstrate or project the educational principles using simple tools and equipments in the field of science, geography, mathematics, music and others.

b) Mechanical Toys: Toys those are specifically used for development of motor skills fitted with simple mechanical devices. These can be battery or electrically operated also.

c) Other Toys: Toys those are meant to give pleasure to children for their mental and physical development viz, hand coordination, recognition of different size, shapes and colors, etc.

However, in practice the above classifications of toys are overlapping in almost all cases. A Mechanical Toy can also be an Educational Toy. Similarly, other toys can also be classified as Educational Toys. Wide ranging inputs, by-products, recycled material, and everything available as waste products can be used as inputs for manufacture of toys. A scale model or a miniature form of any attractive product, instrument, vehicle, mode of transportation, animal or historical character is generally depicted as a toy.

2.2 Toy Industry in India

2.2.1 Traditional Toys

Few products are as essential to human development as toys. Yet this sector has not received its due institutional support and recognition. Development, production and sale of toys cover a vast range of economic activities from tiny cottage craft unit to the sophisticated electronic products manufactured on a mass scale. India has a great, rich tradition of craft toys produced locally by the artisans and crafts communities all over India. Much of this great heritage has been eroded due to neglect and lack of institutional support.

A widespread network of toy making crafts and cottage industries exists in India. There are two broad types of such development and production communities.

- Communities focused largely on making utility products but also produce toys as a seasonal or side activity.
- Those well-established communities whose main products are toys. These communities work with many materials, including terracotta, wood, reeds, grass, pith, bamboo and paper mache.

Traditional Toy Sector is not in competition with the formal toy manufacturing sector. The product line is different. The problems are different, yet both sectors need relevant institutional supports such as availability of materials, markets, design and development support and promotion. In fact the traditional and the modern or formal sector can and should co-exist and strengthen each other.

A study sponsored by Development Commissioner of Handicrafts, Government of India undertaken by National Institute of Design (NID) during 1981-83 (Indian Toys: The Crafts Sector, NID, 1983, A Reference project document) had documented various traditional toy crafts available in India. The study included visits and meetings with traditional toy-making communities all over India as well other stake holders. The study re-confirmed that there is great potential with the family community trained artisans and crafts people who make toys

using locally available materials, skills and themes. It was found that the difficulty in getting the institutional assistance de motivated the sector. Therefore, some concrete measures are needed to be taken to ensure healthy development of the crafts and artisan communities so that they are motivated to let their children carry forward this traditional wealth of knowledge.

2.2.1.1 Major Toy Products and Clusters in India

In India, traditional toys can be categorized state wise as each state has its own specialty products.

- **Sambalpur in Orissa** is one of the many places in our country well known for its wooden toys and dolls. The simul tree grows in abundance in the district. The village carpenters collect the wood and carve out a wide range of attractive toys. Toy making is a traditional craft of the carpenters who practice it in their spare time. People from abroad also come to purchase these beautiful toys. However, in local market there is no demand for such toys. Being soft, the simul wood amenable easily to the carpenter's chisel. The size and use of two or more bright indigenous colors distinguish the Sambalpur toys from those of other parts of the country. The colorful Sambalpur toys are excellent specimen of the village carpenter's craftsmanship **(www.indiastudychannel.com).** Puri in Orissa is also famous for paper mache and stone toys. Raghu Gajpur near Puri in Orissa is a landmark place for a variety of traditional toys.

- **West Bengal** is famous for its clay toys. Clay toys are also made in Jamnagar and Rajgarh and Krishnanagar in Nadia district and in Shantiniketan. The features of Krishnanagar toys are that they are very sharp and beautiful whereas the toys from Shantiniketan in Bolpur are very realistic. The designs are predominantly rural and have scenes and figures of the rural houses apart from temples and domestic animals. Clay Dolls, Clay Animal Figures, huts and religious deities are commonly made. Making clay figures involve a lot of detailing and has been done by hand since ages. Once the moulds are made by hand, the toys are dried and then fired. The fired clay toys are then painted with bright colors. This is a hereditary art form.

- Handmade clay toys of **Madhya Pradesh** are generally cast in hollow shapes though solid figures are not uncommon. Animal figures like horses, elephants, dogs, lions, birds, deer and bulls fixed on wheels are very popular with children. The figures are usually small and artistically made with the solid figures being more popular than the hollow ones. These dolls which are sold in pairs are all time favorites and when they are dressed traditionally then nothing like it. Gwalior, in Madhya Pradesh makes rag dolls which are made in a very traditional way by painting onto them facial expressions which liven up the features. The costumes are traditionally made out of paper with boat shaped turbans on their head and are draped in saris made out of paper with proper jewellery. Budhnighat had about 20 families traditionally making turned wood lacquered toys since generations. Some of them are still in the traditional craft making.

- **Tamil Nadu** is famous for terracotta toys and the craft is flourishing in Chennai, Kanchipuram and parts of Arcot district. The craft has passed down from generation to generation and the artisans have a tradition of excellent workmanship and fine coloring.
- Clay toys are made in two stages; the first of which involves plaster of Paris mixed with tapioca powder to form a paste which is dried till it can be rolled into layers. This is pressed into the die to get the moulds. The raw material used is rock clay which after being properly moistened, is pushed into the mould dusted with French chalk powder so that it can be easily removed. It is then dried in the Sun before coloring. The work is divided between the men who need the clay, roll it into layers, make the moulds and the women who use brushes to do the colorings that are kept in coconut shells.

- The cloth and wire dolls of **Karnataka** are extremely traditional and a perfect piece of art by the local artists. These dolls convey the traditions of Karnataka and also some of the figures are of Indian legends. Dolls are made in many different patterns, such as wire dolls, soft dolls, cone dolls and stuffed dolls. Artist first very carefully bent the wire to form the frame of the proposed doll and the figure is wrapped tightly in cloth and stitched into a 'skin' of brown poplin cloth. Designing and decoration is done once the main dress is put on the skeleton. Their hair and make is done very carefully as these things enhances the beauty of the dolls.

- The horse and the rider toys of **Darbhanga** (**Bihar**) are very famous. Toys are composed of many different materials such as clay, mud, wood, cloth etc. The making of clay toys and images is done seasonally. Once the festive season is over then the artists make the necessary household utensils. Crafted images are made in many different designs. Bamboo dolls are also crafted in Bihar.

- Crafts persons at **Ranchi (Jharkhand)** make attractive wooden toys which are painted in nice and soothing colors. The figures of King- Queen and mother and child are the famous ones. Spinsters and housewives make cloth dolls and are sold during the festival seasons. These dolls are seen during the festive seasons. Chota Nagpur also has artists who work on the wooden toys. The figures which have religious sentiments wherein the artists spend a lot of time in making the features of each doll which make them look beautiful. Black lines are used to outline the features.

- Toys in **Assam** are made in the most ethnic and the traditional way. Craftsmen of hills design cane and bamboo toys using their skilled hands and few local tools. Figures of Gods and Goddesses, animals and many mythological figures are crafted by the local craftsmen of Golapara districts and are made out of clay. Pith toys are also made in this region.

  There is a tradition of making cloth dolls by the women folk of almost every family and this craft is passed from mother to her daughter and this is how this craft is preserved in Assam. Bamboo shotgun which can shoot up to 150 yards is a very demanding toy. Toys made out of bamboo and wood are crafted in the shapes of birds, human figures and

animals. Craftsmen also make dolls for the theatre craft .Bride and groom dolls are made and attracts a lot of attention. These are made out of bamboo, mud, cloth and wood.

- Dolls are the attraction for every age group. The artisans of **Haryana** share the rural image through their dolls. These dolls range from 6 inches to 32 inches. The dolls are designed in the utmost rural beauty depicting the real scenes of village. Designing is such that one has to see the handiwork to accept the truth that these are dummies. Doll images of Sita and Ram are also made wearing proper costumes and jewellery. Bright colored wooden toys of Haryana are famous which include infant walkers and many other pull and push toys made by the local artists.

- **Udaipur** (Rajasthan) is a big centre for wooden toys. The craftsmen used local wood 'doodhia' which is soft and can be finely chiseled and shaped. The toys are lacquered and polished with leaves of a flowering cactus to give them a better look and increase their life. The large variety of toys made in Udaipur include the cart drawn by a sparrow, kitchen sets, grinder, cradle on a stand, gas lantern, gramophones, trains, cars, jeeps, aeroplanes, counting stands, and clock towers. Animal figures include horses, camels, and elephants. Udaipur is also famous for imitation dry fruit which bear a striking resemblance to the real fruits.

- Bassi in **Chittorgarh** (Rajasthan) district are another noted centre for wooden toys where the entire village is engaged in wood-carving and in making wooden products. Jaipur too is very well known for cloth dolls and toys which are generally dyed and stuffed with waste material. These toys are beautifully decorated with colorful paper with expression writ large on their faces.

- The craftsmen of **Tripura**, the bamboo rich state, have made indigenous toys using the most abundant resource of the state to include the bamboo pop gun. The pop gun releases a small pellet which is made of bamboo and is developed for the innumerable bird and animal traps that are used locally.Tiny bamboo whistles made from small diameter cum lengths and bamboo flutes of different types are also made which are used as toys or for professional use. Apart from these, Agartala has a tradition of making small animals from bamboo splits.
- Larger numbers of traditional toy-making units operate at **Chennapatna** in **Karnataka**. There are household units as well as factories engaged in making toys and gift items with the "turned wood" technique. In recent times, these communities face the major problem of shortage of raw material. The toy makers have to face not only the shortage of wood but they also lack the knack and marketing ability that is needed to sell their products.

Toys made from wood or clay or cloth may not match the sheen and finish of their mass-manufactured counterparts, but they certainly help develop a child's motor and cognitive skills. Made from natural materials - such as wood, cane, palm leaf, clay, soft soap stone and cloth - these playmates are safe and enable an understanding and appreciation of nature very early in life. Coated with natural dyes or vegetable colors, the toys are toxin-free. Even the parts of the toys are joined together by natural gums or tamarind paste, rather than a synthetic adhesive.

For instance, stackers can aid in the ability to recognize similar objects, the 'pallankuzhi' (traditional board game played in South India) helps sharpen mental calculation abilities and the abacus improves mathematics. Different toys are recommended for different age groups. Thus children between one and five years can amuse themselves with stackers, while pre-schoolers can take their first steps towards counting with the help of a colorful abacus.

Table 2.1: Traditional Toy Clusters in India and product categories

States	Districts	Towns	Types of Toys	Description
Andhra Pradesh	Adilabad	Adilabad	PRO Terracotta	Pottery and animal and bird figures
		Nirmal	Toys & Dolls	Human forms, forms, birds, fruits, vegetables, models of village activities, mythological figures, Kondapalli toys
	Kondapalli	Kondapalli	Wooden carved toys	
Karnataka	Bangalore		Cloth and wire dolls	Dolls and toys & dolls from pulp
	Bangalore Rural	Channapatna	Lacquer ware	Toys, boxes, birds and decorative
	Belgaum	Khanapur	Pottery & Clay	Pottery & Clay
			Terracotta	Terracotta
	Belgaum		Gokak Toys	Toys
	Bellary		Kinhal toys	Printed wooden toys and decorative
Manipur	Imphal	Imphal	Toys & Dolls	Typical dancing design of dolls
Chhattisgarh	Raipur	Raipur	Rag Dolls	Rag Dolls, Raja/Rani dolls, BattoBai doll
Rajasthan	Chittaurgarh		Toys and Dolls	Cart drawn by a sparrow, kitchen sets, singardan (a box with articles of toilet), grinder, cradle on a stand, gramophone, train, car, jeep, aero plane, counting stand, clock tower, figurers of , imitate
			Woodwork	Carved furniture, ritual items, chowkies, sindoor

				box, figures of birds
	Udaipur		Wooden Toys	
Himachal Pradesh	Kangra	Palampur	Dolls & Toys	
Uttar Pradesh	Agra	Agra	Paper mache birds and animals	
	Azamgarh	Azamgarh	Terracotta/clay toys	
	Lucknow	Lucknow	Miniature Toys	
	Varanasi	Varanasi	Wooden & Clay Toys	
West Bengal	24 Pargana		Clay Folk Toys Cane & Bamboo Craft	Household articles, peasant figures, dolls and toys, images of gods and goddesses, flower-pots, huts, carts, temples
	24 Pargana North	Chandraketugarh	Terracotta	Divinities including Nagas&Naginis, yakshas&Yakshis, ApsarasKinnaras, Vyantara, Devatas, toys,
		Barrackpur	Soft Dolls	Toys and dolls
	Katwa	Burdwan, Hoogly, Murshidabad	Clay Folk Toys	Household articles, peasant figures, dolls and toys
	Krishnanagar			Clay Dolls
	Shantiniketan			Coloured wooden toys
Assam	Dhubrii	Gauripur	Toys & Dolls	
			Terracotta Pottery	Vessels for storing grains, water pots, chaupatia, Handi, Surahi, Images of gods and goddesses, Dolls and Toys
Bihar	Ranchi		Dolls and Toys, Wooden toys	
Orissa	Sambalpur		Wooden toys and dolls	
	Puri		Paper mache& wooden toys	
	Raghurajpur		Paper mache, clay and wood toys	

Madhya Pradesh	Gwalior		Rag Dolls	
Gujarat	Idar&Mahura		Wooden Toys/tuned wood lacquered toys	
	Patan		Scientific clay toys	
	Kutch		Clay / Terracotta & Rag Dolls	

For decades, the small town Chennapatna, Karnataka thrived on the earnings from the making of toys. However, the lack of investment, initiative and even skill to incorporate new designs, along with the use of poor raw materials, resulted in a drop in demand for such toys.

Capitalizing on the knowledge and skill of the artisans and after studying market trends, a local NGO namely Maya Organic recently developed a brand of wooden educational toys called Moogli toys. All the toys go through strict quality checks established by the NGO. There is a technical department that does the R&D and develops new designs. The artisans are given extensive training in quality norms and standards before they begin work in groups of 60 to make toys in adherence to the norms. Once the toys are made and delivered to the NGO, they are put through another quality check before being dispatched to shops.

Another non-profit organization in Bangalore, Sutradhar, has been responsible for reviving traditional Indian board games. The organization develops methods to make learning a fun with the help of toys, games and storybooks. Each toy or game has a link with Indian culture and traditions. Sutradhar has revived 'Chausar' (the early source of the western Ludo) and 'pallankuzhi'. The games are packaged with a detailed booklet of the rules.

Organizations such as Maya and Sutradhar use technology to their advantage through standardization and quality. Both have a catalogue of their products on their websites, where orders can be placed - a huge step from the days when traditional Indian toys were available only at small retail outlets, ‘haats’ (bazaars) or ‘melas’ (fairs). The emphasis on quality and innovation along with Indianness has helped both children and profit margins.

The Traditional toys have many special advantages. The materials and process are usually eco-friendly and inexpensive. There is design diversity, the batch production facilities change and flexibility. The crafts people are usually very skilled and talented.

The negative point can be safety and hygiene aspect and that some NGOs or business houses would need to handle the export of business on behalf of local producers.

Some NGOs have already established success in exporting Indian traditional toys. They are:

- Maya Organic , Bangalore

- Sutradhar, Bangalore
- Kreeda, Chennai, producing redesigned traditional Dohan Gania
- Kalaraksha, Kutch (Gujarat) Redevelopment of local games and toys

The main factor is taking into account the hygiene and safety factors. Otherwise, the sector has good scope for export provided agencies and NGO get interested to organize and manage export business.

The main factors for export suitability are the diversity in design and development and quick response to new orders and new design ideas. Each product or the batch can be marketed as a unique one. The handwork is being valued and crafts people and usually very skilled in innovation, design and development. What is needed is the involvement of trained designers and NGOs interested to work in this sector.

2.2.1.2 Export Potential for Traditional Indian Toys

The Export Potential for Traditional Toys is very good.In the present eco-friendly era, these traditional items though have less value for children but have a very large requirement by parents wanting to keep them as collectables, to show children the different stages of Toy developments and the shape and sizes of toys during their playing days.

- Suggest Traditional Toys are promoted through Indian Emporiums abroad.
- Taking Shelf space with big Toys & Handicraft stores abroad.
- Having exclusive stands at Gifts, Handicraft, and Toys International Fairs & India Stand.

The safety and toxicity aspects for the traditional toys has to be studied and the measure taken for this sector. At this moment, traditional toy sector is being co-ordinated mainly by the Development Commissioner of Handicrafts.

2.3 Current Scenario

The Indian toy industry is a major market for both domestic and international players, owing to low penetration (0.5 per cent) as well as growth in the size of the middle class. India's toy industry has a meager share of 0.5% of the global market. The Indian toy market, whose size is estimated at about Rs. 8,000 crore (as of March 2013) and grow at a compound annual growth rate (CAGR) of 20% by 2015.

Only 20% of the Indian market is served by Indian manufacturers, with the rest being accounted for by imports mainly from China and Italy, which offer wider variety at lower prices and attract children of all ages. These imports include fun games, electronic toys, board games, construction toys, stuffed toys, educational games and toy cars.

The Indian toy industry, which largely consists of small and medium enterprises (SMEs), is caught in a strange paradox - it recorded double-digit growth over the last five years, and yet around 40% of Indian toy manufacturing units have closed down. For this situation, the

Associated Chambers of Commerce and Industry (ASSOCHAM) is used the term "**dragon effect**" in which the Indian market is flooded with Chinese toys and Indian toy manufacturers are being decimated.

Both market segments are growing but the organized market is growing faster at about 35% per year versus the unorganized market at 15%. This difference is partly explained by the relative population growth rates at 2.4% per year for the urban areas versus 1.1% for the rural segment (Lutz Muller, January 2013). The online toy market, represents a mere 5% though growing rapidly, is unlikely to have a major influence on the overall demand in the next couple of years.

It is the organized market that attracts large international toy manufacturers such as Mattel, Hasbro, Disney, LEGO etc. The unorganized segment gets supplies mainly from wholesalers, who draw their supplies either from domestic manufacturers or Chinese sources. The unorganized market place is characterized by very low pricing, small sales volume per store, unconventional accounting and a very high percentage of knock-offs of leading Western brands such as Lego. A high degree attributable to knock-offs from China sold in both the organized as well as the unorganized markets. The organized market is characterized by two leading players- Mattel and Hasbro.

Small toy shops are catering to the masses, while branded ones like Fisher Price, Funskool, Hamleys, Lego amd Mattel are catering to the middle and high class. However, in the recent years, the toy market witnessed a steady growth owing to increased urbanization and retail opportunities, availability of branded toys, enhanced income levels etc. Since the modern trade and organized players are growing at 15 to 20%, the industry growth hovers between 10 and 15%. Metro-cities like Ahmadabad, Bangalore, Hyderabad and Pune have recorded the highest growth in sales of toy and emerging as a hub for toy manufacturing. With increased availability of toys and games in the market and increasing disposable income, the new emergent pool of customers looks beyond the common toys (those connected with just light, sound and motion).

Traditionally, the Indian toy industry recorded marginal growth owing to the small scale operations of the indigenous manufacturers which was characterized by limited innovation, lower investments in equipment, technology and minimal marketing.

The worst-hit toy clusters are in Allahabad, Delhi, Kanpur, Lucknow and Patna. About 50% of the toy units based in Delhi-NCR, 35% are based in Maharashtra, and the remaining 15% are scattered across the country.

While SMEs are being pummelled by Chinese imports within India, made-in-India toys are offering tough competition to Chinese products in the mid- and high-priced segments in both domestic and international markets. Industry experts say that major global buyers have slowly begun looking towards India since the cost of labor is going up in China.

Another problem is manufacturing capacity. Today Chinese manufacturers are able to consolidate their production and send it to different customers in a single container in a particular country, which India is not able to do.

2.4 Major Modern Toy Manufacturing Clusters in India

The modern toy industry in India is a late starter. Till early 1980's Indian toys were not in a position to expand in the domestic market substantially. The toy industry in India is concentrated mainly in the small and cottage sectors, with about 4000 manufacturers in all. The manufacturing units are clustered around Delhi, Mumbai, and northern state of Punjab, Uttar Pradesh and Haryana, also some in the Southern State of Tamil Nadu and Karnataka and in other clusters across India's central states. They produce a wide variety of items ranging from plastic and metal toys to electronic items. Dominant players in the toy industry are the plastic toys. The Indian toy market is presently characterized by limited product innovation and insignificant expenditure on advertising or brand building. In the recent years some larger units under the organized sector have come up too. The unorganized/cottage sector products are usually low priced, their products are mostly sold in small towns and rural areas. These producers, at the lower price end of the market cater to the demand of lower income group by providing toys made from cheaper raw material i.e. recycled plastic or tin. At the middle price range the unorganized sector provides cheaper and crude copies of the toys marketed by the big firms.

The factory made toy segment is growing rapidly owing to a large, emerging middle class in the domestic economy. An estimated 100 million children belonging to this middle class group has considerable buying power.

Major Toy manufacturing centers/clusters and the major categories of products manufactured are given in **table 2.2.**

Table 2.2: Modern Toy Manufacturing Clusters in India and Product Categories

Sl. No.	States	District	Major Product Categories
1.	Delhi	Delhi	• Soft, stuffed/ Plush Toys, • Educational & Sports Toys, • Educational Games & Puzzles, • Game Accessories, • Plastic Toy Guns, • PVC Toys & Dolls, • Blocks Game Wooden & Plastic, • Mechanical windup toys • Battery operated games, • Singing & Moving Eyes Dolls.
2.	Maharashtra	Mumbai	• Computer Base Game, • Video Game, • Soft Toys, • Plastic Toys, • Education Building Blocks • Mechanical Pullback etc • Science Kits, • Math Lab Kits,
3.	Gujarat	Ahmadabad	• Video Game, • Computer Base Game,
4.	West Bengal	Kolkata	• Wooden Educational Toys & Games, • Plastic Toys
5.	Uttar Pradesh	Noida	• Pre-School Toys, • Educational Games, • Jigsaw Puzzles, • Board Games, • Math Lab Kits, • Wooden Toys,
6.	Tamil Nadu	Chennai	• Toys and Gaming • Art and Creativity • Baby rattles • Blocks and construction sets • Jewelry making kits • Dolls
7.	Goa		• Toys and Gaming

			• Art and Creativity • Baby rattles • Blocks and construction sets • Jewelry making kits • Dolls

2.4.1 Large International Toy Manufacturers in India

Mattel: Mattel is the world's largest toy importing company in terms of revenue. The products it imports mostly from China, include Barbie dolls, Hot Wheels and Matchbox cars, American Girl dolls, board games, , video game consoles etc. It was founded in 1945. Today, the Barbie line alone contributes more than 80% of Mattel's profits. The Mattel Company is a US $ 30 Billion company out of which their market share in India is around 5%.

Mattel Toys (India) Pvt Ltd retained its leadership position in toys and games as a whole with its strongest brands, achieved primarily through brands such as Barbie, Hot Wheels and Fisher-Price, all of which are present in traditional toys and games. Sony India Pvt Ltd was ranked second overall in 2014, a position achieved through its leadership in video games, where it is present with its PlayStation range. Despite its size, since the traditional toys and games category remains relatively underdeveloped.

Funskool: Funskool was set up in the year 1987. Funskool is the joint venture between the Indian tyre giant MRF and Hasbro Inc., a leading toy company, undoubtedly the largest toy company in India. Funskool manufacture and export a wide range of toys for their international partner Hasbro. Hasbro is a world leader in children's and family leisure time entertainment products and services, including the design, manufacture and marketing of games and toys ranging from traditional to high-tech. Funskool has two state of the art manufacturing facilities based at Corlim, Goa (Western India) and at Ranipet , Tamil Nadu (Southern India).

The bigger factory at Goa commenced operations in 1988, and employs over 450 personnel, and as a part of the expansion drive, the factory at Ranipet, started operations in 1999 employing about 200 employees.

2.5 Growth of Indian Toy Industry

Indian toy industry is reeling under severe completion from cheap Chinese products. It is pulling out all stops to bounce back into children's reckoning with innovative and better designed toys. According to Euromonitor Report (2013), action figures and accessories have shown robust growth of 36% in 2011 within the traditional toys segment.

- **Traditional Toys**
  Traditional Toys with a price range between Rs 100 and Rs 199 accounted for the majority of sales with 45% share in 2011. Pre-teens between the ages 7 and 12 years were the largest segment of consumers who constituted 43% of the sales in 2011.

Licensed toys are becoming a rage among children who generally spend long hours watching children's shows and movies, such as ChhotaBheem, Ben10, Beyblade etc. Euromonitor Report (2013) estimated this segment to grow by 9% annually between 2011 and 2016.

- **Video Games**
  The video games market performed better than its peers. In this segment, online games are becoming increasingly popular not just among teenagers, but also among adults aged between 20 and 30, thanks to increasing disposable incomes, internet connectivity, mobile devices and tablets as well as innovative games coming into the market. More and more adults are playing video games as a pass-time to alleviate the increasing work related stress. All these factors will help this segment to clock an impressive growth rate of 32% during 2011-16.

