April 11th, 2017 I Industry Research

Tyre Industry: Wheeling around

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Overview:

The Indian auto industry is expected to be the world's third largest by 2016 behind China and the US and will account for more than 5% of global vehicle sales as per IBEF. It is also expected to become the fourth largest automobiles producer globally by 2020 after China, US and Japan (India is currently world's second largest two-wheeler manufacturer).

The Indian tyre industry is ancillary to the automobile industry. Demand swings in any of the auto segments (Commercial vehicles, cars, two-wheelers) have an impact on the tyre demand. Indian Tyre Industry is in modernization phase and is largely driven by demand and supply conditions.

The domestic industry essentially caters to 2 segments – (1) Original Equipment manufacturers (OEM); (2) Replacement market (Aftermarket). Replacement demand dominates the tyre market contributing 56% of total size while the OEM market share is 44% as of 2015-16.

Indian tyre market is driven largely by two & three wheeler tyres (53%), followed by passenger cars (28%) and commercial vehicle segments (16%). Tractor segment accounted for only 3% of the tyre sales in 2015-16.

There were 39 companies (2014-15) in the domestic tyre industry as per ATMA and the industry is valued at around Rs 535 billion as of 2015-16 with the top 10 companies accounting for 85-90% of the market share.

The export revenues stood at around Rs 100 billion during the year.

Tyre manufacturing process:

The tyre is an assembly of numerous components that are built up on a drum and then cured in a press under heat and pressure. Heat facilitates a polymerization reaction that crosslinks rubber monomers to create long elastic. Tyre plants are traditionally divided into five departments that perform special operations. These usually act as independent factories within a factory. Large tyre makers may set up independent factories on a single site, or cluster the factories locally across a region.

