This whitepaper highlights current state of OTR tire market in India. TechSci research is of strong view that this revolution in Indian OTR tire space will open-up vast business avenues for international as well as domestic manufacturers. The paper will also highlight issues and challenges pertaining to raw material procurement and regulations. These challenges eventually form vast business opportunities for some of the companies who plan to get benefitted by current raw material deficit. Also, technology improvements in design, durability, efficiency etc. are rapid and dynamic with most of the tire companies are investing huge sum of their money in research and development activities.

I firmly believe that content of this knowledge paper will provide important insights to OEM’s, tire manufacturers, raw material producers and policy makers in scripting a success story for OTR tire business in India.

Karan Chechi
Research Director
TechSci Research
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EXECUTIVE SUMMARY
Executive Summary

The paper aims at identifying current state of OTR tire business in India with respect to sales, growth and challenges the market is facing.

There has been increasing demand for OTR tire due to growth in agriculture and construction activities.

Tractors and earth moving construction equipment’s are the key demand driving products.

Some of the Indian players are expanding their raw material production to support rising demand for OTR tires.

The paper is concluded by showcasing key challenges and opportunities and some of the future development plans as set by companies to cater to rising demand of OTR tire segment.
GLOBAL OTR TIRE MARKET OVERVIEW
Global OTR Tire Market Overview

GLOBAL OTR tire market registered a sale of 64 Million Unit of tires in 2017. Major factors propelling growth in the market are consistent increasing production and sales of OTR vehicles and rising demand for replacement OTR tires. Moreover, global OTR tire market is forecast to register a total sale of 86.2 Million Unit of tires by 2023. Consequently, global OTR tire market is projected to exhibit a CAGR of 5.22%, in volume terms, during 2018-2023.

APAC region accounted for a volume share of 60% in global OTR tire market in 2016, owing to a large OTR vehicle fleet size. The region is anticipated to maintain its dominance in the market in the coming years as well, as the region’s volume share is projected to reach 65% by 2023.

India and China are the largest markets for OTR tires across the world. India and China cumulatively accounted for a volume share of around 50% in global OTR tire market in 2017, because of growing construction and agricultural activities coupled with increasing sales of OTR vehicles. These countries are anticipated to continue dominating global OTR tire market through 2023.

Michelin and Bridgestone are the leading company in global OTR tire market, both cumulatively accounted for a volume share of more than 25% in global OTR tire market in 2017. Additionally, the company is anticipated to continue dominating the market during the forecast period as well, owing to strong dealer and distribution channel across the globe.
2

INDIA OTR TIRE
MARKET LANDSCAPE
India OTR Tire Market Outlook

Going back in time, a gamut of Indian tire manufacturers was focused on highway tires for mass consumption. But the late 80s brought a change in this mindset, and with the passage of time, the shift towards OTR tires became the need of the hour. Today, we have ushered into an era where India has emerged as one of the leading manufacturing and consumption hubs of OTR tires primarily in the Agriculture and Mining Segments. In order to meet the growing demand, manufacturers are complementing their production capacities with rigorous Research & Development (R&D) and innovation, a telling example of which is the gradual shift to radialization.

The driving force behind constant innovation is the rate at which OEMs are technologically upgrading their offerings for Mining and Infrastructure Sectors. Be they backhoe loaders, forklifts, tipper trucks, dumpers, cranes, or excavators, all equipment’s go through frequent technological upgradations these days, with respect to diversity of applications and hauling loads. And since OEMs are the major consumers of OTR tires, it’s imperative that tire manufacturers periodically tailor their products in accordance with the clients’ requirements. Apart from this, OTR tires of the modern age comply with the international standards and score high on abrasion resistance, fuel economy, and energy efficiency. Undoubtedly, innovation has emerged as the key to success.

Today, the domestic OTR Tire market is quite competitive and highly concentrated and is catered by top notch players. There has been a noticeable change in the technological upgradations that the Indian industry has adopted.

India OTR Tire market stood at 9.1 Million Units in 2017 and forecasted to reach 15 Million Units by 2023.