- **Electronic Toys and Games**
  Research indicates that kids prefer electronic toys with multiple features over traditional ones. As a result, most of the new launches in this segment are toys with multiple features. For instance, Think way Toys partnered with My Baby Excels to launch the 'Darknight Rises' toy line in India in 2012.The toy,was a hit among children, also featured voice recognition, 360 degree flips, pre-recorded dialogues and much more. Euromonitor Report (2013) foresees a growth of 22% annual growth between 2011 and 2016 for this segment.

- **Ethnic Toys**
  As time passed the Barbie doll replaced the humble clay doll, while Lego took the place of simple wooden building blocks. But, Ethnic toys are staging a comeback with the help of NGOs like Maaya Organic, Bangalore which has helped the revival of traditional toy making by infusing market research findings into the ancient Indian craft of wooden and lac-ware toy making. But they are expected to cater to the export segment rather than mass-market segments. "Green" toy makers that use recycled environmentally-friendly material are playing the "non-toxic-yet-cost-effective" card and aspect to draw the attention of quality conscious parents. The toys are expected to be touted as the next "big thing" in the Indian toy market.

2.5.1 Facts

- The Indian toy industry is estimated to be worth US $850 million of which 10% constitutes organized market and 90% constitutes unorganized market and growing 15-20% a year.
- Indian parents spend an average of Rs 250-300 on a toy andit is going up. More and more innovation-driven high-end toys and games from high-priced board games and play gyms to BeyBlades and remote-controlled planes enter the market.
- 20% of the population is in the age group of 1 to 12 years.

- Traditional toy sector is a Labour Intensive Industry predominantly based in Small and Tiny Sector.
- Use of Multi Technology and varied Raw Materials
- Annual growth rate is around 15 to 20%.(TAI Report, 2013)
- Government of India giving impetus to learning through various projects and & schemes.
- Indian toy industry is estimated at Rs. 8000 crores and until now has generated only 0.5% of the global toy market.
- Workers are mostly from economically and socially weaker sections

2.5.2 Advantage for India

- Growing domestic market and buying capacity
- Liberalized economy
- Low cost manufacturing base
- Advantage of Information Technology & Communication
- Spread of play way education through toys
- Huge demand of toys in teaching process under government schemes like 'SarvaShikshaAbhiyan'
- World especially western countries looking for alternate manufacturing hub in place of China.

2.5.3 Major Challenges to Indian Toy Industry

- Weights & Measures Act has been a major cause of inconvenience to the toy industry, right from manufacturers to the retailers
- There is a big grey area in the Central Excise interpretation under chapter 95.03 & chapter 95.04.
- Most Indian Manufacturers ensure that they use and make the best quality toys. In all reports, there are hardly any negative remarks on Indian manufacturers regarding toxic complaints.
- Being a neglected & extremely small industry, Toy Industry received a step-brotherly treatment from every department. There is an urgent need to upgrade the technology so that Toy Industry will have a level playing field to compete with the likes of the bigger international players like Hansbro, Ravensberger, Lego, etc.
- Lack of International market intelligence.
- The C-form collection & submission is a tedious task. With most MSME manufacturers being family run business, the compliance of this law takes precious time and energy. This, followed by delayed assessments, orders, non-compliance penal charges, etc., gives rise to confrontations and legal/ lobbying practices.

2.5.4 Export Prospects

- Due to the merger of Hong Kong with China, American / European Toy Manufacturers / Traders are looking for alternate manufacturing base in South East Asia, and this is the opportune time for India to attract them.
- The cost of production in China is rising faster than in India. They are also facing acute labour problems and escalation of wages.
- It is advantage for India and it is the right time to take full advantage of the situation.

2.6 Future of Toy Industry in India

Over the years Indian middle class has emerged as a major force to reckon with in the consumerist world arena. The purchasing power of Indian middle class has been considered equivalent to the entire European market. Considering the retail boom and the changing consumption habits of the middle class which favor use of toys as a medium for entertainment and education, the toy industry in India is poised for a major upward growth and for a brighter future.

Though the toy industry is mainly driven by designs and marketability, technology remains the backbone for converting the designs into viable and marketable products. Outright purchase of technology or licensing arrangements for toy industry does not appear to be viable. The internationally available technologies are very costly and are beyond the reach of toy manufacturers from the SMEs. Under the WTO scenario, institutional back up can help solving issues of costly technologies, obsolete designs, market intelligence and better tooling. Method of reverse engineering will not be available hence forth to the toy manufacturing companies. As a result, these companies may have to invest in their own design and development. Modern prototype development techniques, better tool room facilities would be more useful to the toy units. The industry needs to be sensitized and upgraded regularly based on WTO provisions and related opportunities. The toy industry has to develop a culture of innovations and market intelligence.

Setting up of a big toy units with a number of peripheral smaller toy component manufacturers can be a good model for development of Indian toy industry. The smaller ancillary units may feed components to larger companies, as per design and advice of the larger company. The central company can source costly technologies from overseas in a WTO compatible environment. This will lead to multiple trades in technology wherein the central company seeks technology from a technology provider in the developed country and also provides technology in parts to its vendors/supplier companies.

After the implementation of the US$2.2 million joint project by the National Programme of Development of Toy Industry by the Ministry of Small-Scale Industries, the Toy Association of India (TAI) and the UN Industrial Development Organization (UNIDO), there has been considerable improvement in the quality and design of products, and increase in toy exports.

CHAPTER 3

PRODUCTIVITY AND GROWTH OF REGISTERED TOY MANUFACTURING SECTOR

3.1 Introduction

This chapter analyses productivity and growth of organized (registered) toy manufacturing sector in India. The organized factory sector occupies an important position in terms of toy production in India[1]. Though the numbers of registered manufacturing units are less in number as compared to unorganized sector, its importance cannot be underestimated. The registered factory sector consists of both small scale and large-scale enterprises.

Major characteristics of the organized factory sector are available from Annual Survey of Industries (ASI) under three digit industrial classifications i.e., **324 -** Manufacture of games and toys. Therefore, the developments in the organized factory sector can be measured on a time series data. Considering these facts an attempt has been made in this chapter to analyze the productivity performance of the registered toy industry (organized factory sector) in India during 2009-10 to 2013-14.

The most significant determinant of competitiveness of any industry is its productivity levels and growth. One important determinant could be its labor productivity. However, besides labor and capital productivity, total factor productivity also critically influence the competitiveness of the sector.

3.2 Key Features of Registered Toy Manufacturing

A brief analysis of the data on toy sector (registered manufacturing) at the All India level based on ASI data reported decrease for eight out of seventeen variables considered during the study period 2009-10 to 2013-14 **(Table 3.1)**. Increase in data have been reported for outstanding loan, rent paid, Invested Capital, Rent paid, interest paid, interest received, Total Output, Total Input, Wages and Emoluments during 2009-10 to 2013-14. Highest increase during the period was reported for outstanding loan as it increased more than 18 times.

It may be seen from **table 3.1** that number of persons engaged in 91 toy manufacturing units decreased from 2936 in 2009-10 to 2162 in 90 toy manufacturing units by 2013-14. It may be noticed that the number of registered factories stagnated around 90 manufacturing units during the study period.

[1]Factory is one that is registered under sections 2m (i) and 2m (ii) of the Factories Act, 1948. The sections 2m (i) and 2m (ii) refers to any premises including the precincts thereof (a) whereon ten or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on with the aid of power, or is ordinarily so carried on; or (b) whereon twenty or more workers are working or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on without the aid of power, or is ordinarily so carried on.

Table 3.1: Overview of Toy Manufacturing: Registered factory Sector

(Value in Rs. Lakhs at constant price, others in Numbers)

Sl. No.	Variables	2009-10	2010-11	2011-12	2012-13	2013-14
1	Number of factories	91	98	102	145	90
2	Factories in operation (no.)	84	82	66	90	52
3	No. of Persons Engaged (no.)	2936	3078	2171	2665	2162
4	Gross Value Added	11974	11486	7751	7322	6364
5	Fixed capital	17044	19814	14718	28391	13165
6	Outstanding Loan	8078	94437	102494	118540	153444
7	Invested Capital	33151	32134	44566	52290	34465
8	Rent Paid for Fixed Assets	157	144	201	257	204
9	Interest Paid	3050	1577	590	14827	11008
10	Rent received for Fixed Assets	89	34	72	74	16
11	Interest received	48	85	88	67	145
12	Total Output	35954	45886	51634	68756	36341
13	Total Inputs	23980	34400	43883	61434	29977
14	Income	7133	7974	5306	-9720	-6419
15	Profit	3879	3702	1782	-14333	-9927
16	Wages to Workers	1286	1562	1197	1459	1589
17	Total Emoluments	2829	3784	3212	4197	3108

Source: Compiled from Annual Survey of Industries (ASI), Summary results of Factory Sector, CSO (various years)

Note: As per NIC 2008 classification, Manufacture of Games & Toys has been put under a separate code '324' so it is not comparable to the previous NIC classifications.

3.3 Productivity Estimation for Toy Manufacturing Sector

Partial productivity has been estimated for the major inputs namely Labour and Capital for the Toy Manufacturing Sector during the study period 2009-10 to 2013-14 and the estimations are

reported in **Table 3.2.** Besides partial productivity estimations, capital intensity (capital investment per worker) has also been estimated for the toy manufacturing sector during 2009-10 to 2013-14 in **Table 3.2**. The methodology adopted for the estimation of Partial (labor & capital) and Total Factor Productivity Growth (TFPG) are given in **Annexure III**. Labor input is considered as the total number of persons engaged in the production process. Capital Productivity has been estimated as Gross Value Added (GVA) with respect to every rupee Invested.

Capital Productivity reported considerable reduction during the study period as it declined from Rs. 0.70 in 2009-10 to Rs. 0.26 by 2012-13. However, there is a turnaround reported during 2013-14 as the capital productivity increased to Rs.0.48.

In the case of Labour productivity there is a consistant decline reported as it decelined from Rs. 4.07 lakhs in 2009-10 to Rs. 2.74 lakhs in 2012-13. Similar to Capital Productivity, Labour Proudctivity also reported an increase during 2013-14 as it increased to Rs.2.94 lakhs per worker.

Capital intensity (capital invested per worker) reported considerable increase during the study period as it increased from Rs.5.81 lakh in 2009-10 to Rs.10.65 lakhs by 2012-13. However, during the last year of the study 2013-14, a sudden dip in capital intensity has been observed as it declined to Rs.6.08 lakhs for capital intensity.

It may be seen that technology plays an important role in the toy manufacturing process during the study period. More and more capital investment has been taking place in the registered toy manufacturing sector which lead to substantial decline in capital productivity.

Table 3.2: Labor Productivity, Capital Productivity and Capital Intensity Estimations for Registered Toy Manufacturing Sector

Year	Capital Productivity (GVA per Rupee invested) (Rs.)	Labor Productivity (GVA per worker) (Rs.)	Capital Intensity (Invested Capital per worker) (Rs)
2009-10	0.70	407834	580518
2010-11	0.58	373164	643730
2011-12	0.53	357024	677936
2012-13	0.26	274747	1065328
2013-14	0.48	294357	608927

Source: Estimated from ASI-Summary results of factory sector, CSO according to NIC 2008 classification.

Note: Productivity has been estimated as (GVA/Price Index)/Factor input.

Further, year on year growth rate estimations for capital, labour and total factor productivity for the registered Toy manufacturing has been reported in Table 3.3. It may be noted that annual growth rate is negative for both lobor and total factor productivity. Average of capital

productivity growth estimated for all the five years reported positive growth rate of 2.44%. On the other hand, average of labour productivity growth rate reported at -7.18%. While, total factor productivity growth rate (TFPG) reported negative growth rate at -8.98%. The abnormal fluctuations reported during the five year period under study shows that the sector is going through intense global competition and loosing out in this fight.

There is an urgent need for policy interventions as the number of registered toy units have remained static and productivity levels are declining and the outstanding loan increased from Rs. 6846 lakhs in 2009-10 to Rs. 116245 lakhs by 2013-14. This indicates an alarming scenario with respect to the growth of toy sector in the country. The higher capital investment in turn did not contribute towards labor and capital productivity growth rather contributed towards negative total factor productivity growth. Though technology up gradation is imperative in the globalised setting, it should translate into higher labor and capital productivity levels for making the Toy Sector sustainable.

Table 3.3: Labor, Capital and Total Factor Productivity Growth of Toy Manufacturing Sector

Year	GVA Growth	Capital Productivity Growth	Labor Productivity Growth	Total Factor Productivity Growth
2009-10		--	--	--
2010-11	-4.08	-17.49	-8.50	5.87
2011-12	-32.52	-9.15	-4.33	-27.33
2012-13	-5.53	-51.03	-23.05	21.11
2013-14	-13.08	87.44	7.14	-35.56
Average for the years 2008-09 to 2013-14	-13.80	2.44	-7.18	-8.98

Source: Computed from Annual Survey of Industries (ASI), Summary results of Factory Sector, CSO

3.4 Conclusion

From the above analysis, it may be concluded that labour, capital and total factor productivity growth estimations indicate that technology played a significant role in the productivity growth of toy sector in India during 2009-10 to 2013-14 period. Increased level of capital investment is taking place in the registered toy manufacturing sector as compared to earlier years, which is contributing to higher levels of outstanding loan per unit without commensurate value added growth or productivity growth. Though technology up gradation is vital to make the toy sector more productive and competitive in the globalised setting, it is also important to consider the return on investment for making the sector sustainable. Due to intense global competition particularly from China, Gross Value Added, profits, number of workers etc., have fallen drastically during the study period along with lower productivity levels.

CHAPTER 4

GLOBAL TOY MARKET AND INDIA

4.1 Introduction

Global toys and games market is mainly influenced by large global enterprises, which enjoy considerable economies of scale, as a result reduce their costs and enhance profit margins. Toy market is characterized by wide-ranging product differentiation that serves to weaken the degree of rivalry amongst manufacturing units to a great extent, and also deteriorate buyer power. Due to high degree of product differentiation, toys and games market requires infinite inputs, some of which are technology intensive, like, electronic components, processors, etc.

In this chapter we analyze the global toy market and India's comparative position with respect to export and import of various toy products in the recent years. We also discuss the toy sector in China and trends in India's trade with China in terms of different toy products.

4.2 Global Toy Market

In 2014, total sales of worldwide toy industry have been estimated at US $85 billion and are expected to reach US $100 billion by the end of 2015. Out of this $85 billion, 20 billion US $ are attributable to the U.S. market which is the largest consumer of toy market (**Figure 4.1)**. The toy industry sales reported an increase of 7% during the year 2015. In recent years, the market has been influenced by varying consumer tastes, with children opting for more sophisticated video games and electronic toys. This means toys and games manufacturers need to bring out new products on a regular basis, and focus on innovation and technological advancements.

Some of the major global manufacturers are: Mattel Inc, Bandai Namco, Hasbro Inc, Jacks Pacific, Leap Frog, Lego Inc, MGA Entertainment, Spin Master, Takara Tommy Co Ltd and V Tech. Top 5 major brands in the world are presented in **Table 4.1**.

Table 4.1: Top 5 Companies by Sales of Toys

Rank	India	China	EU	US	World
1	LEGO	Guangdong Alpha Animation	Mattel Inc	Mattel Inc	Mattel Inc
2	Nintendo	Toyroyal Co Ltd	LEGO Group	Hasbro Inc	Hasbro Inc
3	Funskool	Lego Toys Ltd	Hasbro Inc	LEGO Group	LEGO Group
4	Hot Wheels	Mattel Inc	Private Label	Spin Master Ltd	BANDAI NAMCO Group
5	Disney	Shanghai Yaoji Playing Cards	Simba-Dickie Group	Hallmark Cards Inc	Takara Tomy Co Ltd

Source: Study on the Competitiveness of the Toy Industry (2013) by ECSIP Consortium. For India the information is extracted from this website- http://www.tech5.co.in/top-5-best-toys-brands-in-india/

Further, expected growth rate in major regions for the period from 2013-2016 is given in **Table 4.2**. Among these regions, China shows a significant growth from 15% in 2013 to 17% in 2016. This is due to the big market size and increasing urbanization in the country.

Table 4.2: Expected Growth Rates in Major Regions, 2013-2016 (%)

Country	2013	2014	2015	2016
China	15.48	15.83	16.11	17.14
US	3.74	3.48	1.90	2.44
EU	3.99	4.16	4.02	3.98
Others	6.94	6.95	7.31	7.24

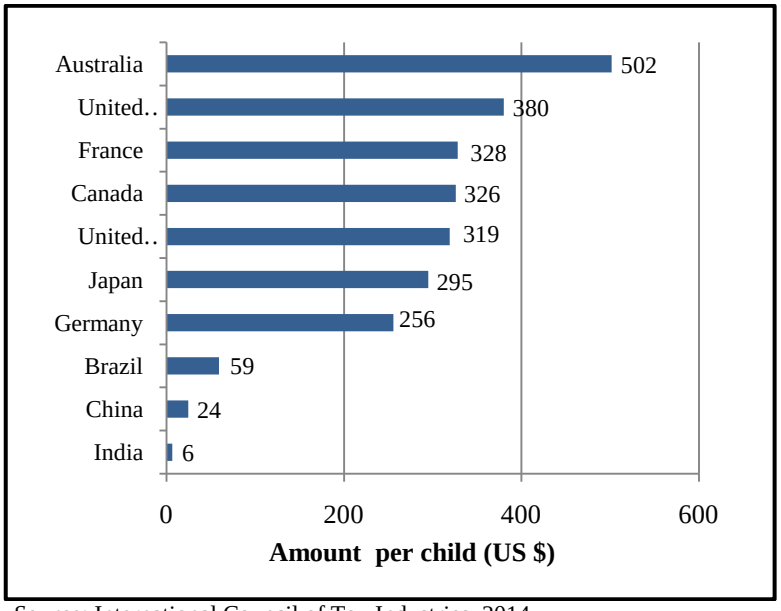
Ten major toy markets in the world along with the country's share in the world toy market, spending per kid, kid population and market for 15 years old children are given in **Table 4.3**. These top ten countries represent two-third of the total toy market. The United States accounts for the highest share of the global toys market, but represents approximately two percent of the world's children. Among these ten nations, India reported the highest kid population at 352.8 million. In the case of spending per kid, Australia reported the highest spending at US $ 501.6 (rank first) while it is only at US $ 6 in India and ranked at 10 position in the selected countries **(Figure 4.3)**. This indicates that there is tremendous market potential for toys in India.

Table 4.3: World Toy Market -Top 10 Countries in the World, 2010

Sl. No.	Country	Country Share in World Toy Market (%)	Spending per Kid ($) in 2014	Kid Population (Million)	Market to 15 years old (%)
1	United States	26.3	319	62.4	19
2	Japan	7.5	295	16.9	16
3	China	6.7	24.4	238.3	2
4	United Kingdom	5.4	380	10.8	12
5	France	4.9	328	12.0	10
6	Germany	4.0	255.6	11.0	19
7	Brazil	3.9	59	53.3	4
8	Australia	2.8	501.6	4.0	17
9	India	2.7	6.4	352.8	0
10	Canada	2.5	326	5.4	17

Source: International Council of Toy Industries.

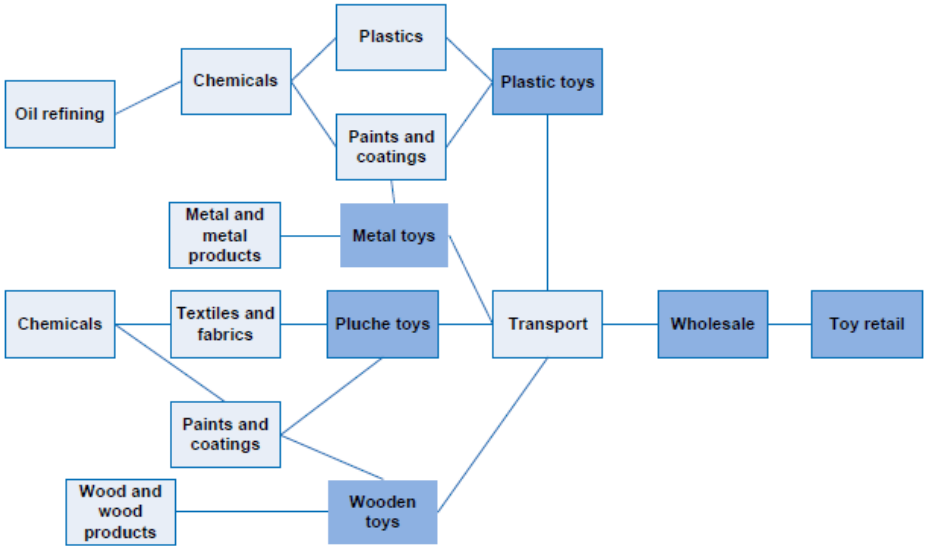
Figure 4.2: Per Capita Expenditure on Toys in Selected Countries, 2014



Source: International Council of Toy Industries, 2014

The process of manufacturing and marketing of toys is shown through a diagram in the report prepared by European Consortium for Sustainable Industry Policy (ECSIP) on Competitiveness of the Toy Industry is given in **Figure 4.1**.

Figure 4.1: Toy Industry Value Chain



Source: Study on the Competitiveness of the Toy Industry, 2014 by ECSIP Consortium

4.2. India's Toy Trade with the World

Toys and games in India witnessed moderate growth in 2015 after a slowdown in 2014 and this was mainly driven by the growth in video games. Traditional toys witnessed slow to moderate growth in 2015 due to decreasing demand and an increase in the number of consumers shifting from traditional toys to video games. However, action figures and accessories, and construction witnessed strong growth within traditional toys due to increasing demand for licensed products and in-store advertising by brands such as Lego. The Indian Toy Industry is expected to grow at CAGR of 20% and would be valued at Rs. 248.83 billion by the year 2020. Market line estimates specialist store sales accounted for 60% of overall industry revenues at almost $ 1.5 billion.

The Indian industry is characterized by-

- Fragmentation
- Small scale of domestic producers
- Lack of innovation
- Lack of resources to invest in equipment, technology and advertising

Smart Research Insights predicts growth will become stronger due to urbanization, expanding consumer base and rising income levels. The Indian toy industry is a mix of domestic and international players. These companies have contributed to the industry in one way or another and are trying their best to revolutionize the industry to place themselves in one of the foremost toy industries globally. Top players in the Indian toy Industry include Hamleys, Funskool India, Hanaug Toys & Textiles, Mattel Toys, Pegasus Toy-Kraft, Zephyr, Chalk and Chuckles, Ok Play India, and many more.

In this section, India's export and import of major toy products to the rest of the world has been analyzed during 203-04 to 2015-16 with special reference to China. Export competitiveness has been estimated from the trade ratio i.e. export as a ratio of import. It is worth noting that during 2003-04 to 2015-16 period exports from India to World markets have increased by almost 5 times whereas imports have increased by more than 15 times.

In can be seen from **Table 4.4** that the exports of Toys, Games and Sports requisites, Parts and Accessories thereof (HS Code 95) rose from Rs. 41,464 lakhs in 2003-04 to Rs. 1,89,206 lakhs in 2015-16, while imports increased from Rs. 22,870 lakhs to Rs. 3,53,662 lakhs during the same period. As a result of fast increasing imports, export/import ratio fell sharply from a highly favorable level of 1.81 in 2003-04 to a very low level of 0.53 by 2015-16. Since 2006-07 import exceeded exports, resulting in the lowest trade ratio during the whole decade at 0.45 by 2012-13. Declining trade ratio indicates that India's global competitiveness with respect to toy products are going down year after year. However, marginal improvement in the trade ratio has been reported from 2013-14 onwards.

Table 4.4: International Trade in Toys, Games and Sports requisites, Parts and Accessories thereof between India and the rest of the World [HS Code : 95]

Year	Export (Rs. Lakhs)	Import (Rs. Lakhs)	Trade Ratio (Export/ Import)
2003-04	41,464	22,870	1.81
2004-05	45,878	29,744	1.54
2005-06	58,646	50,563	1.15
2006-07	57,292	71,162	0.80
2007-08	53,740	70,167	0.76
2008-09	64,192	98,798	0.64
2009-10	63,351	98,997	0.63
2010-11	74,626	1,49,756	0.49
2011-12	1,00,060	2,03,100	0.49
2012-13	1,17,058	2,58,184	0.45
2013-14	1,56,105	2,87,497	0.54
2014-15	1,78,620	3,05,413	0.58
2015-16	1,89,206	3,53,662	053

Source: Ministry of Commerce & Industry, Department of Commerce, GOI

Table 4.5 exhibits a consistently declining trend in export-import ratio for Other Toys such as puzzles, small and smaller recreational models (HS Code 9503) during the decade 2002-03 to 2015-16. Exports increased from Rs. 2,515 lakhs in 2002-03 to Rs. 42,925 lakhs by 2015-16 *i.e.* reporting almost 17 times increase. There is sudden increase in exports of other toys from Rs. 25,055 lakhs in 2014-15 to Rs. 42,925 lakhs in 2015-16. In the case of imports, it may be noted that it increased from Rs. 7,217 lakhs in 2002-03 to Rs. 1,98,453 lakhs in 2015-16 *i.e.* an increase of more than 25 times. Trade ratio plummeted from 1.96 to 0.22 during the period 2002-03 to 2015-16 indicating the alarming levels at which the imports are increasing with

respect to this toy product segment and the decline in India's trade competitiveness. In the year 2013-14 onwards we notice an improvement in trade ratio due to significant increase in exports.