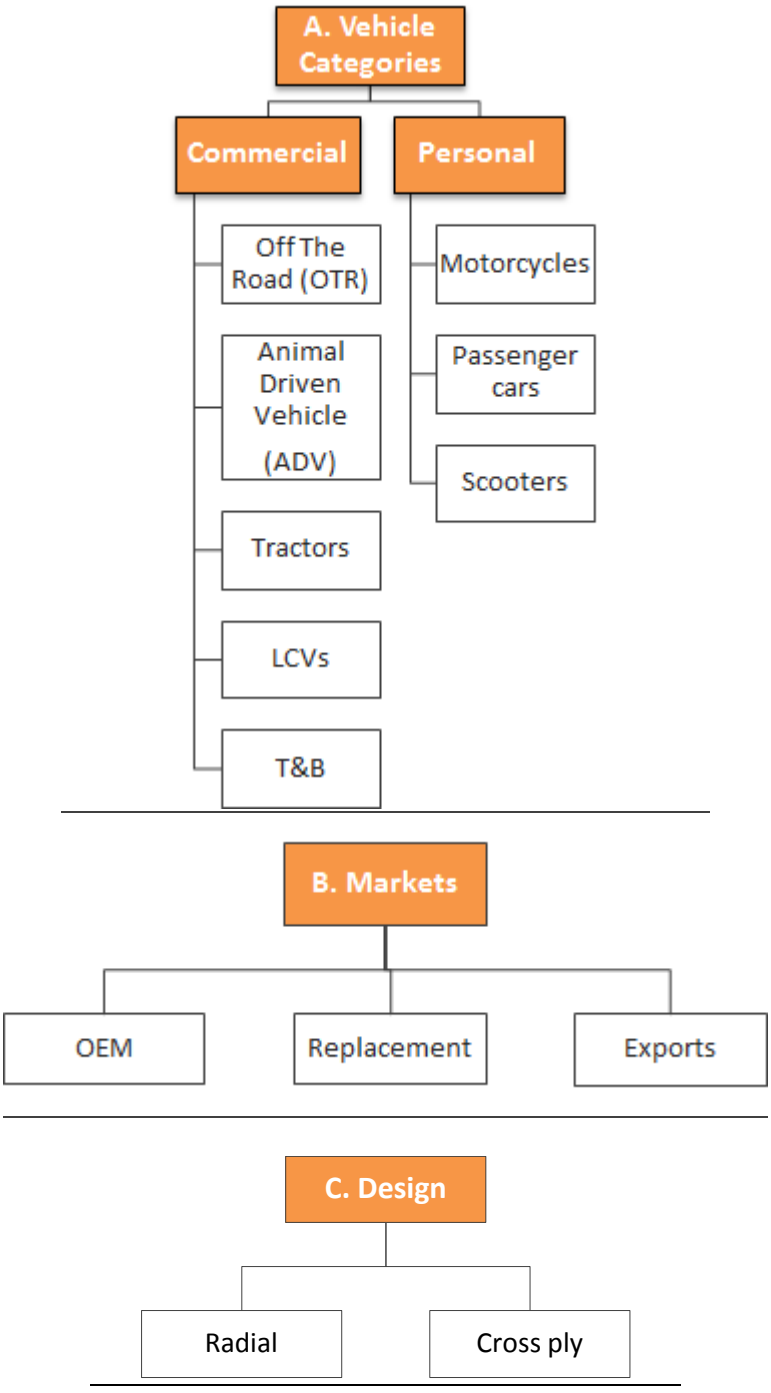
Chart 1: Tyre manufacturing process

Source: CARE Research

Industry Segmentation

The domestic tyre industry is in modernization phase and largely driven by demand and supply conditions, rather than government regulation as it was earlier. The domestic tyre industry can be classified on the basis of its design, markets and vehicle category, which have been evolved over the years.

Chart 2: Industry Segmentation



Source: CARE Research

Vehicles Category wise:

The domestic tyre industry can be classified in terms of types of vehicles in which it is used. The category comprises of tyres used in T&B, LCVs, tractors, OTR and ADVs. Since these tyres are used for commercial usages they are sturdier, bigger and heavier than personal tyre category. In the overall sales of tyres in unit terms, the commercial segment contributed about 19% in 2015-16 while the remaining came from sales of personal vehicles (passenger vehicles and Two & Three wheelers). Under personal segment, two & three wheelers constituted about 66% sales while the passenger cars made up for the balance sales.

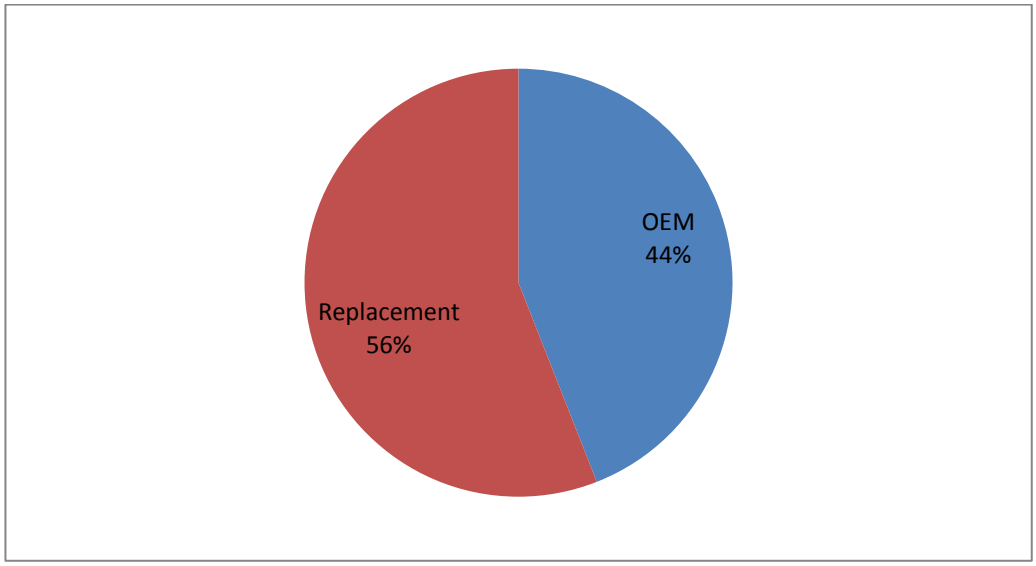
T&B dominates overall commercial usage segment with around 57% share in the units sold in FY16. This is followed by LCV segment with a share of 28% during the year. Tractor front and rear tyre segment constitute around and 9% & 7% respectively during the same period.

Market wise:

Tyre demand originates from two end-user categories, i.e., OEMs and the replacement segment. Consumption by OEMs is dependent on new automobile sales trend while the replacement segment is linked to usage patterns and replacement cycles. Demand from the replacement segment dominates the Indian tyre market contributing about 56% of demand, in terms of units. The major reason for high replacement share is due to the fact that the number of registered vehicles/annual sales remains at about 10x at close to 20 crore registered vehicles (industry estimates) vis-à-vis ~2.4 crore annual vehicle sales.