India Off - the - Road Vehicle Tire Market Size, By Value (USD Billion), By Volume (Million Unit), 2013 - 2023F
India Off-the-Road Vehicle Tire Market, By Value, 2017

1.92 Billion USD

India Off-the-Road Vehicle Tire Market, By Volume, 2017

9.10 Million Units

Source: TechSci Research

The market is likely to grow at a CAGR of 9.05% in volume terms. The growth is backed up by increased spending in construction & mining sector as well as agriculture sector. Major demand driving vehicle categories are tractors and earth moving equipment’s such as loaders, excavators etc.

Mining & Construction segment contributes to more than half of OTR tire sales in India. Agriculture is the biggest segment for OTR tires owing to increased tractor penetration in India rural region.

Application Wise Share

- **54%** Mining/Construction
- **42%** Agriculture
- **4%** Others

Source: TechSci Research
The India OTR tire market is fairly distributed between OEM and replacement demand. Replacement demand is analyzed by looking at current fleet of vehicles, age of vehicle and weighted replacement ratio based on average usage.

The India OTR tire market is largely driven by demand for Bias tires and a small percentage of radial tires. The market is witnessing a trend of increased usage for radial tires in construction/mining sector and players like BKT who are extensively supplying to international markets should increase their focus to cater domestic market as well.
The India OTR tire market is largely driven by demand for <25-inch rim size. This is primarily due to usage of low to medium capacity tractors in agriculture and construction equipment’s for construction & mining sector.

Source: TechSci Research
India Off-the-Road Vehicle Tire Market Share, By Rim Size (<25 inch), By Tire Size, By Volume, 2017 & 2023F

Source: TechSci Research

India Off-the-Road Vehicle Tire Market Share, By Rim Size (>25 inch), By Tire Size, By Volume, 2017 & 2023F

Source: TechSci Research
EXPANDING operations of tractor manufacturers, along with growing demand for higher yield are some of the prominent factors aiding India tractor market. Moreover, increasing population coupled with growing urbanization is boosting demand for tractors in the country, consequently positively influencing the country’s tractor market.

India Tractor Market Size. By Value (USD Billion), By Volume (Thousand Unit), FY2013 - FY2017

<table>
<thead>
<tr>
<th>Year</th>
<th>By Value</th>
<th>By Volume</th>
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<tbody>
<tr>
<td>FY2013</td>
<td>5.24</td>
<td>5.24</td>
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<tr>
<td>FY2014</td>
<td>5.75</td>
<td>5.75</td>
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<tr>
<td>FY2015</td>
<td>6.33</td>
<td>5.12</td>
</tr>
<tr>
<td>FY2016</td>
<td>5.51</td>
<td>4.71</td>
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<tr>
<td>FY2017</td>
<td>5.82</td>
<td>5.70</td>
</tr>
</tbody>
</table>

CAGR FY2013 - FY2017

- By Value: 2.15%
- By Volume: -0.33%

Source: TechSci Research
A major demand for tractors in India is emanating from the north region of the country, which accounted for almost 1/3rd of the volume share in the India tractor market in 2017, owing to the region’s large population size and high number of agriculturally fertile lands in the states of Punjab, Haryana, etc. The region is expected to maintain its dominance over the Indian tractor market through the forecast period as well. Increasing number of infrastructure development projects, rapid urbanization and government initiatives to aid India construction industry are anticipated to boost demand for construction equipment in the country during FY18-FY24. Moreover, growing demand for construction equipment in earth moving, material handling and concrete mixing segments is expected to fuel India construction equipment market over the coming years.

Earth moving equipment’s segment dominated India construction equipment market in FY17, and the segment is anticipated to maintain its dominance over the next seven years as well, owing to growing demand for backhoe loaders and hydraulic excavators in the country. These equipment’s are being widely used in construction industry due to their high usage in earth moving segment.

Infrastructure demand is a primary factor driving the India’s Earthmoving and Construction Equipment (ECE) industry. The country’s infrastructure spending is expected to grow by 9 percent of CAGR during the forecast period. This is likely to spur the demand for ECE, and the result could be USD5.36 billion industries by FY24.
Indian Ministry of Roads and Transport has outlined plans for USD120bn worth of road-widening projects in the coming years. There are also plans for USD60bn to be invested in India’s ports by 2020. USD650 billion investments in urban infrastructure estimated over next 20 years. 100% Foreign Direct Investment (FDI) permitted through the automatic route for townships, cities. 100 Smart Cities and 500 AMRUT Cities will invite investment of USD32 Billion in the next five years.