Table 4.5: Trade in Other Toys; Reduced Size ("SCALE") Models and Similar Recreational Models, Working/NT; Puzzles of All Kinds from India to World Market (HS Code: 9503)

Year	Export (Rs. Lakhs)	Import (Rs. Lakhs)	Trade Ratio (Export/Import)
2002-03	2,515.45	7,217.35	0.35
2003-04	2,384.01	9,626.25	0.25
2004-05	3,162.55	12,537.00	0.25
2005-06	4,065.82	19,277.66	0.21
2006-07	4,305.96	25,005.06	0.17
2007-08	4,687.57	31,103.71	0.15
2008-09	5,767.00	36,257.00	0.16
2009-10	5,818.00	33,358.00	0.17
2010-11	6,756.00	64,550.00	0.10
2011-12	9,077.00	93,901.00	0.10
2012-13	14,227.00	1,24,083.00	0.11
2013-14	22,397.00	1,55,606.00	0.14
2014-15	25,055.82	1,68,870.00	0.15
2015-16	42,925.72	1,98,453.32	0.22

Source: Ministry of Commerce & Industry, Department of Commerce, GoI

4.3. India's Toy Trade with China

Though China is highly competitive in toy manufacturing as compared to India, still some exports are taking place from India to China. From **Table 4.6**, it is observed that India's export of toys, games and sports requisites, parts and accessories thereof to China increased from Rs 259 lakhs to Rs 3,781 lakhs during 2003-04 to 2015-16 periods. However, it accounts only 2% of India's total volume of toy export to the world. In the case of imports of toy products from China, we notice considerable increase during the period. Moreover, the import of toy items from China is about 80.86% of total toy products imported from the rest of the world, by India, during 2015-16.

Table 4.6: India's Trade in Toys, Games and Sports Requisites; Parts And Accessories thereof with China [HS Code: 95] (Rs Lakhs)

Year	Total Export from India to World	India's Export to China	Export to China (% to Total)	Total Import by India from World	India's Import from China	Import from China (% to Total)	Trade Ratio (Export/ Import) of India with China
2003-04	41,463	259	0.63	22,869	11,715	51.23	0.022
2004-05	45,878	152	0.33	29,743	16,426	55.23	0.009
2005-06	58,645	138	0.24	50,562	27,287	53.97	0.005
2006-07	57,292	316	0.55	71,161	43,402	60.99	0.007
2007-08	53,740	232	0.43	70,167	45,081	64.25	0.005
2008-09	64,191	145	0.22	98,797	54,453	55.11	0.002
2009-10	63,351	216	0.34	98,997	68,514	69.20	0.003
2010-11	74,626	276	0.36	149,756	1,08,596	72.51	0.002
2011-12	100,060	745	0.74	203,200	1,55,368	76.46	0.004
2012-13	117,058	677	0.22	258,184	1,91,839	74.30	0.003
2013-14	156,105	605	0.34	287,497	2,21,781	77.14	0.002
2014-15	1,78,619	490	0.27	3,05,413	2,52,519	82.68	0.001
2015-16	1,89,206	3,781	2.00	3,53,663	2,85,985	80.86	0.013

Source: Ministry of Commerce & Industry, Department of Commerce, GoI

Trade ratio also exhibits a dismal picture as the export competitiveness has considerably eroded during the study period as India became a net importer. It can be seen from **table 4.7** that since 2008-09, India's Trade ratio has fallen drastically by almost 60% and India has not been able to improve this ratio.

Furthermore, compound annual growth rate of India's Exports and Imports of toys to and from world and China for the period of 2003-04 to 2015-16 is reported in **Table 4.7**. It is worth noting that total import by India from world has grown at a CAGR of 25.64% whereas the growth rate of total exports from India to world was growing only at 13.49% per annum. Moreover, there is a big difference between CAGR of India's export to China and Imports from China. Export growth rate was 25% against import growth rate of 30.51%.

Table 4.7: Compound Annual Growth Rate (CAGR) of India's Trade in Toys, Games and Sports Requisites; Parts and Accessories thereof with China [HS Code: 95]

Particulars	CAGR (%)
Total export from India to World	13.49
Total import by India from World	25.64
India's Export to China	25.03
India's Import from China	30.51

Source: Consultancy's Computation.

Table 4.8 reports India's trade with China and rest of the world with respect to other toys, reduced size (scale) models and similar recreational models, working or not; puzzles of all kinds. It may be noted that India's exports to China comprises of only a negligible till 2014-15. However, a sudden spurt in export to China reported in 2015-16 and it recorded 7.64% of the total export. While the total export to world increased more than 19 times during the study period, imports increased more than 20 times. Import of this category of toy product from China constitutes nearly 95% of total imports by India. Though the trade ratio is unfavorable to India during the entire study period, considerable increase in export to China has been reported during 2014-15.

Table 4.8: India's Trade in Other Toys; reduced-size ("scale") models & smaller recreational models, working/NT; puzzles of all kinds to China [HS Code: 9503] (Rs. Lakh)

Year	Total export from India to World	Export to China	Export to China (% to total)	Total import by India from World	Import from China	Import from China (% to total)	Trade Ratio (Export/Import) of India with China
2003-04	2,384.01	1.92	0.08	9,626.25	7,663.14	79.61	0.0003
2004-05	3,162.55	10.16	0.32	12,537.71	10,358.93	82.62	0.0010
2005-06	4,065.82	0.33	0.01	19,277.66	16,930.30	87.82	0.0002
2006-07	4,305.96	75.59	1.76	25,005.06	22,807.97	91.21	0.0033
2007-08	4,687.57	2.04	0.04	31,103.71	27,830.51	89.48	0.0001
2008-09	5,767.00	10	0.17	36,257.00	30,572.00	84.32	0.0003
2009-10	5,818.00	3	0.05	33,358.00	29,619.00	88.79	0.0001
2010-11	6,756.00	25	0.38	64,550.00	57,476.00	89.04	0.0004
2011-12	9,077.00	162	1.79	93,401.00	86,900.00	93.04	0.0019
2012-13	14,227.00	340	2.39	1,24,083.00	1,16,256.00	91.27	0.0029
2013-14	22,396.00	9.65	0.04	1,55,606.00	1,46,525.00	94.16	0.0001
2014-15	25,055.80	122.77	0.49	1,68,870.55	1,59,216.13	94.28	0.0008
2015-16	42,925.71	3,280.13	7.64	1,98,453.31	1,87,917.81	94.69	0.0175

Since India is a net importer with respect to both China and Rest of the World, there is hardly any export competitiveness for India in this product category.

It is clear from **Table 4.9** that compound annual growth rate in India's Trade in other toys; reduced size (scale) models and smaller recreational models, puzzles of all kinds with World was 27.24% for the period from 2003-04 to 2015-16. As far as exports of India to China is concerned, it is recorded 85.94% growth per annum which is much higher than the export from India to World. It is also worth noting that import from China to India is at 30.56% while it is accounted at 28.68% for imports by India from world.

It can be concluded that India's import from China for both product category *i.e.* Toys, Games and Sports Requisites; Parts and Accessories (HS Code: 95) and other Toys; reduced-size (scale) models & smaller recreational models, working/NT; puzzles of all kinds (HS Code: 9503) is recorded almost same growth rate (30%) during the period from 2003-04 to 2015-16. But India's export to China of other Toys; reduced-size (scale) models & smaller recreational models, working/NT; puzzles of all kinds (HS Code: 9503) is favorable and accounted at 85.94% whereas it is 25% for the category of Toys, Games and Sports Requisites.

Table 4.9: Compound Annual Growth Rate (CAGR) of India's Trade in Other Toys; reduced-size ("scale") models & smaller recreational models, working/NT; puzzles of all kinds to China [HS Code: 9503]

Particulars	CAGR (%)
Total export from India to World	27.24
Total import by India from World	28.68
India's Export to China	85.94
India's Import from China	30.56

Source: Consultancy's Computation.

4.3.1. Toy Industry in India vis a vis China

A study by ASSOCHAM (2013) reveals that only 20% of the Indian market is served by Indian manufacturers and the rest by import of toys from different countries mainly from China and Italy. India's Toy Industry has a meagre share of 0.51% as compared to China's share of more than 45% of the world's toy market. China's unbranded, cheap toy products have started flooding Indian toy market. Unbranded toys do not adhere to guidelines, such as weight and measures which is mandatory for indigenous toy manufacturing. Many do not print the addresses of manufacturers/ importers, the maximum retail price (MRP) or manufactured date. The inexpensive Chinese toys have replaced the branded Indian toys. It has been estimated that almost 80% of the toy market has been taken over by the Chinese toys.

The Chinese are offering toys at very low prices with large varieties to choose from. They look attractive and cheap, hence, within the reach of common people. Chinese counter parts are selling simple toys at 20-25% cheaper than Indian manufacturer. As a result although the Indian toy market is worth over Rs 10,000 crores, yet the domestic industry is contributing

only 20%. The remaining demand is met by Chinese imports. Toy industry contributes significantly to employment levels in China with 7,287 businesses operating, 12,388 establishments and employing 635,299 people in 2013.

4.4. Conclusion

Market growth is fuelled by video, console and computer games. The industry has been benefitting from a growing adult consumer base which is taking a greater interest in games as a popular leisure pursuit. Small children are no longer considered the industry's main target demographic. Industry players are focusing their marketing efforts on older children and adults rather than the traditional small children sector.

In the case of Europe, the following factors affect the import of products, especially from China:

- Regulatory – Toys safety standards are strict and many companies find it easier to produce toys in EU as that reduces cost of quality assurance
- Cost competitiveness – When it comes to manufacturing of traditional toys, production in EU is more cost competitive than Chinese imports.
- Developed countries are ageing today with more or less stable number of children in the EU and the US
- The one child policy has been recently relaxed in China – Currently, demand is influenced by an increase in purchasing power of parents and teenagers.
- Innovation and Research and Development:
    - Shorter life cycle of toys – The key to remain ahead of the curve would be to learn more from consumer research and introduction of novelties
    - As a category, traditional toys face stiff competition from new ICT products that it would not just be video games and consoles, but even products like smart phones, tablets and other entertainment products compete for the preference and spending of children in mature and emerging markets. Electronic toys, such as applications for tablets are becoming direct and cheap substitutes for pre-school toys.

With the lowering tariff barriers, melting of international trade boundaries, the domestic market is now open and the Indian industry is facing the challenges from the domestic distributors and multinational competitors who imports cheaper products mainly from China. Only 20% of the Indian market is served by Indian toy manufacturers while the rest by import of toys from different countries mainly from China and Italy.

Although the toy sector has primarily become a trader's economy rather than a manufacturing one, there has been double digit growth over the last five years. As a result of fast increasing imports, the export/import ratio fell sharply from a level of 0.64 in 2008-09 to a low level of 0.53 in 2015-16. Since imports exceeded exports, resulting in the lowering trade ratio in the decade, this declining ratio indicates that India's global competitiveness with respect to toy products are going down year after year.

The concept of 'edutainment' toys has dramatically changed the toy market. Toys no longer just fulfill the entertainment requirements of a child, but also cater to the growing needs of skill development of children. The inexpensive Chinese toys have replaced the branded Indian toys. It has been estimated that almost 80% of the toy market has been taken over by the Chinese toys. In recent years, the market has been influenced by changing consumer tastes, with children opting for more sophisticated video games and electronic toys. Children are also becoming increasingly accustomed to changing toys more frequently. Thus toy and game manufacturers are required to produce new products on a regular basis, and focus on innovation and technological advancements.

While, China is the world's biggest toy producer and exporter, taking a two-third share of the international market. Research and expert interviews show that this big difference between the exports of India and China is not only due to the factors mentioned above but also because Chinese manufacturers use network clustering to reduce supply chain costs. On the other hand, India has a scattered industrial set up due to the differential tax incentives offered by various State Governments. Moreover according to Experts, cost of freight per container from Guangzhou to Mumbai is less than cost of freight per container from Mumbai to Delhi.

In China, export houses help small and medium manufacturers drive innovation and add variety to the product line and there is absence of this kind of collaboration in India. With this intention, Indian toy makers need more direction, similar to SMEs working with the automobile sector where a product brief moves from Japan to India, and then to the vendor, who passes it on to SMEs.

CHAPTER 5

TOY INDUSTRY IN CHINA

5.1 Background

History of modern Chinese toy industry dates back to early 1900s. During the last decade and half, the Chinese toy industry has developed substantially to become the world leader in export of toys. Toys in the Chinese market can be classified broadly into electronic, mechanical, plastic and wooden toys. In addition to traditional toys models, licensed toys (movie spin-offs, cartoon characters, etc.,), dolls, high-tech toys, educational toys, internet-compatible toys and toys for adults' recreation and entertainment have continued to dominate the market.

5.2 Domestic Toy Market

According to estimates by London based market research company Euromonitor, the total retail sales of toys and games in China have increased from Chinese Currency Yuan Rmb71.7 billion in 2010 to Rmb192.3 billion in 2015, registering an average annual growth rate of 21.8%. Further, the toy market is expected to reach more than Rmb300billion by 2019. According to the research data, the average amount spent per child (under the age of 16) on toys is less than US$30 in China while in the United Kingdom it is US $380 followed by United States with US $ 319. According to Study on the Competitiveness of the Toy Industry, 2014 by ECSIP Consortium, an estimated 128,000 people are engaged in traditional toy manufacturing in China.

As urban dwellers' income increases and quality of life improves, their demands for toys are beginning to change. There is a shift away from traditional, battery-operated, construction sets and decorative toys to pioneering electronic toys, intelligent toys as well as upmarket plush toys and decorative cloth toys.

The toy factories are an important part of the economic boom that has brought many out of poverty in China. Chinese manufacturers have been innovative and specialize in novelty items.

There are around 226 million children under the age of 14 on the Chinese mainland. The biggest driver for toy demand comes from the policy change for married couples to have two children. The National Health and Family Planning Commission predict that the number of newborns will climb to between 17.5 million and 21 million annually for the next five years. Besides, in view of the stable economic growth of China, the prospect of the toy market is positive.

5.3 Drivers in China's Toy Industry

Major categories of toys which raise demand of toy industries in the country are as follows:

- **Electronic toys:** High-tech Interactive, electronic toys with relatively high technology content have appeared as mainstream items among toys. In addition, educational toys are also main drivers for growth. It helps in children's imagination and creativity and enhances their hand management skills. Toys for both learning and fun are well-received by children and parents alike.

- **Plush toys:** Plush toys are those characters which play role in novel and exclusive designs especially for popular TV drama and animation characters. Now-a-days electronic toys integrates with plush toys has become the most recent trend.

- **Educational toys**: Like jigsaw puzzles, DIY toys and 3D construction sets are becoming the latest craze among parents and children. These toys are marked by several common characteristics: innovative design, highly interactive and carrying high technology content.

- **Animation and related spin-offs:** According to the Forward Industry Research Institute, the animation market in China is estimated to top Rmb38 billion in 2015. It accounts the highest share in toys manufacturing. In China, toy-animation crossover has yet to mature as a profit-generating business model, and most enterprises in the animation and related spin-off sectors still rely on animation characters in the US and Japan in their production.

- **Homemade toys and handicrafts:** It has captured a wide audience on the mainland. Working on handicrafts during leisure time can help one wind down, and counter cross stitching, for example, has caught on as a popular home handicraft.

- **Toys for adults' recreation and entertainment:** The market spells enormous potential, but supply is limited. The market remains largely untapped. According to a market survey conducted by the Social Survey Institute of China (SSIC) in 2010, companies specialized in making adult toys were already in operation in the US a long time ago, and over 40% of these companies' toys are designed for adults. In China, on the other hand, the toy industry is still much confined to meeting children's demands, and adult toys can hardly be found on the market. 62% of the respondents expressed that they would consider buying toys if they are of good quality and met their needs.

Different adult consumer groups have different demands for adult toys. While, 34% of the young people surveyed indicated a preference for more complex, smart toys calling on their ability to think and explore as well as toys made for decorative and appreciation purposes; 29% of the middle-aged respondents stated their penchant for recreational toys and toys incorporating light exercises. As opposed to adult males' preferences, 27% of the adult

females interviewed expressed the desire for decorative items for the home that double as handheld toys.

5.4 The China's Toy Shoppers Survey

Purchasing Behavior Survey published by the Hong Kong Trade Development Council (HKTDC) in 2014 reported the following findings:

- Among the parents surveyed, 93% point out that "I hope my child can have a pleasant and happy childhood; I will continue to buy toys to satisfy my child's demand for toys". To children at an older age (6-14), parents would normally give toys as a reward for the efforts they make.

- Already, children starting from age 3 have clarity on what type of toy they want and would ask their parents for it. As the children grow older, their influence on buying decision becomes stronger.

- Majority of children (73%) obtain information on toys from their friends and peer group. The proportion of children, aged 9-14, who obtain information on toys from the internet and from electronic games is considerably higher than that of children in other age groups.

- Parents generally attach utmost importance to safety (66%) and style/exterior design (55%).

- It has been observed that girls across different age groups like plush toys and dolls, while boys like remote-control/electric toys.

- The average annual frequency of toy purchase made by parents declined from 10.5 times in 2010 to 8.8 times in 2014, whereas the average annual total spending on toys climbed from Rmb799 in 2010 to Rmb1069 in 2014.

- Online shopping has emerged as a new trend in the mainland Chaina. According to the 2010 survey, only 14% of the surveyed parents indicated that they had bought toys online in the preceding year. However, the 2014 survey reports that this proportion has risen to 46%.

- In the past year, among parents who have bought toys online, 79% made the toy purchase on the Taobao platform. Other major platforms include Tmall (56%) and jd.com (39%). The average price of toys purchased online is Rmb112.

5.5 Major Toy Clusters in China

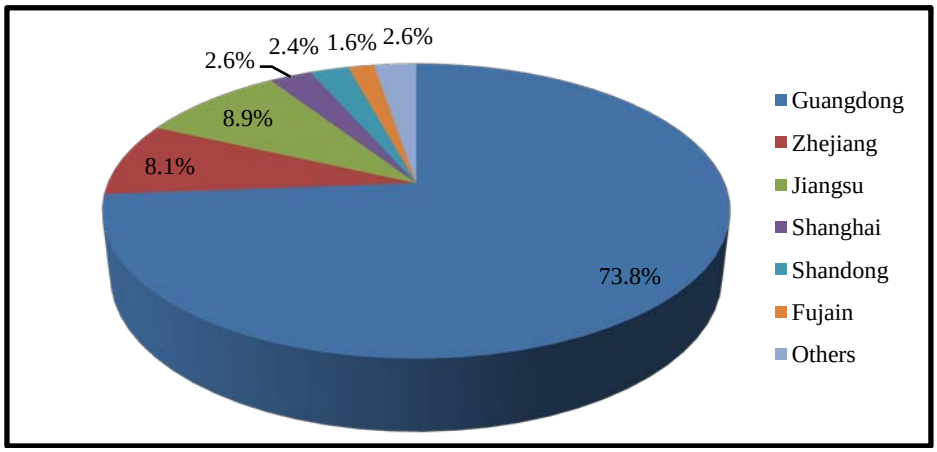
China is a major toy producer in the world. It is estimated that about 85% of toys worldwide is made in China. China currently produces and distributes two-thirds of the multi-billion dollar toy industry's global demand. The five provinces of Guangdong, Jiangsu, Zhejiang, Shandong and Fujian, as well as Shanghai, collectively account for 95% of toy sales in China. Guangdong province, the most important Chinese toy production and export base, represents 70% of toy sales by China. The bulk of toy exports are produced to OEM orders for foreign brands. Toys made in China have lots of categories; here these are divided by types and manufacture areas (**Table 5.1 and Figure 5.1**).

Table 5.1: Types of Toys and Manufacture Areas in China

Sl. No.	Toy Category	Toys	Manufacturing Area
1.	Remote control Toys	RC Helicopter, Cars, Boats, Quadrocopter	Shanghai, Shandong
2.	Diecasts & Toy Vehicles	Cars,Trucks, Car Models	Shanghai
3.	Toy Figures	Lego Toys, Animation Figures	Shanghai
4.	Doll & Stuffed Toys	Toy animals, Puppets, Mascot, Costume	Mainly in Yangzhou and Qingdao, but there are also some in Yiwu, Shandong and other cities
5.	Classic Toys	Yoyo, Balloon, Balls, Kaleidospce	Shenghai, Yiwu, and other cities depending on products
6.	Learning & Education Toys	Toy Musical Instrument	Yunhe(Zhejiang province) for wood made toys
7.	Outdoor & Playground Toys	Kid's Slide, seesaw	Yongjia (a small town of Wenzhou), the capital of playground toys in China
8.	Models & Building Toys	Building Blocks	Shanghai, Yiwu
9.	Baby Toys	Baby Rattles, Baby Walker	No specified cities, but mainly in Zhejiang and Guangdong Province
10.	Puzzles & DIY Toys	Puzzles, Magic Cube	High quality Puzzles mainly produced in Shanghai. DIY craft toys mainly produced in Yiwu.

Source: Jingsourcing.com

Figure 5.1: Major Toy Clusters based on Suppliers in China



Source: Made-in-China.com

Chinese toy manufacturing activity is highly concentrated in Guangdong province in Middle South China, which accounts for almost half of industry revenue. This is mainly due to many Hong Kong-, Macau- and Taiwan-funded investors having their factories in the province. This province is also home to 41.8% of total enterprises and two-thirds of industry employees, and is the largest toy exporter of China. Jiangsu province and Shandong provinces account for 21.8% and 10.4% respectively to total industry revenue in 2014.

5.6 Market Competition

Competition in the Chinese toy market is intensifying. The high-end of the market is dominated by foreign enterprises. Almost all international toy giants have established their own factories on the mainland or collaborated with local manufacturers for production. Most of the major international toy enterprises have also made their inroads into the mainland market by way of appointing sales agents or setting up their own marketing operations there – Sega of Japan and US' Mattel and Hasbro.

Chinese toy exporters are facing tremendous pressure due to declining external demands, escalating local production costs and changes in the Renminbi exchange rate. Many enterprises are increasingly looking to the domestic market for business opportunities. In recent years, many brands have proactively set up sales channels to tap into the local market, among which are international brand names such as Disney and DreamWorks and local brands like Auldey, Goodbaby and Great Dreams. Foreign toy products made by Sino-foreign joint ventures make up the lion's share of the domestic toy market. In a survey, it was found that 41.6% of the respondents opined that Disney, among various players in the toy market, tops the corporate social responsibility rankings. Its competitors, Goodbaby, Barbie, Lego and Fisher-Price, are placed second to fifth places respectively.

Unbranded toys do not adhere to guidelines- such as weights and measures- mandatory for indigenous toy companies. Many do not print the addresses of manufacturers/importers, the maximum retail price (MRP) or manufactured date. The inexpensive Chinese toys have replaced the branded Indian toys. It has been estimated that almost 85% of the toy market in India has been taken over by the Chinese products. The Chinese are offering toys at very low prices with large varieties to choose from. They look attractive and are within the reach of common people. For example a simple toy which is sold by Indian manufacturer at Rs. 25 will be sold at Rs. 20 by their Chinese counterparts.

While OEM remains the primary production mode in China's toy industry, changes are taking place. Some Chinese toy makers are paying more attention to R&D. A number of key enterprises with their own proprietary IPR and brand names have emerged, such as Auldey, Lanmao, Goodbaby, Meisida and Huawei. In the Pearl River Delta region, toy enterprises have also embarked on transformation and shifted gradually their operations to other activities of the value chain like sales and marketing and product development.

5.7 Sales Channels

Traditional sales channels for toys include major shopping centers offering mainly mid- to high-end, international brand name toys; supermarkets and hypermarkets which are important sales avenues for medium-to-low priced toys; and wholesale markets. Specialty stores and franchise chains such as Toys "R" Us, Edutainment, Leyou and Lijiababy have been expanding in recent years and new sales channels like online shops have also flourished.

Toy suppliers have found their way into the fast developing e-commerce platforms in recent years. According to Tmall.com, a number of toy brands like Hasbro, Barbie, Toys "R" Us and Bandai from Japan have gained a foothold in baby.tmall.com. Meanwhile, some foreign brands have successfully entered the mainland market through online platforms.

There are two main ways through which foreign brands break into the Chinese market: by appointing agents to assist in penetrating the market or making a direct entry into the retail sector. The products offered by these foreign toy makers are essentially toys with high technology content like electronic toys, educational toys and game consoles, posing direct threats to the traditional toy market.