The export category is about 18% of the total units sold in the domestic market. The industry registered sales of around 151,026 (000 units) in the domestic market while the total exports of tyres during the year was 26,699 (000 units) in 2015-16. Therefore, the total tyre sales during the year was 177,724 (000 units) registering a marginal growth of about 4% y-o-y.

Chart 3: Indian tyre sales breakup



Source: ATMA, CMIE

Technical deviation: Design

The body of a tyre can be classified into two types i.e. cross-ply tyres and radial tyre. A cross-ply tyre has a sidewall which reinforces plies running diagonally from the bead towards the tread - each layer of textile at a different angle to its adjacent layer. These angles determine the stiffness of the tyre. Radial tyre cords casing run perpendicular to the direction of travel. Viewed from the side, the cords run radially - giving the tyre its name. The weakness of this arrangement is that the cords cannot sufficiently absorb lateral forces when cornering or circumferential forces when accelerating. To compensate this, the cords must be supported or complemented by other structural elements - steel belts etc.

Cross-ply is an old manufacturing technology and has been almost discarded by developed economies like USA and Europe long back. However, in India it is still dominant. Some of the key attributes of cross-ply tyres which make it popular in India are its adaptability on poor road condition, suitability in case of overloading of vehicle and cheaper price. However, its penetration levels have witnessed gradual decrease in the last few years owing to increasing awareness about the inherent advantages of radial tyres.

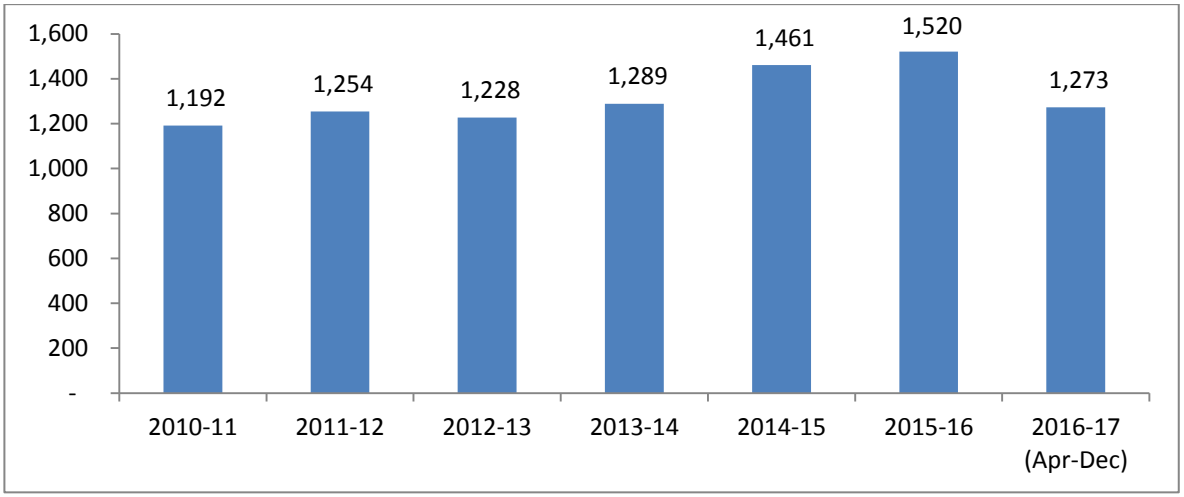
Acceptance of radial tyres, which are of superior quality and have a longer life-cycle, as compared to cross-ply tyres, has been continuously increasing in the Indian market. However because of their higher price and lower adaptability in bad road conditions, these tyres are less preferred for vehicles with commercial usage like trucks, buses, LCVs, tractors etc. However, growing awareness about the advantages of radial tyres has led increasing proportion of vehicle operators across all the vehicle categories to migrate towards radial tyres.

Over the last few years, India has seen increased adoption of radial tyre technology. Despite almost 100% radialisation in the passenger car tyre segment, in the commercial vehicle and two-wheeler segments, India still has a lot of potential for growth. The increase in research and development by domestic players to make cost-effective radial tyres, coupled with growing low-cost Chinese imports, the process of radialisation of commercial vehicle and two-wheeler segments in expected to happen at a faster rate.