All this investment will have a positive impact on sales of heavy equipment's and machines, consequently increase in demand for OTR tire in India.
4 OPPORTUNITIES & CHALLENGES
OPPORTUNITIES & CHALLENGES

OPPORTUNITIES

- Rising demand from mining companies like Coal India Limited to supply radial OTR tires to support their day to day mining activities.
- Rise in demand for bigger OTR Tires by some of the major heavy equipment manufacturers

CHALLENGES

- Introduction of anti-dumping tariffs on Indian OTR Tire Manufacturers by US government will hamper the export market.
- The Indian tire industry has asked the government to allow tire industries to import carbon black on duty free basis, waive the anti-dumping duty on import of the product from China and regulate exports to overcome its shortage in the market. The crunch in domestic availability of carbon black has reached such an extent that several domestic tire companies have been forced to shut down units in the recent past.
- The demand-supply gap for carbon black in the domestic market stood at 14% in the financial year 2016-17. This has gone up to 20% in FY18. The domestic tire industry is already facing the ongoing concern of shortfall in overall availability of Natural Rubber (NR) on a regular basis. Carbon black shortage has only added to the woes of tire Industry in India.
- Notwithstanding domestic crunch, steep anti-dumping duty has been imposed on carbon black imports from China, the single largest producer in the world accounting for about 40% of its global production. According to ATMA, tire industry is left with no other choice but to import carbon black to meet domestic deficit. At the same time, export of carbon black from India needs to be regulated by way of fixing a minimum export price or restricting quantity.
- The unplanned cuts in tire production arising from shortfall in carbon black availability would only lead to higher imports of finished tires from outside India, thereby, discouraging value addition within the country. Besides, despite substantial investments made by the Indian tire industry in capacity creation and enhancement, several allied segments will be adversely affected by ongoing trend.
5 PLANS AHEAD
PLANS AHEAD

1

Phillips Carbon Black Ltd (PCBL) will set up a greenfield carbon black plant in Tamil Nadu and undertake brownfield expansion in two of the existing plants at a combined capex of Rs 900 crore over the next two years. Expenditure of Rs 600 crore will happen to set up 1.5 Lakh Ton capacity plant in Ennore, Tamil Nadu.

The new initiatives would raise the country’s largest carbon black maker’s capacity by another 50 per cent to 7 lakh tons.

2

Yokohama Rubber Co. Ltd. is expanding production capacity for off-the-road tires by nearly 61 percent at the Dahej factory of its ATC Tires Pvt. Ltd. subsidiary with a $45.5 million investment package that will run through year-end 2019. The project will raise annual capacity at the plant to 91,700 metric tons from 57,000 tons.
6 CONCLUSION
CONCLUSION

- Despite all the challenges the industry is facing, the demand for OTR tire is on the rise and there is increased opportunity for raw material suppliers to forward integrate and tire manufacturers to backward integrate which will then streamline the value chain and will greatly support the ongoing OTR tire demand.

- A close eye will need to be kept at mining and construction activities as the OTR tire replacement demand seems to be on the rise in last few years.

- Growing mechanization in agricultural industry is further increasing demand for agriculture equipment’s and vehicles such as tractors, mowers, dozers etc.

- Lastly the raw material such as rubber, carbon black etc. are the key ingredients for tire production. Any volatility in supply, prices etc. can significantly impact the tire market.
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About TechSci Research

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<td>Market Landscaping, Need Gap/Pain Point Analysis</td>
</tr>
<tr>
<td>Market Potential</td>
<td>Market Size Estimation, Market Forecasting</td>
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<tr>
<td>Product Development / Launch</td>
<td>New Product Testing, Price Sensitivity, Market Segmentation</td>
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<td>Positioning &amp; Communication</td>
<td>Pre &amp; Post Communication, Advertising Effectiveness, Event/ Promotion Effectiveness</td>
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<td>Customer Satisfaction/ Tracking, Usage &amp; Attitude, Brand Perception/ Tracking, Consumer Behavior Studies, Consumer/Shopper Insights</td>
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<td>Competitive Intelligence, Competitors Profiling, Competitive Benchmarking</td>
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