Zoos, museums and science and technology museums also serve as sales channels for toys. These venues offer markedly different products from those in department stores, with each having their own focus. While zoos offer relatively more animal figurines, museums often make available a full range of dinosaur toys, and science and technology museums deal mainly in intellectual toys of all kinds.

5.8 Compliance to Standards

China implements zero tariffs for toys from countries and regions enjoying the Most Favored Nation (MFN) status. Under the Regulations for the Administration of Inspection of Toy Imports and Exports, inspection must be carried out on each and every batch of imported

plush toys, mechanical toys, battery-operated toys, plastic toys, inflatable toys, wooden toys, children vehicles and other toy categories included in the list of imported toys subject to inspection. Those which fail the inspections must not be sold or used.

Since, October 01, 2004 a new set of mandatory national standards for children's toys has been in effect. In the new standards, more attention has been paid to the potential danger in toys, with an aim of minimizing hazards posed to children. The new standards differ from the old ones mainly in the limits imposed on hazardous heavy metals. While a test on selenium has been added, most of the indicators in the new standards are more stringent.

Foreign companies venturing into the mainland toy market need to be aware of the relevant standards applicable to the industry. In the Standardization Law of the People's Republic of China which took effect on April 01, 1989, four levels of standards are stipulated: national standards, industry standards, local standards and enterprise standards, in descending order of binding force. National standards are classified into mandatory and recommended standards, represented respectively by standard codes GB and GB/T. For industry standards, there are likewise mandatory standards and recommended standards, and the toy industry is deemed a light industry and represented by the standard codes QB and QB/T respectively. Local standards are mandatory standards within their respective administrative regions, while enterprise standards are applicable to the respective enterprises. For details of the standards, reference can be made to the standardization website hosted by the Industry Coordination Department of the National Development and Reform Commission and the website of the Standardization Administration of the People's Republic of China.

On 1 June 2007, the new version of the *National Standard on Instructions for Use for Toys* was implemented. Compared to the 1996 version, revisions on labelling requirements have been made in aspects like age grading, safety warnings, major ingredients and materials, usage methods, and repair and maintenance. New requirements on durability labelling and installation positions have also been added.

Since September 15, 2009, the AQSIQ has implemented the Measures for the Administration of Inspection and Supervision of Toy Imports and Exports. It requires that for imported toys not listed in the CCC catalogue, a report from the lab for testing toy imports and exports certifying that the products have passed the relevant tests should be furnished.

The Technical Requirements for Environmental Certification of Wooden Toys have been implemented since June 01, 2010. The national standards set out requirements for environmental performance associated with the production of wooden toys and their raw materials and packaging materials.

Since February 01, 2012, the Guidelines for Matching Toys with Children's Age have been in force. The guidelines apply to toys which are designed for children aged below 13, and set out methods of matching toys with children's age and the relevant jargons and definitions.

The General Technical Requirements on Inflatable Toys have been in force since July 01, 2012. The requirements apply to inflatable toys for children aged below 14, and set out the jargons and definitions pertaining to inflatable toys as well as the relevant technical standards, testing methods and classification of defects.

In 2015, the Certification and Accreditation Administration started a new round of fine-tuning and revision of the implementation regulations on the compulsory certification of toys. The intention is to raise the requirements on the implementation of certification and will probably include plush toys and wooden toys in the list for mandatory certification.

To ensure the safety and quality of children's toys and to protect the health and safety of children, the Standardization Administration of China (SAC) has revised GB 6675-2003: National Technical Requirements for Toy Safety which forms parts 1 to 4 of GB 6675-2014: National Standard for Toy Safety. The requirements are mandatory and have come into force from January 01, 2016.

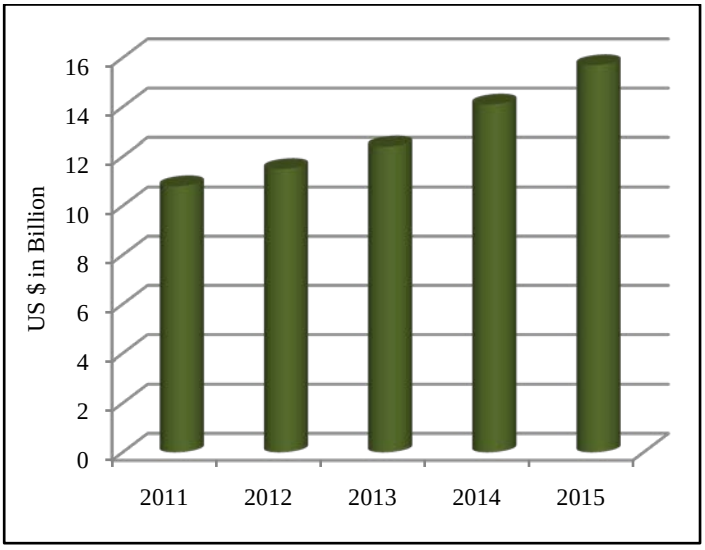
5.9 Future Trends for the Chinese Domestic Market

The main factor for increase in demand of toys is the increases in disposable incomes of the consumers. In the category of traditional toys and games, construction toys and outdoor and sports toys remain popular among players. In video games, games for PCs/MACs and PC and console game downloads increasingly supported by domestic players because of their insight of Chinese consumers' preferences.

5.10 Export Market

China is still the world's largest manufacturer and exporter of toy products. It produces and exports more toys than any other country in the world with Guangdong Province alone making the largest share of the country's total manufactured output. Exports of toys in China has increased from US $ 10.8 billion in 2011 to US $15.7 billion in 2015 **(Figure 5.2)** recording the compound annual growth rate at 10%. However, the industry continues to suffer and in the past two years has fallen to 6.6% each year. Part of the problem may be explained by strict safety standards introduced by Western Governments and safety awareness among consumers are adversely affecting shipments of toys from China with high levels of lead. For example, laws passed by the U.S. Congress require that lead levels in the paint used to coat children's toys be tested for lead and certified by independent laboratories. Regulations for exporting to European countries are even stricter. New laws ban the use of certain fragrances on toys bound for that continent. Chinese manufacturers respond to the new requirements by changing their manufacturing practices to accommodate such restrictions though it could elevate their costs by 20%. There is a realization in China that they must change the way they do business in order to survive in this new economy.

Figure 5.2: China's Toy Export Value



Source: Wind Info

According to China Toy and Juvenile Product Association, the major items exported are:

- Traditional toys (include dolls, educational toys, puzzles, electric trains and toy musical instruments etc.)
- Video games (not coin or disc-operated)
- Festive articles
- Baby strollers & bicycles

The top 10 export destinations for China are USA, Hong Kong, UK, Japan, Germany, Philippines, Singapore, Russian Federation, Canada and France. Details of toy exports from major clusters are given in **Table 5.2**

Table 5.2: Cluster wise Exports of Toy Products, January-March 2014

Region	Volume (-) (million nos)	Value (US$ million)	Compared with the same period last year	
			Volume (%)	Value (%)
Guangdong	2087.92	1487.47	-0.5	9.7
Zhejiang	1078.94	280.12	23.2	20.3
Jiangsu	1134.27	206.78	79.8	12.7
Shanghai	76.57	79.354	56	2.1
Shandong	37.23	62.89	-6.9	8.4
Jiangxi	56.78	47.38	31	6.2
Fujian	106.58	44.88	-10.8	23.2

Source: Customs Information Network, China Government

China's toys were exported mainly from Guangdong, Zhejiang and Jiangsu. Among which, the export value of Guangdong accounted for 65.12% of China's total export value for toys, while the export value of Zhejiang and Jiangsu accounted for 12.26% and 9.05% respectively of China's total toy export.

Major retailers in Beijing and Shanghai, including 17 top departmental stores of leading toy and baby product retail chains, such as Shin Kong Place, Bao Da Xiang Shopping Center for kids, Lijia Baby and MAMA's Goodbaby etc., participated and started the promotion of safety Commitment Campaign on Toys & Baby Products, to guide Chinese consumers to buy Safety Commitment Brands and high quality products. Till now, 123 overseas and Chinese famous brands, including Mattel, LEGO, Barbie, Transformer, Hot Wheels etc., have joined the campaign and pledged their commitment towards producing safe and quality products in China.

Apart from these, China's domestic toys and games has advantages of

- Low wages
- Counterfeiting and piracy
- Minimal worker health & safety regulations
- Lax environmental regulations & enforcement
- Export industry subsidies, highly efficient "industrial network clustering"
- Catalytic role of Foreign Direct Investment (FDI)
- Superior infrastructure- both general and specific to toy sector
- Proximity to Hong Kong
- Large scale operations
- An undervalued currency.

5.10.1 Trends and growth of export of China's Toy Market

Capitalizing on advantage of the raw materials and cost of labor, China has become the largest manufacturer and exporter of toys in the world. The export of China's toys slowed to some extent, the export amount realization US $ 15.7 billion, up 10.8% compared with 2011. The export market of China's toy manufacturing focuses on OEM (original equipment manufacturer), low proportion of high creative products, extreme concentration of export markets and the decrease of export profit and cost.

According to Huidian Research, the rising consumption demand brought by the changes of lifestyle and upgradation of consumption encourage the rapid development of related industries. Under such background, the toy industry has broad development prospects and especially, the progress of the urbanization construction and the plan to double the wages inescapably support the rapid development of the mass consumer goods and become the continuous inspiration to promote the toy products to release the market demand, which will be the opportunity for the future development of toy industry in China.

5.11 Challenges Faced by China's Toy Market

China was able to withstand global economic crisis of 2008-09 and had grown consistently over the years. However, for 2012, it was a year full of challenges and opportunities for China's toy industry. On the one hand, the toy industry faced the pressure caused by the fluctuations of raw materials prices and exchange rate, the rising labor cost and the continuous depressed overseas demand caused by the European and American debt crisis. On the other hand, it faced the huge development opportunities brought by the rapid rising of the foreign emerging markets and the continuous upgrading of the domestic consumption market.

In 2013, the economic slowdown in China did contribute to consumers' reluctance to increase the spending on toys and games. Still willingness to spend on toys and games supported double-digit growth of the toy market. More adult consumers perceived that toys that promote learning skills were more suitable, which led to dynamic growth in construction toys, scientific/educational toys, arts and crafts and action figures and accessories. Games and puzzles remained the largest category in traditional toys and games in 2013, due to a steady consumer base buying poker cards in China, but games and puzzles had the lowest growth rate in 2013 because of the maturity of this category. Other categories registered healthy growth in 2013, given that consumers sought products in each category.

Chinese consumers have been more aware of the side effects that unbranded pirated toys can pose. In traditional toys and games, multinational brands and well-known domestic brands are being chosen by more consumers, with more of them holding rational attitudes towards value-for-money products and putting product safety and product quality ahead of price incentives. In video games, multinational video game software manufacturers are still pressured by pirated products and disadvantaged. However, domestic players cope up with pirated software by providing lower price for digital version products, and therefore, receive positive feedback from consumers.

CHAPTER 6

SWOT ANALYSIS OF INDIAN TOY INDUSTRY

6.1. Strengths

- Growing large domestic market.
- Increase in demand due to rise in the disposable income of domestic consumer.
- Growing confidence of both- domestic and international buyers in the Indian toy industry.
- Availability of most of the raw materials.
- Availability of skilled manpower at comparatively lower cost.
- Emergence of India on global toy scene.
- Support structures available for obtaining finance.
- Innovation skills.
- Less overhead costs.
- Wide range of products.
- Business acumen of the entrepreneurs.
- Manufacturing industry network & linkages.
- Pool of support institutions.
- Capacity to compete under adverse conditions.

6.2.Weaknesses

- Most of the toy industry is tiny in size hence Low Volume of Production.
- Lack of Research and Development facilities.
- Toy specific designers not available.
- Fragmented Technical knowledge.
- Absence of strong & professionally managed Toy Industry Associations.
- Lack of synergy and coordination amongst various toys manufacturers-critical for Component Approach.
- Poor process capability because of low technology, inferior tooling and use of general-purpose machines for specialized jobs.
- Absence of focus on export.
- Inadequate technical capabilities particularly in electronic toys and video games.
- Quality parameters are not followed.
- Surface finish and other features are poor.
- Higher production cost due to lack of economies of scale.
- Lack of range /poor presentation.
- Insufficient/ inconsistent vendor support.
- Comparatively higher cost of funds.
- Costly Special Purpose Machines/ Very high cost of foreign technologies.
- Lack of pride in workmanship.
- Insensitivity to customer needs/ poor channels of customer feedback and customer complaint redressal system.
- Minimal expenditure on brand building, advertising.

- Weak online presence.
- Lack of professional management.
- Reluctance to introduce new product designs because of unfavorable economies of scale.
- Imported toys are cheaper in cost, versatile in features, attractive and handy in packaging and better in quality.

6.3. Opportunities

- Well developed market-domestic as well as overseas.
- Growing domestic market and buying capacity.
- Almost one third of the population under 14 years of age to expand market.
- Liberalized economy, "Make or Buy" decisions easier.
- Low cost manufacturing base- enabling strategic alliances/ Potential co-operation with large customers and multinationals.
- Better support from government through Inter-Ministerial Committees
- Increasing surplus income of Indian middle class.
- Toys recognized as a better medium for education in a play way method.

6.4. Threats

- Competition from international players as they started manufacturing operations in India.
- China and other countries corner major market share of the growing Indian toy market.
- Technology obsolescence is creating road blocks to rapid changes in product design and also for adjusting to consumer preferences.
- Slow response to safety & quality standards based on international market requirements.
- Toy units diversifying to other sectors leading to poor component base.
- Shift in market demand to electronic toys in which India does not have competitive edge.
- Enhanced brand consciousness amongst Indian consumers.
- Children devoting more time to computers/ internet/ studies, leaving less time for games and toys.
- Increasing concern among international buyers about quality aspects of Indian toys.
- Low scale of operation capabilities with Indian manufacturers.
- With the melting of international trade boundaries, free flow of Chinese toys accessed the Indian market, having dual impact on the local toy industry.

CHAPTER 7

TOXICITY & SAFETY OF TOYS

7.1. Introduction

Toy Safety is the practice of ensuring that toys made for children are safe, usually through the application of a set of safety standards. Toxicity and Safety aspects have become a major concern among parents all over the world while buying toy products for children. Toys are supposed to be fun and are an important part of any child's development. However, each year scores of kids are treated for toy-related injuries. Choking is a major risk for kids in the age group of 3 years or younger, because they tend to put objects in their mouths. Toy manufacturers follow certain guidelines and label most new toys for specific age groups. But perhaps the most important thing a parent can do is to supervise play.

Here are some general guidelines to be checked while shopping for toys:

- Toys made of fabric should be labeled as flame resistant or flame retardant.
- Stuffed toys should be washable.
- Painted toys should be covered with lead-free paint.
- Art materials should be nontoxic.
- Look for the UL (Underwriters Laboratories) seal on electrical toys. It indicates the electrical parts have been tested for safety.

7.2. Safety Regulations

Safe toys must be well designed and age appropriate, durable, and non-toxic. Always read labels to make sure a toy is appropriate for a child's age. Many studies have reported that environmental hazards are caused by the toxic contents of toys which are mostly made in China. Therefore, quality measures are required to be set and inspected on regular basis.

In India, Bureau of Indian Standards (BIS) and in USA the Consumer Product Safety Commission (CPSC) has clearly formulated the standards relating to toy safety in terms of their physical form and toxicity. Most of the manufacturers either not follow safety norms or are completely oblivious of the norms. Guidelines published by the CPSC and other groups are helpful to make the buying decisions. Child's temperament, habits and behavior also need to be considered before buying a new toy. Moreover, age levels for toys are determined by safety factors, not intelligence or maturity of the child.

Here are some age-specific guidelines with respect to toy products:

7.2.1. For Infants, Toddlers and Pre-schoolers

- Toys should be large enough at least 1¼ inches (3 centimeters) in diameter and 2¼ inches (6 centimeters) in length so that they can't be swallowed or lodged in the windpipe. A small-parts tester, or choke tube, can determine if a toy is too small. These tubes are designed to be about the same diameter as a child's windpipe.

- Avoid marbles, coins, balls and games with balls that are 1.75 inches (4.4 centimeters) in diameter or less because they can become lodged in the throat above the windpipe and restrict breathing.
- Battery-operated toys should have battery cases that secure with screws so that kids cannot open. Batteries and battery fluid pose serious risks including choking, internal bleeding and chemical burns.
- When checking a toy for a baby or toddler, make sure it's unbreakable and strong enough to withstand chewing. Also, make sure it doesn't have:
    - Sharp ends or small parts like eyes, wheels or buttons that can be pulled loose.
    - Small ends that can extend into the back of the mouth
    - Strings longer than 7 inches (18 centimeters)
    - Parts that could become pinch points for small fingers.
- Most riding toys can be used once a child is able to sit up well while unsupported - but check with the manufacturer's recommendation. Riding toys like rocking horses and wagons should come with safety harnesses or straps and be stable and secure enough to prevent tipping.
- Stuffed animals and other toys that are sold or given away at carnivals, fairs, and in vending machines are not required to meet safety standards. Check carnival toys carefully for loose parts and sharp edges before giving them to your infant.

7.2.2. For Grade Schoolers

- Bicycles, scooters, skateboards and inline skates should never be used without helmets that meet current safety standards and other recommended safety gear like hand, wrist and chin guards. Look for CPSC or Snell certification on the labels.
- Nets should be well constructed and firmly attached to the rim so that they don't become strangulation hazards.
- Toy darts or arrows should have soft tips or suction cups at the end, not hard points.
- Toy guns should be brightly colored so they cannot be mistaken for real weapons, and kids should be taught to never point darts, arrows, or guns at anyone.
- BB guns or pellet rifles should not be given to kids under the age of 16.
- Electric toys should be labeled UL, meaning they meet safety standards set by Underwriters Laboratories.

7.2.3. Keeping Toys Safe at Home

After buying safe toys, it's also important to make sure kids know how to use them. The best way to do this is by supervising their play. Elders playing with kids alongside teach them how to play safely while having fun.

Parents should:

- Teach kids to put toys away.
- Check toys regularly to make sure that they are not broken or unstable:
    - Wooden toys should not have splinters.
    - Bikes and outdoor toys should not have rust.
    - Stuffed toys should not have broken seams or exposed removable parts.
- Throw away broken toys or repair them right away.

- Store outdoor toys when they are not in use so that they are not exposed to rain, sun or snow.

And be sure to keep toys clean. Some plastic toys can be cleaned in water, but read the manufacturer's directions first. Another option is to mix antibacterial soap or a mild detergent with hot water in a spray bottle and use it to clean toys, rinsing them afterwards.

7.2.4. Dangerous Objects

Many non-toys also can tempt kids. It is important to keep them away from:

- fireworks
- matches
- sharp scissors

7.3. Toxic Aspects of Raw Materials

7.3.1. METALS

❖ **Lead**

- Uses: stabilizer in Polyvinyl Chloride (PVC); pigmentation in paint, rubber, plastics, ceramics; cheap metal jewelry
- Found in: jewelry, paint and PVC
- Concern: neurotoxicity

❖ **Cadmium**

- Uses: stabilizer in PVC, coatings & pigments in plastic and paint.
- Found in: jewelry and PVC
- Concern: developmental effects and known carcinogen.

Health Effects: Depending on the level of exposure, cadmium has been linked to:

- Cadmium exposure is associated with developmental effects, including possible decreases in birth weight, delayed sensory-motor development, hormonal effects, and altered behavior (Schantz 2001).
- Cadmium can cause adverse effects on the kidney, lung and intestines (ATSDR 2005).
- Cadmium is classified as a known human carcinogen, associated with lung and prostate cancer (Huff 2007).
- Exposure to cadmium can result in bone loss and increased blood pressure (Gilbert 2004).
- Acute toxicity from ingestion of high levels of cadmium can result in abdominal pain, nausea, vomiting and death (Gilbert 2004).

❖ **Bromine**

- Uses: flame retardants, most often listed as “brominates flame retardant”
- Found in: furniture, textiles and plastic encasing electronics.
- Concern: persistent and toxic, possible carcinogen, may affect brain development, may cause reproductive problems.

7.3.2. Chloride

Detection of chlorine in a toy component indicates the likely use of PVC (polyvinyl chloride) or vinyl, a widely used type of plastic. PVC is of concern to the environment and public health during all phases of its life cycle.

During the production phase, workers at PVC facilities, as well as residents in surrounding areas, may be exposed to vinyl chloride (a building block of PVC) and/or dioxin (an unwanted byproduct of PVC production), both of which are carcinogens. At the end of a product's life, PVC can create dioxin when burned. PVC is not easily recycled. Lead and other heavy metals are sometimes used as a stabilizer or to impart other properties to PVC plastic.

7.3.3. Mercury

Mercury is a metallic element. Its compounds are often used in inks, adhesives, and as a catalyst in reactions to form polyurethanes (ATSDR 1999). Healthytoys.org has detected low concentrations of mercury in a number of different toy components. Mercury can exist in different forms and some forms are more toxic than others. Methyl mercury is a form of mercury that is particularly hazardous to the developing brain. The main pathway of exposure to methyl mercury is from eating contaminated fish and it is unlikely that this form would be present in children's toys. However, the use of mercury in children's products means potential exposure of workers to this compound and release to the environment when the product is discarded.

Health Effects of mercury :

- Mercury is a persistent toxic chemical that can build up in the body.
- All forms of mercury can affect the kidneys (ATSDR 1999).
- Organic, inorganic, and metallic mercury are toxic to the nervous system, each affecting different regions of the brain (ATSDR 1999).

7.3.4. Arsenic

Arsenic is an element that can be present in both organic and inorganic compounds. Arsenic trioxide, an inorganic arsenic compound, is primarily used as a wood preservative. It is now imported and not domestically produced. In recent times, it has been found in children's products, though the reason for its presence is not clear. It may be used as a dye in plastics and textiles. The XRF technology does not allow us to assess the form of arsenic detected, although it is possible that the arsenic is in children's products in the more toxic inorganic form.

7.3.5. Phthalates

Since PVC is an inherently brittle material, it requires additives to make it flexible and to impart other desired properties. Another group of additives commonly found in PVC products are phthalates. Phthalates are used in many plastics, especially PVC products, as a softening agent to make the plastic flexible. Over 90% of all phthalates are used in PVC products. Phthalates - group of chemicals commonly used as plasticizers mainly to soften PVC-

- Soft toys typically contain 15-20% phthalates.
- New shower curtain smell.

- Health effects are controversial.

Table 7.1. Commonly Used Phthalates and their Potential Effects

Types of Phthalate	Common Uses	Potential Effect
DEHP di (2 -ethylhexyl) phthalate	Wall coverings, tablecloths, floor tiles, furniture upholstery, shower curtains, garden hoses, swimming pool liners, rainwear, baby pants, dolls, toys, shoes, automobile upholstery, packaging film, wire & cable sheathing, medical tubing, blood storage bags.	• Human immune system toxicant • Strong evidence of endocrine disruption • Possible human developmental toxicant • Limited evidence of reproductive toxicity.
DBP (di-n-butyl phthalate)	Carpets, paints, glue, insect repellents, hair spray, nail polish, and rocket fuel	
Diethyl phthalate	Toothbrushes, automobile parts, tools, toys, food packaging, cosmetics, insecticides and aspirin.	

7.4. Safety Standards of Toys in India

The organized segment of the toy industry in India is aware of the safety norms and expectations of the parents. Ministry of Small and Medium Enterprises (MSME) under the National Programme for Development of Toy Industry (NPDTI) had established a Toy Testing facility at Okhla, New Delhi. This is to facilitate toy industry to develop and produce toys confirming to National and International Standards. Technical standards and legislations in the toy field have been written with the aim of avoiding different types of hazards a toy may cause, taking into account the foreseeable use of the toys, and bearing in mind the behaviour of children. In this context, Indian Standards (IS) address to some specific hazards that a toy may present. Based on Indian Standard Specifications of 9873 (Part I, II and III), a comprehensive toy testing facility had been set up and maintained. The tests prescribed under the toxicity following safety specifications can be conducted in the centre.

- Safety aspects related to mechanical and physical properties as per IS:9873 (Part I)
- Safety of Toys : Flammability Test as per IS : 9873 (Part II)
- Safety of Toys : Migration of elements as per IS: 9873 (Part III)

At present, the development and production of Toys conforming to Indian Standard Specifications on safety is voluntary. But in the recent years, with due awareness, interest in developing new design, concepts and expanding markets, it would be necessary to consider this. With the growth of Toy Industry and expansion of market, toy manufacturers and distributors need to pay attention to ensure that toys are within the permissible level of toxicity and should give due consideration to overall safety aspects as well.

Safety and Toxicity aspect would be one of the most important aspect which would supervise and advice on the growth and development of this sector. Suitable measures need to be worked out to motivate toy manufacturers and distributors to take up this as a part of the business development.

The materials used in toys like plastics, paints and fabrics are made up of chemicals and may also contain added chemicals to impart specific properties such as rigidity, durability,

flexibility or flame resistance. When children put these products into their mouths, some of these chemicals may enter their bodies. The chewing, licking and swallowing behavior of children allow the substances, which are not always chemicals bound to the products, may also be released directly into skin, or into the air that children breathe. Children's bodies are more vulnerable to the effects of toxic chemicals. It is widely accepted that no level of lead or cadmium in the blood should be considered safe for children.

Toys made of *polyvinyl chloride* (PVC) are potentially toxic to children as PVC contains both Lead and Cadmium. Lead and Cadmium are known poisons, being *neurotoxins and nephrotoxins*, respectively. Lead and cadmium compounds act as stabilizers but they readily reach out. They can also be used in pigments to impart bright colors to toys in order to attract children. Chewing and swallowing behavior of children is a common source of lead and cadmium exposure. Lead is not biodegradable. It persists in the soil, in the air, in drinking water and in homes. It only accumulates where it is deposited and can poison generations of children and adults unless properly removed. At high levels, lead poisoning causes coma, convulsions and even death. At low levels of toxicity, it causes reductions in IQ and attention span, reading and learning disabilities, hyperactivity, impaired growth, behavioral problems and hearing loss. These effects are long term and may be irreversible.

Table: 8.1 Indian Standards on Toxicity

Toy Material	Element (ppm)							
	Sb	As	Ba	Cd	Cr	Pb	Hg	Se
Any toy material given in clause 1, except modeling clay and finger paint	60	25	1000	75	60	90	60	500
Modeling Clay and finger paint	60	25	250	50	25	90	25	500

The existing Indian standard for maximum lead content in paints is governed by a standard set by the Bureau of Indian Standard (BIS). BIS is only a scientific–technical body which recommends parameters and standards. It is up to the relevant ministries to make standards mandatory by bringing in necessary legislation. This requires adherence to an "Eco-Mark" scheme, which in turn requires that the manufacturers ensures that the Lead Concentration is below 1000 ppm. The paint samples studied by Toxic Link showed concentrations as high as 14000 ppm. Currently, there is no regulation making it obligatory for the toy manufacturers in India to comply with any safety standard. Thus, industries have the option of complying with BIS standards if they want compliance certificates, but they are still free to manufacture and sell their products without compliance marks. Also manufacturers do not register for the ISI mark for their products because it is an expensive procedure. Many regions have modeled their safety standards on the EU's EN 71 standard, either directly or through adoption of the ISO-8124 standard which itself is modeled on EN 71.

7.5. Bureau of Indian Standards' Guidelines

The Bureau of Indian Standards (BIS) on April 21, 2011 released its draft regulations on standards on **phthalates** to make plastic toys. The draft standards have been released following a Bombay High Court Order on March 24, 2011. The court's direction was in response to the Public Interest Litigation (PIL) filed by the Mumbai non-profit Consumer Welfare Association in 2007 demanding stringent regulations for phthalates in toys. Studies show that phthalates damage male reproductive system, impair lung functioning and affect pregnancy. The new norms has been included in part 3 of the BIS standard for safety requirements of toys (IS 9873) on July 3, 2011.

1. **IS 9873 (part 1): 2001/ISO 8124-1:2001 covers safety requirements of toys, safety aspects related to mechanical and physical properties.**
   The requirements in this part apply to all toys and acceptable criteria for structural characteristics of toys such as shapes, size, contour, spacing and criteria for properties peculiar to certain categories of toys are specified. The standard specifies the requirements of test methods for toys intended for use by children of various age groups from birth to 14 years. A drop test may be carried out to know the physical strength of the toy. Eye of a doll toy may be pulled with a predetermined force to know the behavior of this accessory when the toy is being played with by the child.

2. **IS 9873 (Part 2): 1999/ISO 8124-2.1994 covers safety requirements of toys, flammability requirements**
   This standard specifies the categories of flammable materials, which are prohibited in all toys and requirements concerning flammability of certain toys when they are submitted to a small source of ignition. The standard includes general requirements relating to all toys and specific requirements and methods of testing relating to some of the selected toys. This type of test will be very much important for push toys and other toys which have a tendency to catch fire in adverse conditions.

3. **IS 9873 (Part 3): 1999/ISO 8124-3:1997 covers safety requirements of toys, migration of certain elements**
   This part specifies maximum acceptable levels and methods of sampling & extraction prior to analysis for migration of the elements antimony, arsenic, barium, cadmium, chromium, lead, mercury and selenium from toy materials and from parts of toys. This is also governed by ISO 8124, adopted by International Organization for Standardization. The migration of elements is specified from the following toy materials:-

- Coatings of paints, varnishes, lacquers, printing inks, polymers and similar coatings.
- Polymeric and similar materials including laminates, whether textile reinforced or not, but excluding other textiles.
- Paper and paper board upto maximum mass per unit area of 400 gms per sq. mt.
- Natural or synthetic textiles
- Glass/ceramic/metallic materials, excepting lead solder, when used for electrical connections.
- Materials intended to leave a trace (e.g. the graphite materials in pencils and liquid ink in pens).
- Pliable modeling materials including modeling clays and gels.

- Paints to be used as such in the toy including finger paints, varnishes, lacquers, glazing powders and similar materials in solid or liquid form.

4. ISO 8098:1989 Cycles – safety requirements for bicycles for young children.

Toy safety standards are continually updated and modified as the understanding of risks increases and new products are developed. For example, the new European standard EN 71-4:2013 was published in 2013. It replaces and updates the 2009 version of the same standard since the latter and newest has been harmonized under the EU Toy Safety Directive. The new method is a reference test method regulating chemicals in toys and juvenile products. This gives a new test method for 'Experimental sets for chemistry and related activities' under the toy safety EN 71 series.

According to the study of Delhi-based NGO Centre for Science and Environment (CSE) in 2010 some toys breached the limits that are set by the European Union by more than 60-160 times. Out of the 24 samples picked randomly, 14 were found to be from China and two from Taiwan. It is noted that 57% of China-made toys and 100% of Taiwan-made toys crossed the safe limit. Another study which is conducted by the Greenpeace-IPEN (2011) measured toxic metals in 500 children's products purchased in five Chinese cities: Beijing, Guangzhou, Hong Kong, Shanghai, and Wuhan. The results showed that one-third of tested products contained at least one toxic metal at levels of concern. Forty-eight samples (9.6% of the products) contained more than one toxic metal, increasing the possibility of harm. None of the tainted products contained warning labels to inform consumers about their toxic ingredients. The toys that tested positive for heavy metals, including lead, were found in every category of product, no matter whether it was branded or non-branded, cheap or expensive. In short, no matter who or where you buy the toy in China, there is a possibility that a toxic metal is present.

7.6. Safety Regulation on Import of Toys from China

EU and other countries mandatorily regulate the chemical content whereas India and China do not have such standards. Indian standards are voluntary in nature and no license has been granted for this standard. Since BIS has not granted any Certification license for toys against the Indian Standard, it cannot enforce it against manufacturers of toys. The government in January 2009 has put quality restrictions on toys from China that does not meet international safety standards and norms. But the restriction was eased later after Beijing questioned the restrictions on the ground that New Delhi did not put such curbs on toys from other countries. The government has two options either regulate all toys, both domestic production and imports, or let the order expire and leave the entire market unregulated.

India must provide safe environment to children so that they are not exposed to toxic chemicals. This can only be achieved by implementing a robust regulatory mechanism and preventive approach through the use of safe and non-toxic materials. At present India have no enforceable standards for lead, cadmium and other toxic metals permissible in toys. Toys, particularly soft PVC toys, which are intimately linked to children's environment, have not been investigated as one of the possible sources of lead, cadmium and other heavy metals exposure to children.

Safety & toxicity in toys need to be considered as integral component of design development, training and awareness programmes as part of the overall programme for the development of toy sector. This is essential but complex area particularly if tiny and cottage industry is also included.

There are some suggestions which can be followed in India for the safety purpose of children. These safety suggestions are as follows-

1. Brands and manufacturers should actively improve manufacturing processes and product design, rapidly reduce and ultimately eliminate all hazardous substances, especially toxic heavy metals such as lead, from their products and production processes. The industry should also disclose information on chemical ingredients in products.

2. The government should strengthen its supervision over hazardous substances in children's products. It should adopt a more protective lead concentration limit in children's products and extend the concept of "total concentration limits" to other heavy metal substances using protective regulatory limits.

3. Consumers should carefully read product labels and try to identify chemical safety information before purchasing children's products. Through their inquiries about corporate environmental policy and product chemical information, consumers can help drive companies to progressively reduce and ultimately eliminate hazardous chemicals from their products and production processes. Consumers should also support rigorous regulatory policies to limit the presence of toxic substances in products.

CHAPTER 8

FIELD SURVEY FINDINGS: TOY MANUFACTURING UNITS

8.1 Introduction

In this chapter an attempt has been made to study the issues and problems of the toy manufacturing units in India on the basis of detailed field surveys across both traditional and modern segments of toy manufacturing. The main objective of the field survey is to get the feedback from the toy manufacturing units in terms of output, employment generation and export competitiveness. The field survey has been carried out across 8 selected states with structured questionnaires (**Annexures 1.1 & 1.2**) for identifying sector specific issues and problems with a view to recommend appropriate policy measures in order to enhance productivity and export competitiveness of the toy sector in the country. From the modern segment 82 manufacturing units have been surveyed, while 55 manufacturing units have been surveyed from the traditional segment. List of manufacturing units surveyed from both the categories are given at **Annexure IV.**

8.2 Profile of Toy Manufacturing Units: Modern Segment

Modern toy manufacturing units have been surveyed with a structured questionnaire **(Annexure 1.1)**. The questionnaire was designed to elucidate firm level details such as turnover, employment, domestic and foreign trade, product description, cost related information, factors affecting productivity, factors responsible for competitiveness and specific suggestions and feedback from these units. In the modern Toy Manufacturing segment, field survey has been conducted across 8 states covering 82 toy manufacturing units.

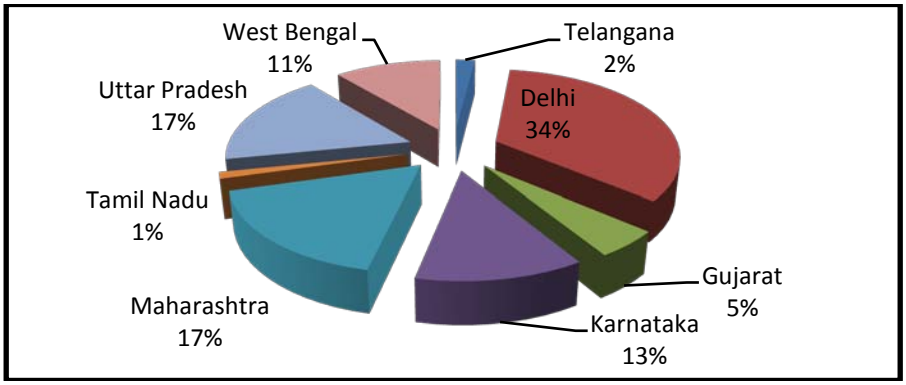
State-wise distribution of the responding Toy manufacturing units from the modern toy segment is given in **Table 8.1.** It is seen from the table that majority of the toy manufacturing units surveyed are drawn from Delhi (34%) followed by 17% units each units surveyed from Maharashtra and Tamil Nadu.

Table 8.1: Distribution of Modern Toy Manufacturing Units : NPC Field Survey

Sl. No.	States	No. of Units	Percent
1	Telangana	2	2
2	Delhi	28	34
3	Gujarat	4	5
4	Karnataka	10	12
5	Maharashtra	14	17
6	Tamil Nadu	1	1
7	Uttar Pradesh	14	17
8	West Bengal	9	11
	Total	**82**	**100**

Source: NPC Field Survey, 2015

Figure 8.1: State wise Distribution of Surveyed Toy Manufacturing Units

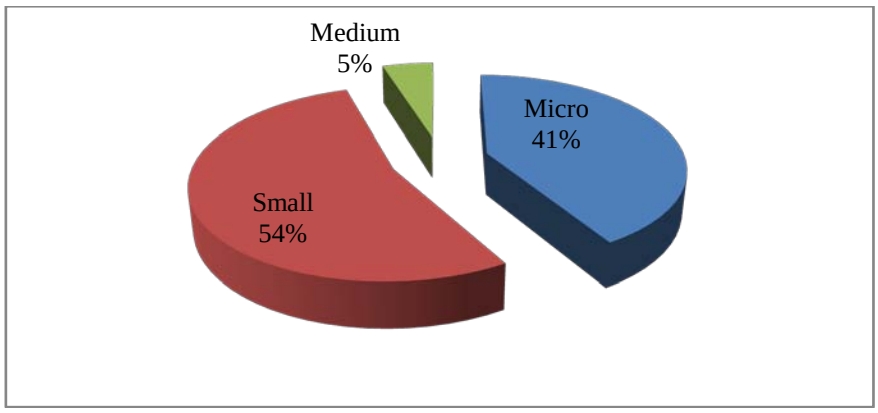


The year of establishment of the manufacturing of the surveyed units are reported in the range of 1890 to 2013. The field survey consists of 44 small units which accounts for 54% of the total field survey whereas 41% surveyed units are micro and 5% units are medium category **(Table 8.2 & Fig 8.2**).

Table 8.2: Category of Toys Manufacturing Units

Sl. No.	Category	Total No. of Units	Percent
1	Micro	34	41.5
2	Small	44	53.7
3	Medium	4	4.9
Total		**82**	**100**

Figure 8.2: Category wise Distribution of Toy Manufacturing Units



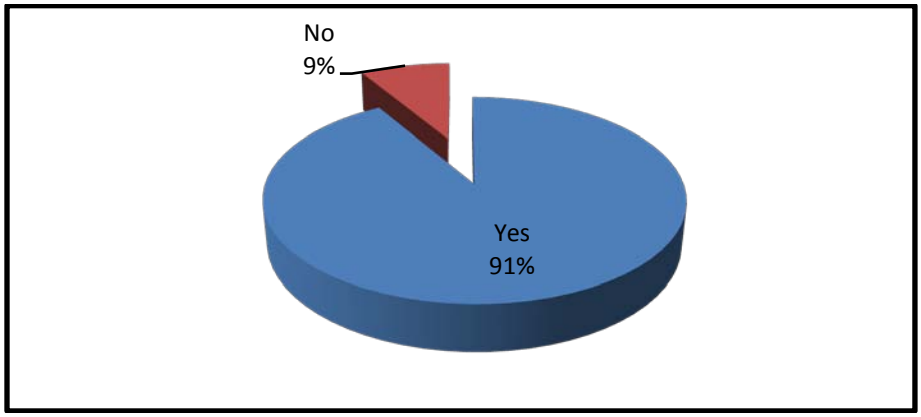
Furthermore, unregistered manufacturing units accounted for almost negligible share *i.e.*1% whereas the rest is recorded by the registered units **(Table 8.3).**

Table 8.3: Profile of Manufacturing Units

Sl. No.	Particulars	Yes	No
1	Registered Units	81 (99%)	1 (1%)
2	Members of Toy Manufacturing Association	75 (92%)	7 (8%)
3	Having Quality Accreditation	16 (20%)	66 (80%)
4	Units in favour of accreditation helped in business growth	22 (27%)	60 (73%)

As far as quality accreditations are concerned, only 20% units have received quality accreditation of ISO 9000, HACCP etc**.** Among the sample units having accreditations, 27% units reported that it helped in boosting business while majority does not in favour that these accreditations helps to increase demand for the product**.** Out of total number of units, 91% are having membership in Toy manufacturing Associations (**Fig 8.3**).

Figure 8.3: Memberships in any Toy Manufacturing Association



8.3 Operational Details of the Manufacturing Units

Table 8.4 provides averages of employment and capital investment over the years 2012-13 to 2014-15 across the surveyed units. Average number of skilled workers is reported to be about 20 persons besides 18 unskilled workers. Both wages and salaries and capital investment reported considerable increase during this period.

Table 8.4: Averages of Employment and Capital Investment

Sl. No.	States	2012-13				2013-14				2014-15			
		Skilled Workers (No.)	Unskilled Workers (No.)	Wages & Salaries (Rs. Lakh)	Capital Investment (Rs. Lakh)	Skilled Workers (No.)	Unskilled Workers (No.)	Wages & Salaries (Rs. Lakh)	Capital Investment (Rs. Lakh)	Skilled Workers (No.)	Unskilled Workers (No.)	Wages & Salaries (Rs. Lakh)	Capital Investment (Rs. Lakh)
1	Telangana	6	11	24.63	80	5	11	26.5	67.5	5	13	27.75	67.5
2	Delhi	9	15	14.93	68.83	10	15	17.41	94.34	11	16	20.21	91.26
3	Gujarat	24	3	14.81	112.5	23	5	14.88	107.75	23	5	14.75	101.5
4	Karnataka	13	6	16.11	31.47	15	7	17.5	34.95	19	5	18.11	36.75
5	Maharashtra	13	21	29.1	31.13	14	22	31.39	36.96	14	22	33.83	41.51
6	Tamil Nadu	160	10	450.5	660	160	10	455	680	165	10	458	700
7	Uttar Pradesh	37	34	77.32	270.76	39	36	75.33	332.12	43	36	81.96	361.82
8	West Bengal	18	1	5.37	15.46	18	1	6.29	15.59	16	1	6.31	15.98
All India Average		**19**	**17**	**32.63**	**94.1**	**20**	**18**	**33.94**	**115.75**	**21**	**18**	**36.6**	**119.32**

Table 8.5: Average Installed Capacity, Capacity Utilization and Idle Capacity for the average Manufacturing Units across states during 2014-15

State	Installed Capacity			Capacity Utilization			Idle Capacity		
	Unit per day	Average working hour per day	No. of working days in a Year	Unit per day	Average working hour per day	No. of working days in a Year	Unit per day	Average working hour per day	No. of working days in a Year
Telangana	125	8	288	55	8	288	110	8	288
Delhi	2701	9	301	1809	9	301	2298	9	302
Gujarat	1413	9	295	1363	9	295	1350	9	295
Karnataka	268	8	301	200	8	310	261	8	310
Maharashtra	2179	9	302	1557	8	288	1321	8	290
Tamil Nadu	2000	8	300	1500	8	300			
Uttar Pradesh	3012	8	303	2300	8	337	11608	8	303
West Bengal	126	7	294	99	7	298	32	7	296
All India Average	**1974**	**8**	**300**	**1414**	**8**	**302**	**3276**	**8**	**300**

Table 8.6: Averages of Output, Total Sales, Cost of Production across states

States	2012-13				2013-14				2014-15			
	Output (No.)	Total Sales (No.)	Total Sales Value (Rs. Lakh)	Cost of production (Rs. Lakh)	Output (No.)	Total Sales (No.)	Total Sales Value (Rs. Lakh)	Cost of production (Rs. Lakh)	Output (No.)	Total Sales (No.)	Total Sales Value (Rs. Lakh)	Cost of production (Rs. Lakh)
Telangana	9600	1350	170.00	54.00	10750	9000	187.50	57.50	13000	10500	205.00	66.00
Delhi	229201	215402	241.27	164.38	242705	229561	269.27	194.88	243844	739108	308.31	246.77
Gujarat	207500	194250	35.75	19.50	222500	210500	47.75	27.00	262500	248900	51.50	40.50
Karnataka	61290	59400	54.00	46.11	64170	61100	67.90	53.90	62700	57900	68.00	57.20
Maharashtra	426237	299467	200.07	137.58	306448	296072	200.14	141.50	276197	256713	218.62	161.17
Tamil Nadu	450000	375000	2100.00	1900.00	510000	444000	2200.00	1950.00	600000	521000	2250.00	2050.00
Uttar Pradesh	612779	639178	727.86	621.36	616402	642706	845.21	734.93	636162	665169	819.64	715.71
West Bengal	22600	23678	15.67	10.89	22849	23189	15.67	10.67	24184	22694	14.78	10.44
All India Average	**282762**	**253976**	**280.60**	**223.68**	**268738**	**260664**	**315.26**	**254.64**	**270347**	**429771**	**329.27**	**274.10**

Table 8.7: Average Profit Before and After Tax across States

(Rs.Lakhs)

Sl. No.	States	Profit Before Tax			Profit After Tax		
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
1	Telangana	41.50	46.50	50.50	16.00	18.00	19.50
2	Delhi	28.75	34.42	39.42	11.08	14.29	16.96
3	Gujarat	6.75	8.75	15.00	4.75	6.50	10.75
4	Karnataka	11.60	13.90	13.40	9.00	10.50	9.40
5	Maharashtra	-.91	-.82	-1.64	-1.09	-1.00	-1.82
6	Tamil Nadu	200.00	250.00	200.00	150.00	200.00	150.00
7	Uttar Pradesh	124.14	144.50	138.43	43.71	53.29	50.93
8	West Bengal	4.67	4.11	3.78	4.50	3.56	3.56
All India Average		**38.48**	**45.25**	**45.27**	**16.12**	**19.69**	**19.44**

Table 8.8: Expenses in lieu of Interest Charges and Taxes

Sl. No.	States	Interest Charge			Taxes		
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
1	Telangana	5.50	5.50	6.00	24.00	27.50	29.50
2	Delhi	17.33	16.92	17.58	4.67	5.58	7.04
3	Gujarat	.25	.25	.25	.00	.00	.00
4	Karnataka	.80	1.70	1.80	2.40	4.00	4.00
5	Maharashtra	1.09	1.45	1.82	.36	.45	.64
6	Tamil Nadu	50.00	52.00	54.00	44.00	46.00	47.00
7	Uttar Pradesh	20.36	24.45	28.00	39.25	45.38	45.54
8	West Bengal	.00	.00	.00	.33	.33	.22
All India Average		**8.57**	**9.48**	**10.40**	**9.67**	**11.80**	**12.45**

8.4 Sources of Raw material

For producing toys, majority of the manufacturing units (73%) source raw materials from indigenous sources within the country. However, about 24% units rely on both indigenous and imported sources for the raw material. Only a few units (2%) source raw materials from entirely imported sources (**Table 8.9. & figure 8.4).**

Table 8.9: Sources of Raw Materials Used by Manufacturing Units

Sl. No.	Material	No. of Units	Percent
1	Indigenous	60	73.2
2	Imported	2	2.4
3	Both	20	24.4
Total		**82**	**100**

Figure 8.4: Sources of Raw Materials Used by Manufacturing Units

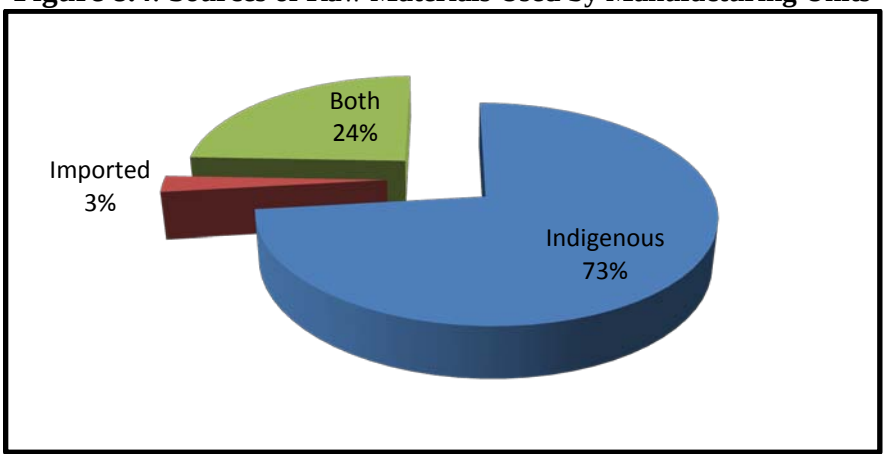


Table 8.10: Input Related Information

(Rs. Lakhs)

Sl. No.	States	Raw Material cost			Fuel & Energy		
		2012-13	2013-14	2014-15	2012-13	2013-14	2014-15
1	**Telangana**	26.00	28.50	32.00	3.50	3.50	4.00
2	**Delhi**	163.54	177.42	233.61	6.79	7.71	8.79
3	**Gujarat**	21.25	29.00	47.25	.50	.50	.75
4	**Karnataka**	12.10	14.80	13.80	2.00	2.90	3.00
5	**Maharashtra**	52.82	57.10	47.00	1.82	1.82	1.91
6	**Tamil Nadu**	1200.00	1250.00	1310.00	156.00	168.00	175.00
7	**Uttar Pradesh**	313.14	375.29	366.64	24.29	28.71	26.71
8	**West Bengal**	1.44	1.63	1.67	.38	.33	.33
All India Average		138.15	159.82	172.15	9.61	10.88	11.00

8.5. Packaging of Toys

To sell their toy products, manufacturing units have adopted different types of packaging. 54% surveyed units pack their products using local materials which are followed by card board packaging with the name of Unit (25%) and designer packaging is done by 20% units.

Table 8.11 : Different types of Packaging of Toys used by Manufacturing Units

Sl. No.	Types of Packaging	No. of Response	Percent
1	Own Packaging using local material	64	54
2	Card Board Packaging with name of Unit	29	25
3	Designer Packaging	24	20
4	Any Other	1	1
	Total	**118**	**100**

8.6. Marketing of Toy Products

For a toy manufacturing unit, after packaging, there is a need for marketing the products. Among the surveyed units, 39% units sell their products directly to the buyers whereas 37% producers take help of distributors and dealers network. To expand the market size, 24% units sell product by both channels **(Table 8.12).**

Table 8.12: Methods for Marketing Products in Domestic Market

Sl. No.	Methods	No. of Units	Percent
1	Direct Marketing	32	39.0
2	Distributor & Dealer Networks	30	36.6
3	Both	20	24.4
Total		**82**	**100**

About 89% toy manufacturing units face competition from similar products in local market whereas 11% firms are not in favour of it **(Table 8.13).**

Table 8.13: Units facing competition from similar products in local market

Sl. No.	Particulars	No. of Units	Percent
1	Units facing competition from similar products in local market	73	89
2	Units Not facing competition from similar products in local market	9	11
Total		**82**	**100**

As far as outflows of toys from the country is concerned, only 29% manufacturing units exports their toys to other countries whereas a majority of them (71%) does not export their toys. **(table 8.14**).

Table 8.14: Units Export Toy Product

	No. of Firms	Percent
Yes	24	29.3
No	58	70.7
Total	**82**	**100**

Out of total export units, 54% units account 1-10% revenue in total sales followed by 17% firms which record 10-25% revenue in total sales (**Table 8.15**).

Table 8.15: Export as a percentage of Total sales of the Manufacturing Unit

Sl. No.	Range	No. of Respondents	Percent
1	1-10%	13	54.17
2	10-25%	4	16.67
3	25-50%	2	8.33
4	50-75%	1	4.17
5	Above75%	4	16.67
	Total	**24**	**100.00**

To promote exports, 62% of the total response, use direct export to foreign buyers while 30% export through buying house and rest of the units export through agents (**Table 8.16)**.

Table 8.16: Methods for undertaking Export Activity

Sl. No.	Channels	No. of Responding Units	Percent
1	Directly export to foreign buyers	23	62.16
2	Through Buying Houses in India	11	29.73
3	Through Agents in India	3	8.11
	Total	**37**	**100.00**

There are a number of reasons why most of the toy units could not export their toy products. **Table 8.17** reports that no knowledge of export procedures (29%) followed by no help from authorities/association (20%), and cumbersome (19%) are the major reasons for not exporting.

Table 8.17: Reasons for not Exporting

Sl. No.	Reasons	No. of Response	Percent
1	Cumbersome procedures	14	18
2	Low Margins	5	6
3	No help from authorities/association	15	19
4	No ISO/other Certification	8	10
5	No Knowledge of export procedures	23	29
6	Others	15	19
	Total	**80**	**100**

8.7 Government Assistance

It has been reported that about 32% of the responding manufacturing units are aware about the Market Access Initiative scheme of Government for export promotion while only 12% have used the facility. Similarly, 28% manufacturing units are aware about Market Development Assistance (MDA) scheme of Government for export promotion but only 12% have used the facility **(Table 8.18).**

Table 8.18: Awareness about Export Assistance Schemes (%)

S. No.	Schemes	Yes	No
1.	Awareness about of MAI	32	68
2.	Used MAI to promote export	12	88
3.	Awareness of MDA	28	72
4.	Used MDA to promote export	12	88

For the growth of a company the government need to provide assistance, 15% manufacturing units requested interest rebate for all bank loan, 14% reported design & development centers to be set-up,12% reported quality infra structure and 11% reported developing training facilities for the industry. **(Table 8.19)**

Table 8.19: Areas which need Government support

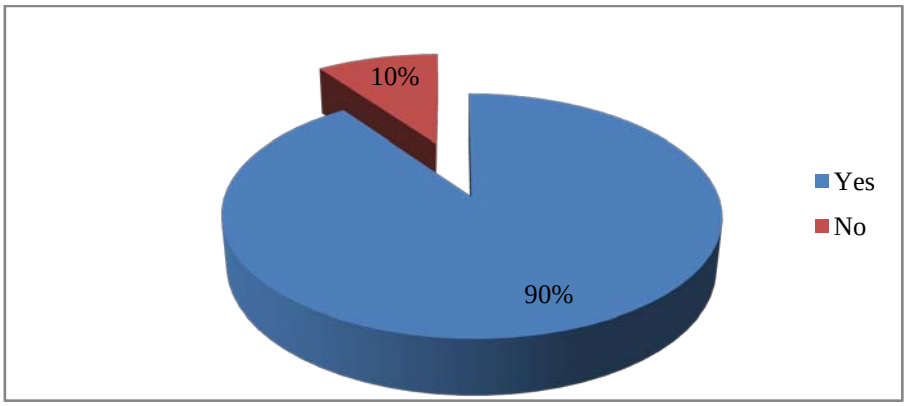
Categories	Response	Manufacturing Units Response (%)
Developing training facilities for the industry	37	11
Design and Development centre to be set up	46	14
Quality of infrastructure	42	12
Interface with business	9	3
Labour relations	16	5
Marketing of finished poducts	36	11
Export marketing	39	11
Easy availability of capital	22	6
Interest rebate for the bank loan	51	15

Others	42	12
Total	**340**	**100**

8.8 Competition from Chinese toys

About 90% of the respondents are facing competition from imported Chinese toy products (**Fig 8.5)**. The Chinese toys are reported to be about 10% cheaper than Indian toys according to 15% of the respondents while 40% of the respondents were of the view that Chinese toys are 10-25% cheaper.

Figure 8.5: Percentage of Units facing competition from China



8.9 Domestic Market

The perceptions of the respondents regarding various aspects of the domestic toy market are presented in **Figure 8.6 and 8.7**.

According to 60% of the toy manufacturers, demand for toy products has increased in the domestic market in the recent years (**Fig 8.7)**. However, about 45% of the respondents have stated that they face intense competition from imported toy products **(Fig 8.8)**

Figure 8.6: Domestic Demand in the recent years

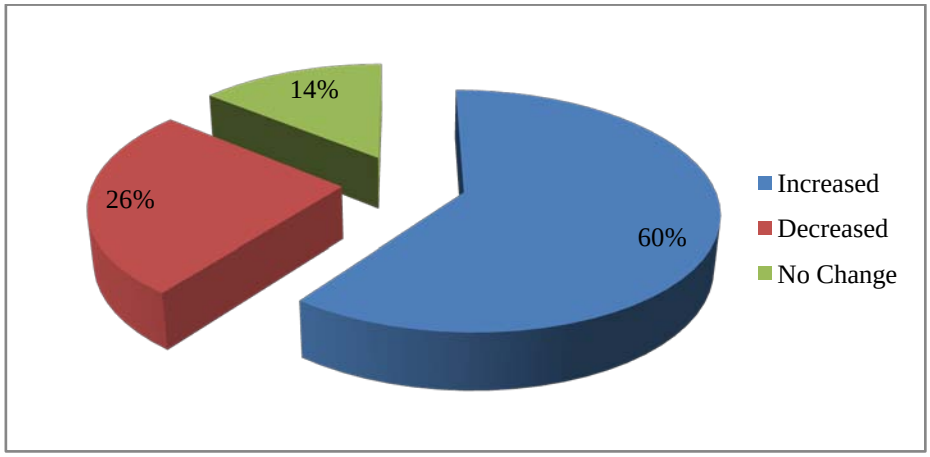
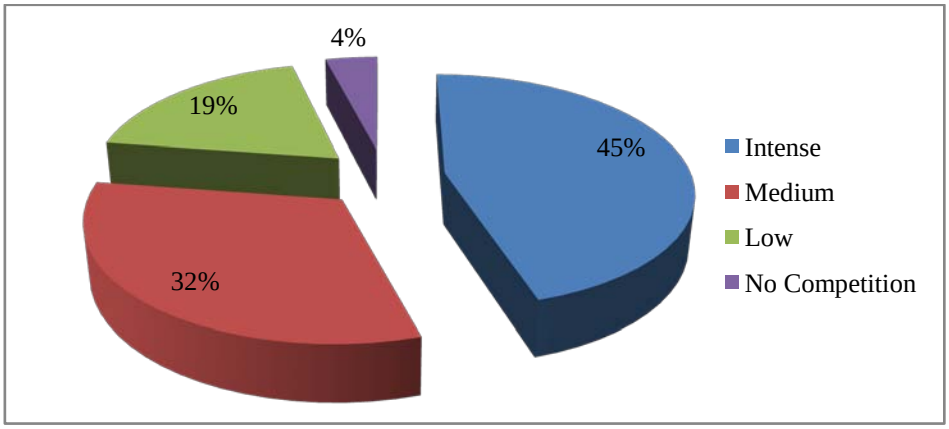


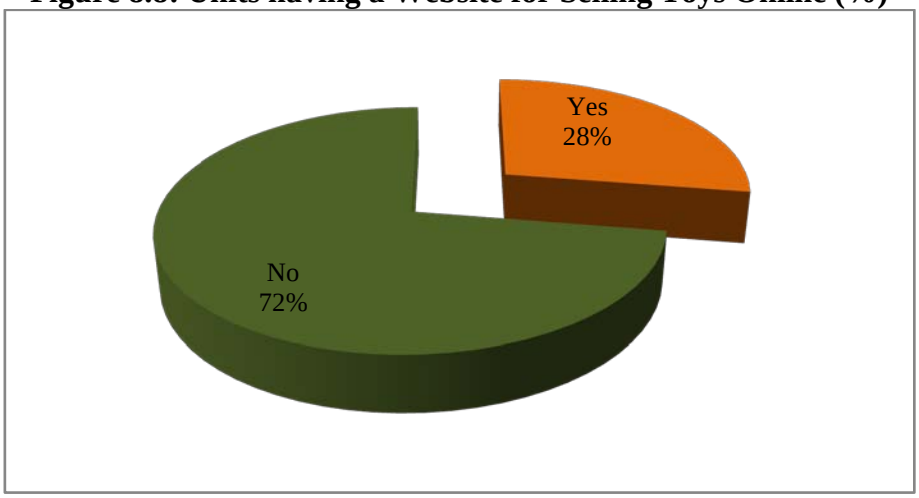
Figure 8.7: Competitions in the Domestic Market from Imported Products



8.10 Marketing and Product Promotion Efforts

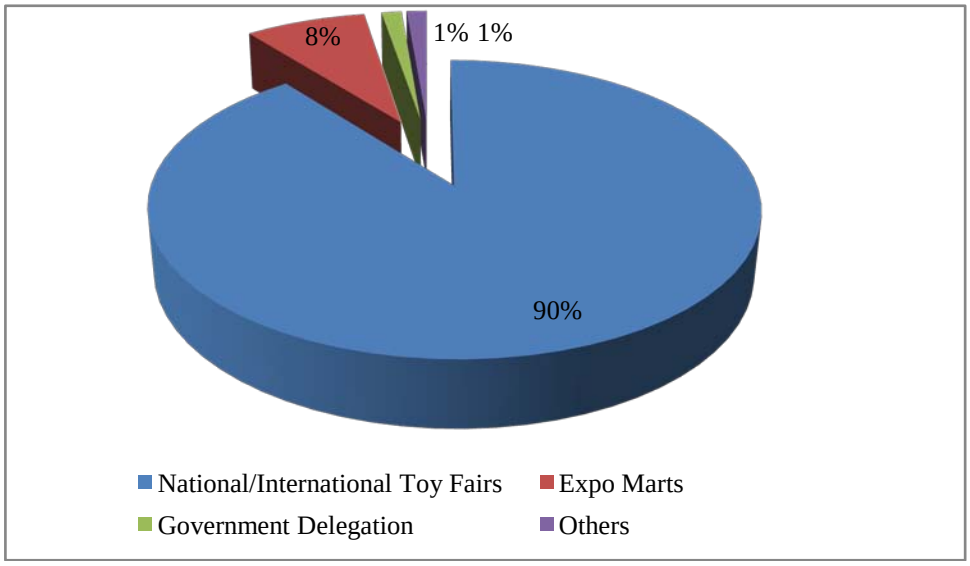
According to the field survey, 28% of the toy manufacturers operate websites for selling toys online (**Fig 8.8)**. About 90% of the respondents have attended toy fairs both national and international **(Fig 8.9).**

Figure 8.8: Units having a Website for Selling Toys Online (%)



Regarding the online marketing/advertising of the products it was found that only 7% of the responding units having websites for selling toys online.

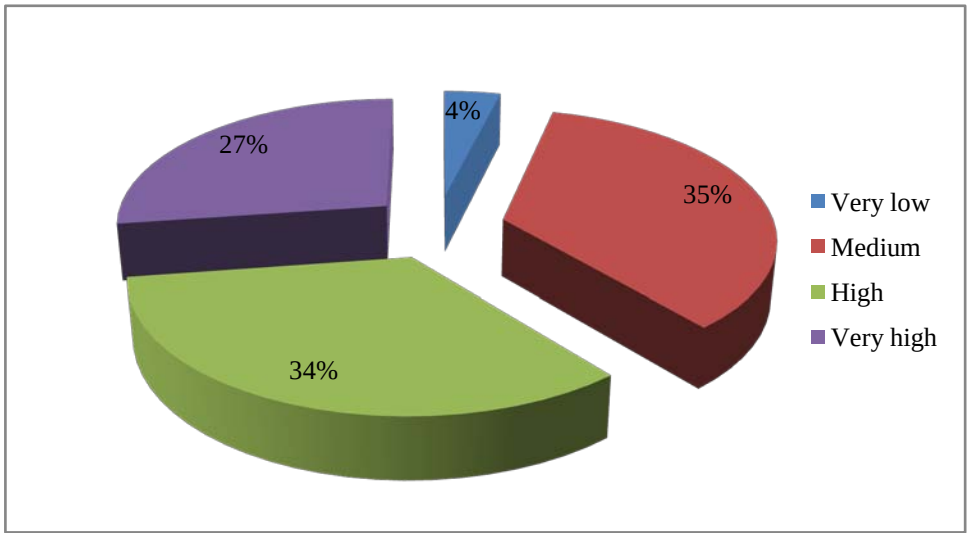
Figure 8.9: Units Participating in Fairs (%)



8.11 Innovation

Innovation is perceived as very important by almost all the responding units. The design aspect of toy manufacturing was considered as a medium activity by 35% and high by 34% of the responding toy manufacturers **(Fig 8.10).**

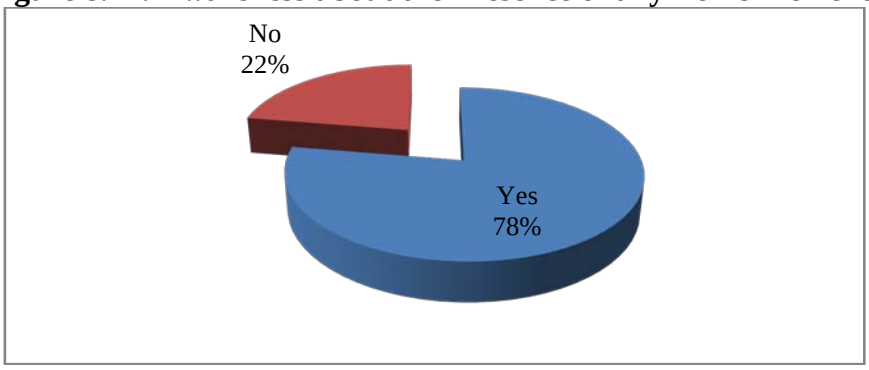
Figure 8.10: Importance of New Design to the Company



8.12 Toxic Aspects of Raw Materials

Figure 8.11 shows that 78% of the respondents are aware of the presence of toxic elements such as Lead, Bromine, Chlorine, Cadmium etc. in the toys. The presence of toxic material is identified through complaint or law suit according to 22% of the respondents.

Figure 8.11: Awareness about the Presence of any Toxic Elements

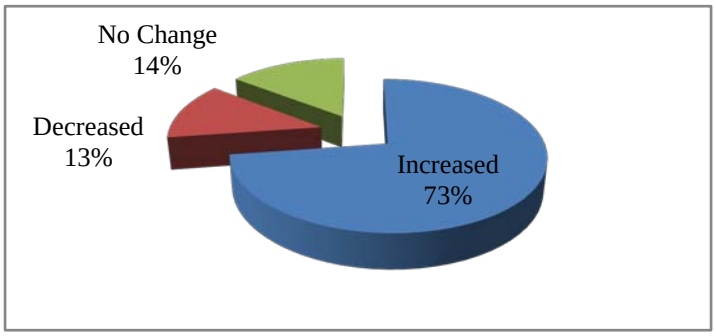


8.13 Profile of Toy Manufacturing Units: Traditional Segment

Majority of the traditional toy units are located in Uttar Pradesh (27%) and remaining units are based at West Bengal (22%), Karnataka (20%), Gujarat (16%) and Andhra Pradesh (15%). Among this, 35% units belong to registered manufacturing categories. Among the sample units 96% belong to Small size manufacturing units whereas micro size units account only 4%. Out of total number of units, only 16.4% are members of Toy Manufacturing Association.

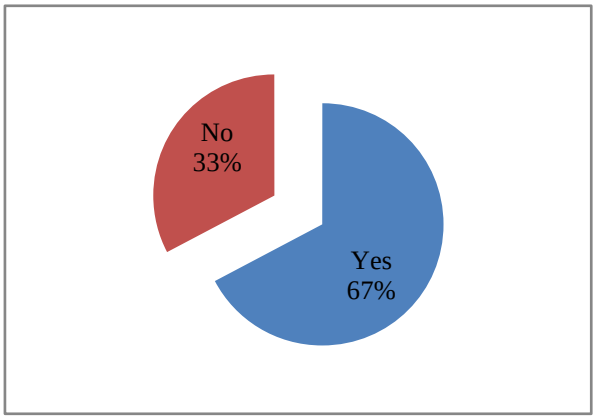
About 96.3% of the traditional toy manufacturers are not exporting. The two important reasons for not exporting are low margins and no knowledge of export procedures. **Figure 8.12** shows that 13% manufacturing units have experienced decline in the domestic demand of the product in the recent years. One of the reasons for this has been cited as competition in the domestic market from the similar products.

Figure 8.12: Growth of Domestic demand in recent years



In the era of liberalization, traditional sector is also facing competition with similar domestic products. As 67% respondents are facing competition **(Fig 8.13).**

Figure 8.13: Competitions in the Domestic Market from Similar Products



Besides, 85% manufacturing units involves their family members to produce toys **(Fig 8.14).** It includes their wife and children. Major sources of finance for funding your business are private sources and self fund. Further, almost all sample units are deprived of benefit of any scheme implemented by Central / State Government for promotion of traditional toys industry.

Figure 8.14: Participation of Family Members in Toys Manufacturing

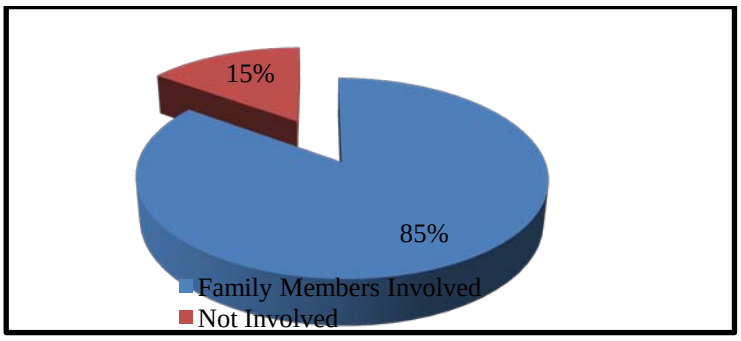
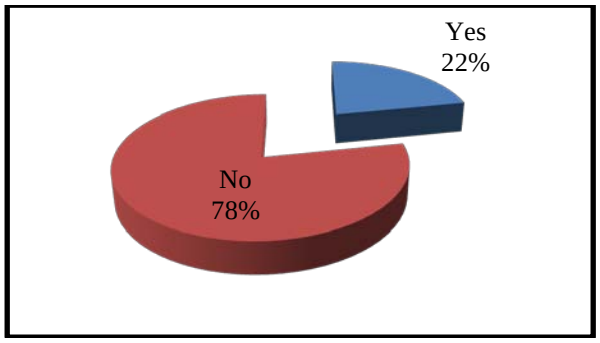


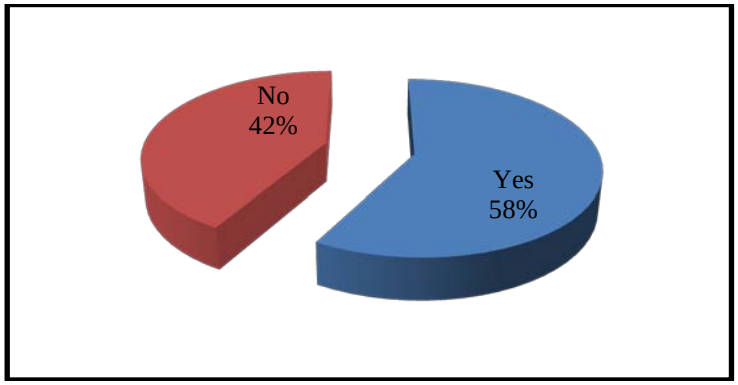
Figure 8.15 show details regarding export of toys. It shows that only 22% of the responding units are exporters of toys. The reasons for not exporting has been cited by respondents being no knowledge of export procedures (75%) and no help from authorities/association (25%)

Figure 8.15: Export of toys



About 58% of the respondents are facing competition from imported Chinese toy products (**Fig 8.16)**. The Chinese toys are reported to be about 10% cheaper than Indian toys according to 38.6% of the respondents while 37% of the respondents were of the view that Chinese toys are 10-25% cheaper but quality is not better than Indian Products.

Figure 8.16 Percentage of Units facing Competition from China



CHAPTER 9

CONCERNS OF THE INDIAN TOY INDUSTRY

9.1 Introduction

Indian toy industry comprises of large number of indigenous toy manufacturers and a few leading global players. Indian Toy industry requires more organized approach to face the challenges of global competition and raising the scale of production. Toy Industry in India is mainly based on cottage, micro, small and medium enterprises. The toy market has two broad segments- the "organized" segment, which represents about one-third of the market, and the "unorganized" segment which predominantly operate on cash-and-carry basis. Dynamics of toy industry changed with the opening up of the Indian market.

This is an opportune time to deliberate on the regulatory reforms and Governmental support requirements to make the Toy sector as a noticeable contributor to Gross Domestic Product (GDP) in the coming years. There is no denying the fact that the Toy sector in India presents an attractive capital and technology investment opportunity for both domestic and foreign investors, leveraging on the country's vast toy market primarily due to the young age population. Considering the demographics of India, there is huge potential to be tapped by the Toy Industry to recapture the Indian market by producing quality and price competitive toy products.

9.2. Toy Industry – An Overview

World Toy Business is estimated to be around US$ 85 billion ie Rs.578,000 Crores. Indian toy business is around 0.5% of the world toy business. The potential of toy business is huge in India with the availability of huge disposable income due to country's demography favouring younger population and hence large consumer base. This is a need to reposition Indian Toy Industry under 'Make in India' initiative to tap this huge potential.

Toy may be defined as a scaled down replica of adult world for safe use by a child.

Toys help in:

- Understanding concepts
- Develop intellectual as well as mortar skills
- Unleash creativity
- Develop Social Habits
- Problem solving

Every type of manufacturing technology that is used to make things for grownups is also used by the toy industry. It is important to highlight that in today's time Children are the main focus of Indian families. As a result, great importance is being given to the Child's

development and learning process with the help of toys and games. Toys also assume high importance due to shrinking outdoor space for play like Children parks and common playgrounds for outdoor games.

Researchers and Psychologists are of the view that the children who do not play with toys and games are less intellectually developed than those who have used toys. Learning from these examples, now days, most schools and parents have been seen adopting the play-way/ learning by playing method to teach children. In this way children are known to learn faster besides achieving higher intellectual capabilities and help development of emotional and interpersonal capabilities. Hence, toys and games help overall development of children and help in homing our future generations. Hence, the policy intervention should be consumer centric and the industry should focus more on selling experience than on product.

Middle class consumer size is set to grow to 600 million by 2030 from 200 million today. India is expected to be the fifth largest consumer economy by 2025. India is the fourth-largest economy with respect to Purchasing Power, even ahead of Germany. Size of Indian Retail Toy Market is Rs. 3000 crores and the Organized Retail: 25 % and Unorganized Retail: 75%.

Toy products export during 2014-15 registered Rs. 328.09 crores whereas import of toys reported Rs. 1936 crores. This shows that toy import is about 6 times more than the toy export by India. Further, toy products imported from China accounts for more than 90% of the total toy import during 2014-15.

Indian manufactured toys sold at retail are approximately 15% of the domestic market. Toys made by other countries (mainly China) imported into India accounts for 85% of domestic market.

Toy Industry is Highly Labour Intensive. It has vast potential for employment generation especially for women. Toys are generally divided into the following sub-group: Plastic Toys, Electronic and Mechanical Toys, Dolls, Metal Toys and Collectibles, Puzzles and Children Board games made of Cardboard/ Paperboard, Wooden Toys and Traditional Toys, Soft and Plush Toys and others.

Frequent dispute arise in classification of Children Games and no uniformity and consistency in applying excise duty. Educational Board Games meant for Children below age group of 14 years, classified as Parlour Games are subjected to Excise Duty.

All kinds of toys and games manufactured in India fall under HS 9503 and HS 9504 of Chapter 95 of the First Schedule to the Central Excise Tariff Act ("CETA"). There is a need for reclassification of it after taking inputs from toy Industry. Central Government exempts products falling under 9503 by way of Notification from Excise Duty. Games as referred in HS code of Tariff Heading 9504 are those which are played predominantly by Adults in Clubs, Parlour including gaming parlour, video parlours, Casinos etc.

Toys and games are indispensable tools of education. Education through toys and games is an accepted fact worldwide. Researchers have also found that toys and games stimulate 25 % more brain synapses per neuron.

Board games require protection for children to learn and acquire skills like concentration, memorizing, additions, deletions, interpersonal skills, social skills etc. Therefore, it is appropriate to classify Educational Board games under 9503.

Modern Stuffed Toy manufacturing came to India in late 1980's with Korean technical collaborations. There were 7 factories setup from 1989 to 1996 with Korean tie ups. All were setup with 100% Export Oriented Units (EOUs). Unfortunately most of the units closed down by early 2000 and only 2 factories survive today.

Stuffed toy industry faces challenge in procurement of raw materials. Quality & competitive materials are available locally, special Custom Duty concession requested for manufacturers when importing materials. Disparity in duty rates for raw materials & finished goods need to be addressed.

9.3. RECOMMENDATIONS

1. Uniformity of VAT for Electronic/Non-Electronic Toys.
Toys are only toys and different components, like mechanical or electronic components are added to make them easy to use. It is a method of running the Toys. Just by using some electronic components, they cannot be termed as "Electronic Toys" and charged different VAT. In order to protect the Indian Toy Industry there should be uniform VAT for all toys and rename all kinds of toys as just "Toys" without bifurcation of Toys & Electronic Toys.

2. Dampening effects of Inverted Duty Structure on the Indian Toy Industry
The Indian Toy Manufacturers have been at a disadvantage as compared to Importers. While import duty on finished goods attracts less Customs Duty, Indian Manufacturers have to pay more duty on imported raw materials and capital goods. This has been true to many Indian Industries. Even though the Government of India has corrected this anomaly in many cases where import duty was more for raw materials than the finished goods, this benefit has not been extended to the Indian Toy Industry.

3. Promoting Indian Toys for Schools and Anganwadis under Sarva Siksha Abhiyan (SSA) and Integrated Child Development Scheme (ICDS)
Governments, including Local Governments, are major buyers of toys under the SSA and ICDS Schemes. As of now, toys are bought by these agencies through tender irrespective of their origin, whether they are imported or indigenously produced. Imported toys are very general and they are not based on the specific needs of the Indian Child. In order to protect the Indian Toy Industry from the onslaught of imports, Government should encourage procurement of Indian Toys for Schools and Aanganadis under SSA and ICDS Schemes.

4. Cluster Development for Manufacturers

While there is need for bringing Manufacturers under the Cluster Scheme, there is also a need to develop a marketing Hub in major cities for the Toy Traders like in China so that it becomes easy for the Manufacturers to sell their products at single point. This will also allow customers to come to this hub for buying toys and games. These hubs should have all the modern facilities

.

5. Need for more Research & Development and Skill Development

Major Toy Makers are based in US or Europe and they rule the International market mainly because of their capacity to bring out newer and innovative designs. Even though Indian Industry has the potential to compete with International Brands, they lack in Research & Development facilities. There should be efforts to setup Centers where Research on new designs can be pursued. Human skills should also be developed in a regular and consistent way.

6. Compliance through Self Certification

Manufacturers often complain that they feel harassed by officials from various departments like Weights & Measurement or Central Excise. This affects the morale of the Industry and Trade. There should be a mechanism wherein the entrepreneurs comply with various rules and regulations by self certification as has been envisaged in the Startup India Action Plan.

7. Simplification of Standards set by BIS

BIS is considering standards for Indian Toys and Games Industry. Even when the Industry is all for producing safe and quality toys for the Indian Child, the industry should get enough grace period to prepare for the same.

THREE INDIAN STANDARDS- Introduced by BIS as follows:

- **IS 9873(Part 1):2012 / ISO 8124-1:2009** Safety requirements for toys: Part 1 Safety aspects related to mechanical and physical properties (first revision)
- **IS 9873(Part 2):2012 / 8124-2:2007** Safety requirements for toys: Part 2 Flammability requirements (first revision)
- **IS 9873(Part 3):1999** - Safety requirements for toys: Part 3 Migration of certain elements (first revision)- Based on ISO 8124-3

While the above standards, are suitable for the Indian market. The Foreign Buyer wants the Indian Exporter to get the Toy certified by an agency giving EU-EN 71 or the American ASTM-F963-11 Standards. Unfortunately BIS standards do not confirm to EU-EN 71 or the American ASTM-F963-11 Standards. BIS should get themselves accredited to EU-EN 71 or the American ASTM-F963-11 Standards unless this is done the foreign buyer will not accept BIS standards.

8. Indian Metrology Act (Weights & Measures Act) – Discrepancies arise from the interpretation of the law, which varies from the officer to officer. Template: 20 to 30 templates for all products in all categories under all chapters (including toys in chapter 95). This could be in a handbook. B) Registration of case: C) MRP put by Retailers/ others.

9. Central Excise & Custom Duty - Central Excise interpretation under chapter 95.03 & chapter 95.04. Although Toys are exempted from Central Excise, Toy Components are excisable, thereby increasing the input costs & making the Indian product less competitive with the imported ones. The import duty on complete toys is far less than component of toys, which completely defies the logic of promoting the "Make in India".

10. C-form issues – Compliance of this law takes precious time & energy besides it leads to harassment by officials.

11. Technology Up gradation: Promote use of new technology in the manufacturing sector. Provide higher rate of depreciation @ 20-25% & lower tax rate, coupled with CLCS. Cheaper loans to be provided by SIDBI, other Banks, etc. CLCS (Credit Linked Capital Subsidy) for Technology Up-gradation only assures 15% upfront capital subsidy, which, in our opinion, is not sufficient.

12. Taxation Benefits: Toys play an important role in the overall development of the child. It enhances their motor skills, ignites spark in creativity and helps enhance the overall development. Exemption or Lower rates of taxes Abolition of multiple taxes like Octroi, LBT, etc. lower rate of GST, unification of all toys & games as one, including electronic. Tax holiday for 2-4 years will help manufacturers recover relocation costs. VAT / GST at lowest rate request you to keep Toys out of the complicated tax laws. Presently, many manufacturers are troubled with multiple tax structures like VAT/ Octroi/ LBT/ CST/ etc.

13. Quality Standards: Use a standard that is widely accepted in the world, like the EU-EN 71 or the American ASTM-F963-11. Recommended that the part 3 (dealing in toxicity) of the IS 9873/ EN 71-Part 3, be implemented, both for imports & domestic manufacturers. This will ensure that the cheaper toxic toys do not enter the country Removal of clause 5 b & c and the term "Reason to believe". This will be a grey area and a cause for the lobbying fraternity. Implementation of the standards in a phased manner. .

14. Toy Design Centre (TDC) – Toy Design Centre could be a good solution, where new designs could be made and offered to the Toy Industry Manufacturers. Use of a design institute like NID / IIT/ NIFT, Full package service, from design to patent & legal support. Competitive pricing.

15. Cluster & Relocation benefits – Toy Manufacturers are concentrated in two major areas, Delhi & Mumbai. Loans at subsidized rates for companies coming into cluster. Above applicable for relocation as well lower rate of loans for the Toy Sector is suggested.

16. Capital Support for manufacturers

It is proposed that the present credit limit of Rs. 1 crore available under Credit Guarantee Trust for Micro, Small and Medium Enterprises without collateral (unsecured) may be increased to Rs.3 crores since the cost of machinery and technology has gone up substantially in the recent years. It is proposed to have rate of interest may be around 6-7% per annum (or

about 1% more than the prime lending rate). The processing time may be fixed within 90 days.

17. Government Support:

A) Quality check & control on all imported Toys & Games, "To ensure that there is same quality compliance as the Indian Manufacturers".

B) Promotion of Toys & Games – Educating the Indian Consumer: It is usually seen that the price point is noted, not the play factor, which is of most important. If the GOI could use the Make in India platform to encourage the consumers to purchase Indian Manufactured toys, this would have a far reaching effect as well.

C. Trade meets & exhibitions) GOI helps the Toy Industry by collecting data bank of the Toy Quality check at point of import Products that fail may be destroyed/ scrapped at point of import Seminars in schools with children & parents Government support Hiring of agency to help grow market.

18. Big Leap Help (Bulk Orders)

Backing to a company, consortium or cluster to execute a huge order out-sourced to the Toy Industry. Legal guidance for the same .Government backing incase of delays in the payment, cancellation of order, etc. Every manufacturer who successfully comes through should help one other manufacturer/ cluster. Others include MSME scheme re-imbursement process simplified. Subsidy for one domestic & one international exhibition already in existence help with simpler documentation MSME schemes excellent, help with Single Window

PROBLEM AREAS, ACTION PLAN AND IDENTIFIED BENEFITS

S .No.	Problem Areas	Suggested Action	Benefits
1	Weights & Measures (Indian Metrology Act) (CENTRAL GOVERNMENT)	• Template formation. • Transfer of case to Manufacturer's hometown. • Violation by downstream vendors should not be blamed on the manufacturer.	• More effective implementation. • Lesser violation of the law, hence reduction in legal matters. • Huge reduction in the lobbying tactics. • Lesser mental stress and better working efficiency.
2.	Central Excise (CENTRAL GOVERNMENT)	• Clarity in the definitions u/s 95.03 • Exemption for Toys &	• Effective compliance. • Reduced burden on the

		Games. • Components exempt from excise • Import duty on components be less than complete toy.	Industry • Better growth rate.
3	C-form issues (CENTRAL GOVERNMENT)	• Online registration of vendors • Quarterly statements should be mapped online. • C-form issue & submission eliminated.	• Smarter process. • Simple implementation, hence faster assessments • Lesser paperwork, better efficiency
4	Technology up gradation (CENTRAL GOVERNMENT)	• Promote use of new technology in the manufacturing sector. • Provide higher rate of depreciation @ 20-25% & lower tax rate, coupled with CLCS. • Cheaper loans to be provided by SIDBI, other Banks, etc.	• Better efficiency • Improved productivity & quality • More competitive pricing. • Increased exports & better reach in the Indian market, hence lower imports.
5	Taxation benefits (STATE GOVERNMENT)	• Exemption or Lower rates of taxes • Abolition of multiple taxes like Octroi, Urban Local Body Tax (ULBT), etc. lower rate of GST, unification of all toys & games as one, including electronic. • Tax holiday for 2-4 years will help manufacturers recover relocation costs. • VAT / GST at lowest rate	• Lower taxes = competitive pricing • With competitive pricing, more chance of recapturing the market share, thereby reducing imports. • Prices will get competitive & sales will raise, hence collection on VAT/GST will compensate. • Presently Toys are exempted from Ce. Ex, VAT in 90% states or it is 5% or less, hence Toys & Games should come in the lowest GST bracket.

6.	Quality Standards (CENTRAL GOVERNMENT)	• Removal of clause 5 b & c and the term "Reason to Believe". This will be a grey area and a cause for the lobbying fraternity. • Implementation of the standards in a phased manner. • Use of common standards for India & EU, etc. Any one.	• Safer & better toys would be available to the children of India. • Elimination of health risk. • International compliance in the quality, hence fall in the imports. • Domestic Industry gets a boost • Common standards would eliminate dual testing requirement.
7.	Toy Design Centre (CENTRAL/ STATE GOVERNMENT)	• Use of a design institute like NID / IIT • Full package service, from design to patent & legal support. • Competitive pricing.	• New designs & not copies, hence better recognition internationally. • Design students get first hand practical knowledge & experience • With the IPR matter being handled by the institute, there is no personal/ internal clash amongst members.
8	Cluster / Relocation benefits	• Toy Manufacturers are concentrated in two major areas, Delhi & Mumbai. • Loans at subsidized rates for companies coming into cluster. • Above applicable for relocation as well	• Good locations should be provided near these concentrated centers if cluster is to be successful. • Loans as 6% PA & below will attract manufacturers (or Inflation + 1%). • Increase in amount from 1cr to 3 cr is suggested, depending on the company & its turnover/ profitability. • Provide same benefits to companies relocating, being asked to relocate in case of countries progress

			(Govt. construction, road widening, etc.)
9	Government Support (CENTRAL / STATE GOVERNMENT)	• Quality check at point of import • Products that fail be destroyed/ scrapped at point of import • Seminars in schools with children & parents • Government support • Hiring of agency to help grow market. • Use the Indian Embassy to create international data bank and hold Toy Trade Meets/ Mini Exhibitions to promote Indian Toys	• Will provide level playing field to the Indian Manufacturers • Consumer benefits as safe products are available • Impact on imports • Educate children & parents on how to choose apt product for the apt age group. • Increases knowledge of impact of toys in overall growth. • Benefits of Toys in child's development. • Will have a positive impact on the industry • Expose quality products from India to the international market
10	Big Leap Help (Bulk Orders)	• Backing to a company, consortium or cluster to execute a huge order being out-sourced to them. • Legal guidance for the same. • Government backing incase of delays in the payment, cancellation of order, etc. • Every manufacturer who successfully	• Smaller players in the industry will be encouraged to grow. • More employment generated. • Economies of scale in favor, manufacturer encouraged to take more such orders. • Better relations amongst manufacturers, laying the foundation for a cluster formation, better coordination, etc.

		comes through should help one other manufacturer/ cluster.	
11	Others	• MSME scheme re-imbursement process simplified. • Subsidy for one domestic & one international exhibition already in existence, help with simpler documentation • MSME schemes are excellent but manufacturers need Single Window support	• Simple one-time registration & bi-annual updates will encourage manufacturers to take benefits. • Encourage manufacturers to go international • Increase exports from India • Promote Brand India • Help encourage manufacturers to use the scheme with simpler procedures. • Single window to help expedite paperwork and procedure. • With faster re-imbursement, build hunger to take calculated risks and stimulate growth. • Single window can be given on a subsidized charge per manufacturer, depending on profitability: 1000/- to 10,000/- per annum.

CHAPTER 10

SUMMARY, RECOMMENDATIONS AND WAY FORWARD

10.1. Summary

India has a rich heritage in toys. Toys act as cultural ambassadors reflecting 5000 years of Indian civilization. The Indian toy industry is estimated to be worth Rs 1,700 crore of which 10% constitutes organized market and 90% constitutes unorganized market and growing 15-20% a year. According to a Euromonitor study, spending on toys and games in India is set to grow at 157% between 2009 and 2014, much faster than other Asian countries such as China (84%), Taiwan (35%), South Korea (33.1%) and Singapore (17.2%). Indian parents spend an average of Rs 250-300 on a toy and this is going up more and more innovation-driven high-end toys and games - from high-priced board games and play gyms to BeyBlades and remote-controlled planes - enter the market. Uuntil now has generated only 0.5% of the global toy market.

Indian toy industry comprises of large number of indigenous manufacturers and a few leading global companies. The toy industry is mainly based in the small and cottage sectors, with about 4000 manufacturers. The toy manufacturers are mostly located in Delhi, Mumbai, Punjab, Uttar Pradesh, Haryana, Tamil Nadu and clusters across central states. The toy market has two broad segments- the “organized” segment, which represents about one-third of the market, and the “unorganized” segment. Mom-and-Pop shops (also known as “Kirana”) are mainly “unorganized” outside the main urban centers, and predominantly operate on a cash-and-carry basis. The “organized” stores are in the big cities – mainly toy specialty stores such as RCS in New Delhi, Hamleys in Mumbai or Prijanka in Hyderabad. Some large MNC toy manufacturing units like Mattel and Funskool have their presence in India. Funskool Toys is the largest toy producer in India with 30% share, followed by Mattel (20%), Hasbro (9%), Bandai (4%) and Lego (4%) and Leap Frog (3%) and the others accounts for about 30%. The online toy market, represents a mere 5% though growing rapidly, is unlikely to have a major influence on the overall demand in the next couple of years. India is producing quality toys, which is unmatched elsewhere and therefore, the demand for Indian toys is rising by leaps and bounds. However, dynamics of toy industry changed with the opening of the market for Chinese players, Chinese toys are destroying the Indian toy industry and small and medium manufacturers are almost on the verge of collapse. Nearly 2000 SMEs have closed so far in the last 4-5 years and about 20% of the toy industries are on the verge of closure with the rise in imports from China and Italy.

The productivity levels of the sector are estimated in terms of Labour productivity, capital productivity and total factor productivity during 2008-09 to 2012-13. Average of capital productivity growth reported negative growth. However, labour productivity growth reported positive growth for these 5 years at 13.31%. this indicates that increase in capital formation requires to make on continuous basis to provide impetus for TFPG of Toy Industry in India. The estimated partial productivity growth for both labour and capital as well as total factor

productivity growth indicates that technology played a significant role in the productivity growth of Toy sector in India. Technology upgradation schemes are vital to make toy sector more productive and competitive in the globalized setting.
Inspite of double digit growth, Indian toy industry is much backward in comparison to China's toy industry. Captivating the advantage of the raw materials and cost of labor, China has become the largest manufacturer and exporter of toys in the world. It is estimated that about 75% of toys worldwide is made in China. According to China Toy and Juvenile Product Association, China's toy exports totaled US$ 26.34 billion in 2014.

With the lowering tariff barriers, melting of international trade boundaries, the domestic market is now open and the Indian industry are facing the challenges from the domestic distributors and multinational competitors who imports cheaper products mainly from China. Only 20% of the Indian market is served by Indian toy manufacturers while the rest by import of toys from different countries mainly from China and Italy.

However, export from India to world has increased by almost 4 times out of which India's exports of toys to China is even less than 1%, but imports have increased by more than 14 times, of which 77% is imported from China during 2002-2014 period. This leads to ***declining trade ratio which suggests that India's global competitiveness with respect to toy products are going down year after year.***

10.2. Recommendations

Though the heritage of the Toy Industry in India is rich, it is struggling to remain competitive especially against imports and requires a lot of protection and encouragement by way of Upgrading existing technologies, R and D, Designing, Toy Safety norms etc. It has tremendous scope and potential for expansion in exports as well as in the domestic markets. All policy recommendations suggested in this report are formulated after having detailed interactions with the industry experts and Toy Association. The Toy Industry in India is in urgent need of the following proposals:

- **Template:** Since the Weights and Measures Act has been a major cause of inconvenience to the toy industry, right from manufacturers to the retailers, a set format of template need to be developed which could be used as a reference when the case is being registered. This will ensure that no officer plays mischief only to trouble the manufacturer. (Presently, the law is written in a descriptive manner and this is interpreted by different officers in different manner. Once the template is finalized, there is no confusion and implementation and understanding of the law is simplified.) Once the case is registered, it would send a signal to the manufacturer too that there is some discrepancy, which he/ she can then understand and rectify.
- **Registration of cases**: The registration of the case should be done in the home city/ town of the manufacturer, or where the H.O. is located, instead of the city/ town where the violation is caught. Eg: if the case is registered, say in Patna, and the manufacturer is in Mumbai, then if the manufacturer wants to challenge the case, he has to travel to and fro from Patna. The cost involved in the travel/ stay/ incidental expenses is many times more than the fine, hence being from the business community, it makes sense to accept the violation rather than challenge the same. The cost multiplies every time the

case is delayed. This leads to rampant corrupt practices. This can be avoided if the case is registered as per paragraph a) and then transferred to the home city of the manufacturer, along with the evidence. This will ensure that the manufacturer, mostly from the MSME sector, is not inconvenienced and can follow the laws more correctly.

- **MRP put by Retailers:** Another problem faced by manufacturers is that although they follow norms, if the retailer/ middleman alter the MRP at his level, the manufacturer is blamed and tried for the same. It is un-ethical so it should be very clearly defined. If the manufacturer has placed all details as per template, then any additional MRP sticker put up by the retailer should be the sole responsibility of the retailer.
- **Central Excise:** The toy industry would benefit if the clarity in the law is given and the grey areas removed. It is in the best interest of the children of India that all Indian Manufactured Toys and Games be exempted from Central Excise. This would make them more competitive and help reduce dependency on imported toys. Toys and Games are essential for the overall growth and development of Children.
- **Quality Standards:** Toy association need to be asked to ensure that the manufacturer produces the quality certificate within 1 month and a provision should also be made to reimburse the manufacturer for the fees paid to test the quality of the products.
- **Toxicity:** It is highly recommended that the part 3 (dealing in toxicity) of the IS 9873 be implemented, both for imports and domestic manufacturers. This will ensure that the cheaper toxic toys do not enter the country, and the domestic quality manufacturers do not face competition from sub-standard products. This will reduce the import volumes by a huge margin, if it is strictly adhered too. It is suggested that initially only two ports be allowed to handle toys, Mumbai and Chennai. It would be easier to control and implement the quality check. Thereafter, other ports could follow suit once the systems are in place. There should be Quality check and control on all imported Toys and Games as it will reduce the dumping of toxic/ rejected toys from around the world into India. To ensure that the control is maintained, only 2-3 ports could be designated/ allowed to import Toys. This will result in complete control initially. Other ports could be equipped in the future. Also, place to destroy those toys which fail the tests should be made available, like in the EU or USA.
- **Technology Up gradation:** With the Government of India now assisting the manufacturing sector, specially the MSME, technology of toy industry need to be upgraded. New technology will bring with it better efficiency, hence better productivity and quality. However, all these come at a huge capital cost, which is a big deterrent. If some subsidies are made available, it would be of huge help. One suggestion from a senior member of toy industry is as follows: If 10% of the total profits is re-invested in technology up gradation/ adaptation, income tax benefits of up to 10% be made available.
- **Toy Design Centre (TDC):** R&D in the Indian Toy Industry is negligible. The main deterrent being huge capital cost and smaller life, as new designs are easily copied with least IP protection. A Toy Design Centre could be a good solution, where new designs could be made and offered to the Toy Industry Manufacturers. This will

ensure that there are no copies and the TDC, being a nodal independent body, will ensure that their ideas/ designs are not copied by others.

- **Taxes/Octroi/ GST:** Toys play an important role in the overall development of the child. It enhances their motor skills, ignites spark in creativity and helps enhance the overall development. The benefits are enormous. So it is suggested to keep Toys out of the complicated tax laws. LBT/ Octroi should be abolished and help keep toys in the lowest rate of VAT/GST.
- **Elimination of C-forms**: Since the C-form collection and submission is a tedious task. Problems related to this can be avoided by simplifying the procedure. The submission of C-forms can be eliminated. A suggestion is given as follows:
  Every manufacturer gets a VRF (Vendor Registration Form) filled by the client/ dealer. The details could be uploaded online. This could then be mapped with the client when he uploads the summary. Individual invoices/ summary could be verified, when a doubt arises or at random checking/ annual filing of returns certified by the CA. Only those clients registered by the manufacturer on the site will have the transactions cleared. For other clients, 30 days time be provided to upload the details, else the transaction be treated as URD (Un Registered Dealer) and VAT be imposed (at say 5%). The transactions could be system generated and completed, thereby eliminating any human interference and eliminate lobbying.
- **International Promotion:** With the help of the Indian Embassies, Trade meets and exhibitions need to be organized. This would expose the Indian manufacturers and their products to the international consumer and help increase bi-lateral trade.
- **Transportation:** The use of way forms for transport of goods into various states is a huge deterrent to many dealers. The system could also be made simple and online, so that the interaction between the government body and manufacturer is eliminated. This would help the traders as well as the manufacturers in faster processing the orders and deliveries of the goods.
- **Tax Holiday:** The Government of India removes various Tax Holiday schemes for various backward areas, in order to develop them. Since the toy industry is struggling it could be considered for a tax holiday. If a tax holiday, including MAT, is removed for only Indian Owned Toy Companies, it would be a morale booster for all. Manufacturers would then also be encouraged to invest in R&D, new machinery and technology, seeing the benefits they can garner from it.
- **Knowledge Upgradation of Industry Stakeholders:** It will be in the interest of the industry if manufacturers could be educated on the payment procedures/ recovery procedures through interactive meets. A single window clearance for existing and new projects/ technology upgrading, etc, would also be beneficial.

Chinese Government supported its Toy Industry in the 70's and 80's. The result today is that over 75% of the toys in the world are China sourced. The needs and requirements mentioned above will help boost the Indian toy manufacturing community, most of them are either Tiny Industry or in the MSME. Toy Industry is an extensively labor oriented industry. Hence when the Toy Industry grows, they will hire more people, hence will also serve the nation by helping in reducing the un-employment rate.

10.3. Way Forward to Meet Emerging Challenges on Productivity & Competitiveness

More than 30% of working capital in a typical manufacturing industry is spent on energy charges. Thus, to enhance the cost competitiveness of the finished goods, Energy Audits of the units of a company will get benefited, as there is a potential of saving of 15 to 20% (approx) in each manufacturing unit.

The ambit of productivity can be extended to other operations of the industrial unit by conducting Productivity Audit. It will help the organizations to set baseline productivity levels and track productivity improvements. Experienced consultants can further enhance the efficiency and effectiveness of the management & other resources by identifying the most promising areas for productivity improvements and reducing wastes.

Material Flow Cost Accounting (MFCA) aims to reduce both adverse environmental impact as well as reduce costs and increase profitability. It is a tool used in organizations decision-making which is aimed at improving their business productivity by accounting for all inputs reducing costs through waste reduction. It focuses on identifying & differentiating between costs associated with products and "material" losses and differs from conventional accounting. It will be useful in costs being competitive so as to compete globally and serve as benchmarks.

Lean Production & Office Management is an approach that includes a set of management practices which work synergistically to create a high quality system for reaching customer demand with no waste. Lean applies in every business and every process. It is not a tactic or a cost reduction program, but a way of thinking and acting for an entire organization. It includes identifying 7 Wastes, solving them through adoption of 5S, 6 Sigma, Just In Time (JIT), quality systems, work teams, cellular manufacturing, and supplier management, etc. Certified trainers in the Basic and Advanced courses on Productivity Practitioners can assist creating an ethos and culture of productivity and consciousness by training a cadre of trained professionals. They can be trained in each unit through various Skill Development Schemes.

Maintenance figures significantly in operating costs in an organization. It is considered as a main pillar of the organizational performance. Preventive and Predictive Maintenance can be incorporated into maintenance activities. Consultancy support for which strategy to apply based on disruption due to equipment downtime, cost of parts and labor time, and equipment history can be obtained. It will also enhance the safety consciousness in the organization.

10.3.1. Industry 4.0: Next Industrial Revolution and the possibilities

Industry 4.0 or the Fourth Industrial Revolution as it is called, is emerging globally as a powerful force and is being touted as the next industrial revolution. It is characterized by the increasing digitization and interconnection of products, value chains and business models. Industry 4.0 would mean the convergence of real and virtual worlds - the next phase in bringing together conventional and modern technologies in manufacturing. This will result in

the "Smart Factory", which is characterized by versatility, resource efficiency, ergonomic design and direct integration with business partners.

Industry 4.0 is one of the major drives of the Fourth Industrial Revolution. The first industrial revolution was triggered by water and steam power to move from human labor to mechanical manufacturing. The second industrial revolution built on electric power to create mass production. The third used electronics and information technology to automate manufacturing. The fourth is the current trend of automation and data exchange in manufacturing technologies.

Manufacturing today is cutting edge and requires a high level of skill. Today, the global manufacturing sector is undergoing a structural transformation. Though India banks heavily on its Service Sector for growth, the Manufacturing Sector needs to play a significant role in the Indian economy The Manufacturing Sector especially MSMEs play a pivotal role in the Indian economy and provide the largest share of employment after agriculture. In order to converge the aims of growth with employment it is important to increase the share of manufacturing in the country's Gross Domestic Product from 16% to 25% by 2022 and to create 100 million additional jobs by 2022 and Industry 4.0 can play major role in achieving these targets.

Industry 4.0 brings in the following benefits:

- Lower Cost
- Additional Revenue
- Enabling Industrial Companies to optimize customer relationship.
- Transparency in the production process
- Clarity on the status of all aspects of production system in real time
- Logistics processes becomes leaner
- Reduced inventories
- Maintenance processes standardization
- 100% traceability

Industry 4.0 is driven by an amalgamation of emerging technologies like

- Sensors
- Additive Manufacturing – 3D Printing
- Augmented Reality
- Industrial Internet
- Cloud Computing
- Simulation
- Robots (auto + Cobots)
- Big Data & Analytics,
- Horizontal & Vertical Integration
- Cyber Security

However, there are many challenges which have to be addressed in order to successfully adopt advanced technologies and realize Industry 4.0 potential in the sector. Few key challenges are given below:

- Fostering a strong digital culture of linking production to markets
- Data Security: The major risk with recording, storage and analysis of large volumes of customer data is the inappropriate use of the said data
- The option for adoption of various technologies will have to be assessed in terms of i) Competitiveness in terms of customer – valued advantage ii) compatibility with existing systems iii) Feasibility iv) Impact and v) Risk.

The approach, use of technologies etc for successful implementation of Industry 4.0 may differ from one sector to another. Energy intensive sectors such as Iron & Steel, Pulp & Paper etc may adopt sensor based Energy savings solution to provide dynamic information about energy consumption & cost whereas other sectors such as Toy Industry may adopt 3D printing in order to optimize design development activity.

Various initiatives are being undertaken by Government of India and other stakeholders in order to realize successful adoption of Industry 4.0 technologies / concepts such as New Industrial Policy which includes Industry 4.0 highlights, establishment of Centre of Excellence on Industry 4.0 etc which will expedite the dissemination of technologies to "Make in India". The adoption of appropriate and relevant Industry 4.0 technologies can also be incentivized to ensure speed and scale for mass adoption. The critical standpoints of do-ability (time frame), feasibility as per infrastructure and viability (in financial terms) will have to be assessed to enable frugality and value for money in adoption rather than mere copying high cost technologies which are labour displacing.

ANNEXURE 1.1

SURVEY QUESTIONNAIRE FOR TOY MANUFACTURING SECTOR

Company/Manufacturing Unit: Modern Toy Sector

National Productivity Council, under Ministry of Commerce and Industry, Government of India, is carrying out a nationwide research study on ***Productivity & Competitiveness of Toy Manufacturing Sector in India*** *as a part of XII Plan Project. The objective of this study is to identify and understand major concerns and issues faced by the sector in terms of productivity, employment, value addition, domestic and export competitiveness. The study is expected to come out with specific recommendations to facilitate policy formulation by Government of India to enhance productivity and export competitiveness of the Toy Manufacturing Sector in India. The information/data provided would be utilized exclusively for the study purposes and would be kept confidential.*

(Please fill as per instructions given with each question)

Write codes/ values in the box provided at the right hand side)

1.0	**General Information**	
1.1	**State Code :** (1=Telangana, 2=Delhi, 3=Gujarat, 4=Karnataka, 5=Maharashtra, 6= Tamil Nadu , 7=Uttar Pradesh, , 8=West Bengal)	
1.2	**Product Category:** (1= Soft toys, 2= Metal toys, 3= Plastic toys, 4=Educational toys, 5= Mechanical toys, 6= Computer games, 7= Wooden toys, 8=Vinyl toys, 9=Others)	
1.3	**Company Name & Address: _____** Contact Person:_____ Telephone No: Landline_____Mobile:_____ E-mail address& website if any:_____	
1.4	**Year of Establishment**	
1.5	**What is the category of your company?** (!= Micro, 2= Small, 3=Medium, 4=Large,)*****	
1.6	**Whether your company registered? (**1= Yes, 2=No)	
1.7	**Does your organization have Quality Accreditation, like ISO 9000, HACCP etc?** (1= Yes, 2= No)	
1.7.1	**If yes, please specify the standards/ accreditation:** (1=ASTM F963, 2=ISO8124 (parts I-III), 3=IS9873 (parts I-III), 4= Any other please Specify _____	
1.7.2	**Has the standards/ accreditation helped in boosting business growth/ demand for the products? (**1= Yes, 2=No)	
1.8	**Are you a member of any Toy Manufacturing Association?** (1= Yes, 2=No)	
1.8.1	**If yes, please specify the name of association:**	
2.0	**Input Related Information**	
2.1	**Employment & Capital Investment**	

Years	**Skilled workers (Number)**		**Un Skilled workers (Number)**		**Wages & Salaries (Rs. Lakhs)**	**Capital Investment (Book Value) (Rs. Lakhs)**
	Male	**Female**	**Male**	**Female**		
2012-13						
2013-14						
2014-15						

2.2 Capacity Utilization of the Unit per day

SL.No	**Category**	**Unit per day**	**Average working hour per day**	**No. of working days in a Year**
1.	Installed Capacity			

	2.	Capacity Utilization			
	3.	Idle Capacity			

3.0 Trade Related Information

3.1 Details related to production, Manufacturing practices & marketing

Years	Output (Number of unit)	Total Sales ((Number of unit)	Total Sales Value (Rs. Lakhs)	Cost of Production Rs. Lakhs)
2012-13				
2013-14				
2014-15				

3.2 Financial Information

Sl.No	Particulars	2012-13	2013-14	2014-15
1	Profit before tax			
2	Profit after tax			
3	Raw Material cost			
4.	Fuel & Energy			
5	Interest Charge			
6	Taxes			

3.3 **Source of raw material**
(1= Indigenous raw material, 2= Imported raw material)

3.4 **Packaging of toys:** (1= Own packaging using local material , 2= Card board packaging with name of unit, 3= Designer packing, 4= Any other)

3.5 **Kindly indicate the methods followed for marketing products in the domestic markets :**
(1= Direct marketing, 2= Distributor & Dealer network)

3.6 **Do you face competition from similar products in local market?** (1= Yes, 2=No)

3.7 **If yes, What are the measures taken to overcome it?**

_____

_____

_____

3.8 **Do you export toy products?**
(1=Yes, 2= No)

3.8.1 **If No, reasons:** 1) Cumbersome 2) Low margins 3) No help from authorities/association 4) No ISO/ other certifications 5) No knowledge of export procedures 6) Others specify _____

3.8.2 **If yes, what is the percentage of your Export in your Total Sales**
(1-10%, 10-25%, 25-50%, 50-75% Above 75%)

3.9 **How do you undertake export activity?** (1=Directly export to foreign buyers, 2=Through buying houses in India, 3=through agents in India, 4=Others (specify)_____

3.10 **Data on production and foreign trade during last three years.**

Years	Export (Rs. Lakhs)	Import (Rs. Lakhs)
2012-13		
2013-14		
2014-15		

3.11 **Please mention your export destinations**

3.11.1 Product Description	Countries you are exporting to:
1.Soft toys	
2.Metal toys	
3.Plastic toys	
4.Educational toys	
5.Mechanical toys	
6.Wooden toys	

	7.Vinyl toys						
	8.others						
3.12	**Are you aware of Market Access Initiative(MAI) scheme of Government for export promotion** (1= Yes, 2=No)						
3.12.1	**Have you ever used MAI to promote your export?** (1= Yes, 2=No)						
3.12.2	**If yes, please give details:**						
3.13	**Are you aware of Market Development Assistance(MDA) scheme of Government for export promotion** (1= Yes, 2=No)						
3.14	**Have you ever used MDA to promote your export?** (1= Yes, 2=No)						
3.14.1	**If yes, please give details _____**						
3.15	**Have you ever utilized following incentive schemes:** (1= Duty Drawback, 2= EPCGS (Export Promotion Capital Goods Scheme), 3= Export credit, 4= Any other(specify))						
4.0	**Competition from Chinese Toy Products**						
4.1	**Are you facing competition from toy products from China?** (1-Yes, 2=No)						
4.1.1	**If Yes, how would you compare quality of your products with Chinese products?** **(**1= Quality is better than Chinese products, 2=Quality same as Chinese products, 3. Quality is lower than Chinese products, 4=Any other (please specify)						
4.2	**China scores over India in terms of:** (1= Cost, 2= Quality, 3= Innovation, 4= Others)						
4.3	**How much cheaper are Chinese toys as compared to Indian toys?** **(**1= <10%, 2=10-25%, 3=25-50%, 4= >50%)						
4.4	**In which of the following categories do Indian toys have an overall advantage over Chinese toys**? (1=Plastic & Soft Dolls, 2=Plush/Stuffed Toys, 3=Board Games/Puzzles, 4=Educational Games & Toys, 5= Wooden Toys, 6= Metal/ Tin Toys, 7=Electronic Toys/Games, 8=Collectibles and Stationary items converted into playthings.)						
4.5	**What are the major areas of Price Advantage for China?** (Please choose a number between 1-5 where 1=Least advantageous and 5=Most advantageous for China) please circle your choice						
	Wages	1	2	3	4	5	
	Infrastructure	1	2	3	4	5	
	Quality of Manpower	1	2	3	4	5	
	Subsidy	1	2	3	4	5	
	Network Clustering	1	2	3	4	5	
	Undervalued Currency	1	2	3	4	5	
	FDI	1	2	3	4	5	
	Health care facilities	1	2	3	4	5	
	Environmental factors	1	2	3	4	5	
4.6	**Suggestions for Tariff structure in India to compete with China**						
4.7	**Suggestions for Restricting Dumping of toy products from China**						
5.0	**Domestic Market Related Information**						
5.1	**Domestic demand for your products in the recent years (**1=Increased, 2=Decreased, 3=No Change						
5.2	**Competition in the domestic market from imported products?** 1=Intense (>50% market share imported toys),2= Medium (25-50%), 3=Low (0-25%),4= No Competition						
5.3	Major issues faced domestically: (Please rank your views on the sources of price advantages for China on a scale 1 to 5 where 1=Least area of concern and 5=Major area of concern)						
	Procurement of land for expansion	1	2	3	4	5	
	Labor, Skilled, unskilled	1	2	3	4	5	

	Wages						
	Labor laws or any other aspect affecting labour efficiency	1	2	3	4	5	
	Technology Up gradation	1	2	3	4	5	
	Finance	1	2	3	4	5	
	Taxation	1	2	3	4	5	
	Procurement of Raw material, Designing, Testing	1	2	3	4	5	
	Marketing	1	2	3	4	5	
	Logistics	1	2	3	4	5	
	Working Capital	1	2	3	4	5	
	Availability and quality of basic infrastructure	1	2	3	4	5	
	Govt. Assistance	1	2	3	4	5	
	Toxicity in raw materials	1	2	3	4	5	
	Any other issues……	1	2	3	4	5	
6.0	**Marketing and Promotion Efforts**						
6.1	**Please mention the marketing channels currently being used** (1=Electronic Media, 2= Print media, 3= Online , 4= Word of mouth, 5= Others (Pl Specify)_____						
6.2	**Do you own a website for selling toys on line** (1=Yes, 2= No)						
6.3	**Please mention the share of marketing and advertisement cost in total cost.** **(**1**=** Zero, 2= 0 – 3 %, 3= 3 – 5 %, 4= more than 5 %)						
6.4	**Have you ever participated in any of the following** **(**1= Toy Fairs (National/International), 2= Expo Marts, 3= Government Delegation, 4= Any other (please specify_____						
6.5	**Effect of E-commerce on Your Total Sales?** (1=Increased; 2=Decreased; 3= No Impact)						
6.5.1	**As a Manufacturer, How Much of Your Sales is Routed through E-commerce?** (1=<15%; 2=15-30%; 3=30-50%; 4=50%+)						
6.5.2	**As a Distributer, How Much of Your Sales is Routed through E-commerce?** (1=<15%; 2=15-30%; 3=30-50%; 4=50%+)						
7.0	**Innovation by the Company**						
7.1	**Type of design or innovations in your company (Choose one or more):** (1=Technology innovations, 2=New Product development, 3=Production/process innovations,4=Marketing 5=Others (pl specify) _____						
7.2	**Sources of product design and innovations in your company?:** (1=In-house R&D and innovation processes, 2=Suppliers, 3=Customers/buyers, 4=Employees, 5=Media 6=Others (pl specify)						
7.3	**R&D Costs as Percentage to Total Manufacturing Costs:** (1=Less than 5%; 2=5 -10%; 3=10-15%, 4=15% & above)						
7.4	**Importance attached for the adoption of new designs to your company** (1=Very low,2= Medium, 3= High, 4=Very high)						
7.5	**Compared to your competitors, how would you rank usage of technology in your company?** **(**1**=** Uses technology more than competitors, 2= Uses technology as much as competitors, 3= Uses technology less than competitors, 4= Note aware)						
8.0	**Toxic Aspects of Raw Materials**						
8.1	**Are you aware of the presence of any toxic elements (e.g. Lead, Bromine, Chlorine (PVC), Nickel, Cadmium, Arsenic, Mercury, Antimony, Chromium, Tin, Others) in raw materials used for toy manufacturing?** (1= Yes, 2= No)						
8.2	**Are you aware of the permissible limits of toxic chemicals in toys in India?** (1= Yes, 2=No)						
8.3	**Are you aware of the permissible limits of toxic chemicals in toys in the countries you export to?** (1=Yes, 2= No)						
9.0	**Major Problems & Suggestions**						

9.1	**What are the major problems faced in the recent years. Please explain :** **a. Product range , design improvement , variety to cater to the changing needs of the market:**_____ **b. Availability of skilled labor, costs & training** _____ **c. Procurement of critical raw material /parts & supply chain mechanism , quality & prices & availability**_____ **d. Packaging of finished products & Design development** **e. Promotion , marketing strategies** _____ **f. Quality of support infrastructure for the industry e.g. transportations, power etc.** **g. Finance from institutions for capital investments and working capital** h. **Dumping of the Chinese Toys in local market**

10.0	**Government Support**	
10.1	**What are the sources of finance for funding your business?** (1= Banks, 2= Government Agencies 3= Private sources 4= Self, 5= Others, please specify	
10.2	**Have you received any financial support from Central/State Governments?** (1= Yes, 2=No)	
10.2.1	**If yes, please provide the details:**	
10.3	**Which of the following areas you need Government support?** (Give your options as per your priority) (1=Developing training facilities for the industry, 2= Design and Development centre to be set up, 3= Quality of infrastructure, 4= Interface with business, 5= Labour relations, 6= Marketing of finished products, 7= Export marketing, 8=Customs clearance, 9 = Easy availability of capital, 10 = Interest rebate for the bank loan, 11 = Others, please specify)	
10.4	**Please give suggestions for improving the productivity and competitiveness of the toy sector and also for showcasing the toy products in national and international markets.**	

Name of the Official/Investigator: _____
Signature : _____
Place of Survey : _____
Date : _____

Name and Signature of Head / Authorized Representative of the Company / Unit with Seal

Thank you

Question No. 1.5 Note: *

Category of Enterprise	Investment in Plant & Machinery
1. Micro Enterprise	Does not exceed Rs. 25 Lakhs
2. Small Enterprises	More than Rs. 25 lakhs but does not exceed Rs. 5 Crores.
3. Medium Enterprises	More than Rs. 5 Crores but does not exceed Rs. 10 Crores
4. Large Enterprises	More than Rs. 10 Crores

ANNEXURE 1.2

SURVEY QUESTIONNAIRE FOR TOY MANUFACTURING SECTOR
Company/Manufacturing Unit: Traditional Toy Sector

National Productivity Council, under Ministry of Commerce and Industry, Government of India, is carrying out a nationwide research study on ***Productivity & Competitiveness of Toy Manufacturing Sector in India*** *as a part of XII Plan Project. The objective of this study is to identify and understand major concerns and issues faced by the sector in terms of productivity, employment, value addition, domestic and export competitiveness. The study is expected to come out with specific recommendations to facilitate policy formulation by Government of India to enhance productivity and export competitiveness of the Toy Manufacturing Sector in India. The information/data provided would be utilized exclusively for the study purposes and would be kept confidential.*

(Please fill as per instructions given with each question)
Write codes/ values in the box provided at the right hand side)

1.0	**General Information**	
1.1	**States Code :** (1=Andhra Pradesh, 2=Gujarat, 3=Karnataka, 4 =Uttar Pradesh, , 5=West Bengal),	
1.2	**Product category** 1= Terracotta, 2= Toys & Dolls, 3= Paper Toys, 4= Wooden Toys , 5= Cane & Bamboo, 6= Lacquer ware, 7= Clay Folk Toys , 8= Cloth and Wire Dolls, 10= Others_____	
1.3	**Unit Name & Address:** _____ Contact Person :_____ Telephone No: Landline_____Mobile:_____ E-mail address& website if any:_____	
1.4	**Year of Establishment:**	
1.5	**Type of Unit** 1= Organized Sector (Registered with DIC/others), 2= Unorganized Sector	
1.6	**What is the category of your Unit?** (1= Micro, 2= Small, 3=Medium, 4=Large)*****	
1.7	**Are you a member of any Toy Manufacturing Association?** (1= Yes, 2=No)	
1.7.1	**If Yes, please specify Name of the Association:**	
2.0	**Input Related Information**	

2.1 Employment & Capital Investment

Years	Skilled workers (Number)	Un Skilled workers (Number)	Wages & Salaries (Rs. Lakhs)	Capital Investment (Rs. Lakhs)
2012-13				
2013-14				
2014-15				

2.2 Whether family members are involved in manufacturing of toys?
(1= Yes, 2= No)

2.3 Whether children are involved in toy making activities?
(1= Yes, 2=No)

2.4 Details related to production, Manufacturing practices & marketing

Years	Output (Number of unit)	Total Sales (Number of unit)	Total Sales Value (Rs. Lakhs)	Cost of Production (Rs. Lakhs)
2012-13				
2013-14				
2014-15				

2.5 Capacity Utilization of the Unit per day

Sl. No	Category	Unit per day	Average working hour per day	No. of working days in a Year
1.	Installed Capacity			
2.	Capacity Utilization			
3.	Idle Capacity			

2.6 Source of raw material
(1= Indigenous raw material, 2= Imported raw material)

2.7 Packaging of toys:
(1= Own packaging using local material , 2= Card board packaging with name of unit, 3= Designer packing, 4= Any other)

3.0 Trade Related Information

3.1 Domestic demand for your products in the recent years
(1=Increased, 2=Decreased, 3=No Change)

3.2 Please indicate the domestic markets methods adopted
(1= Direct marketing, 2= Distributor & Dealer network)

3.3 Do you face competition from similar products in local market?
(1= Yes, 2=No)

3.4 Do You export your toys?
(1=Yes, 2= No)

3.4.1 If yes, How do you undertake export activity?
(1=Directly export to foreign buyers, 2=Through buying houses in India, 3=through agents in India, 4=Others(specify)

3.4.2 Please indicate the export share in total sales value
(1= Less than 25%, 2= 26-50%, 3= 51-75%, 4= Above 75%)

3.5	**Do the govt. agencies/ Export Promotion Council provide enough visibility to the indigenous or traditional toys of the region? (1=Yes, 2=No)**	
3.6	**What are the sources of finance for funding your business?** (1= Banks, 2= Government Agencies, 3= Private sources, 4= Self, 5= Others,----------	
3.7	**Are you beneficiary of any scheme implemented by Central / State Government for promotion of traditional toys industry?** (1= Yes, 2=No)	
3.7.1	**If yes, Please provide the name of the scheme and benefit received:** _____ _____	
4.0	**Competition from Chinese Toy Products**	
4.1	**Are you facing competition from China toy products?** (1-Yes, 2=No)	
4.1.1	**If Yes, how would you compare quality of your products with Chinese products?** **(**1= Quality is better than Chinese products, 2=Quality same as Chinese products, 3. Quality is lower than Chinese products)	
4.2	**How much cheaper are Chinese toys as compared to similar toys produced by your unit?** **(**1= <10%, 2=10-25%, 3=25-50%, 4= >50%)	
5.0	**Problems and Support Required**	
5.1	**What according to you are the major problems for the traditional toy sector :** i. Product range , design improvement , variety to cater to the changing needs of the market_____ j. Availability of skilled labor, costs & training _____ k. Procurement of critical raw material /parts & supply chain mechanism , quality & prices & availability_____ l. Packaging of finished products & Design development _____ **m.** Promotion , marketing strategies _____ n. Quality of support infrastructure for the industry e.g. transportations, power etc. _____ o. Finance from institutions for capital investments and working capital _____	
5.2	**Please indicate the areas where you need government support** (1= Developing training facilities for the toys industry, 2= Design and development centers to be set-up, 3= Quality of infrastructure, 4= Interface with business, 5= Labor relations, 6= Marketing of traditional toys, 7= Exports marketing, 8= Easy Availability of capital, 9= Others (Please specify	
5.3	**Please give suggestion on the measures required for showcasing the traditional**	

	toys in national and international markets. _____ _____ _____ _____
5.4	**Any other suggestions please specify:** _____ _____ _____ _____

Name of the Official/Investigator:

_____

Signature :

_____

Place of Survey :

_____

Date :

_____

Name and Signature of Head / Authorized Representative of the Company / Unit with Seal

Thank you

Question No. 1.6 Note: *

Category of Enterprise	**Investment in Plant & Machinery**
5. Micro Enterprise	Does not exceed Rs. 25 Lakhs
6. Small Enterprises	More than Rs. 25 lakhs but does not exceed Rs. 5 Crores.
7. Medium Enterprises	More than Rs. 5 Crores but does not exceed Rs. 10 Crores
8. Large Enterprises	More than Rs. 10 Crores