Tyre Production

Indian tyre industry is highly competitive with the presence of a large number of global and Indian auto-companies. However, top 10 companies account for about 80% of the market share. Tyre demand is directly proportional to the automobiles demand. Therefore, demand swings in the automobiles have an impact on the demand for tyres. India's annual automobiles production registered a sluggish growth of 2.6% y-o-y in 2015-16. This led to decline in demand for tyres as well during the year. Tyres production (in volume terms) increased only marginally by about 4% in 2015-16 after increasing by about 13% in the preceding year.

Chart 4: Production of Tyre (Lakh units)



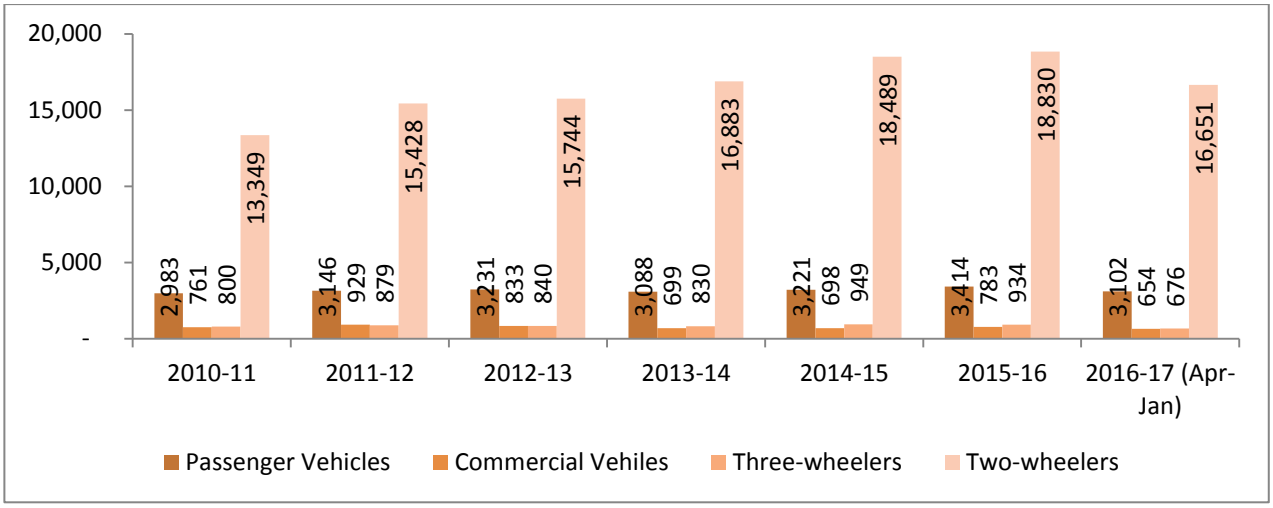
Source: ATMA, CMIE

Category wise, two & three wheeler tyres have a share of about 53% in the overall tyre production. This is followed by passenger vehicles and commercial vehicles with a share of about 26% and 17% respectively. Tractor segment constitutes only about 4% of the total tyre produced in the country. Off –the-road and other tyres constitute minute shares of less than 1% of the industry production. A similar share trend is witnessed in the sales of tyres registered in the country.

In 2016-17 (Apr-Dec), tyre production increased by 11.9% y-o-y on back of increased OEM demand as well as the replacement market. PV production grew by about 12%, Tractors by about 17%, CVs and Two and Three wheelers production by about 4% and 5.5% respectively during the same period. However, cheaper imports from China and slower exports pose a threat to this growth in production of tyres.

Automobiles production

Chart 5: Category wise Production of Automobiles (000 units)



Source: SIAM

Segment wise domestic market share of automobile industry

Table 1: Segment wise domestic market share (2015-16)

	%
Two-wheelers	79
Passenger Vehicles	14
Three-wheelers	4
Commercial Vehicles	3

Source: SIAM

In 2015-16, India's annual production stood at 23,960,940 vehicles (including passenger vehicles, commercial vehicles, three wheelers, two wheelers and quadricycle) as against 23,358,047 in 2014-15, registering a sluggish growth of 2.6% y-o-y. Two-wheelers have dominated the production volumes of the automobile industry over the years. Over the past 4 years, Two-wheeler production share in the overall automobile production has remained constant at around 80%. This is followed by passenger vehicles having a share of 14%. Productions of commercial vehicles and three-wheelers have about 3% share each in the automobile industry.

Two & Three wheelers together comprising about 83% in the overall automobile production in 2015-16, demands about 53% of the total tyre production volumes, followed by passenger vehicles segment that accounts for about 26% share of the total tyre production volumes.

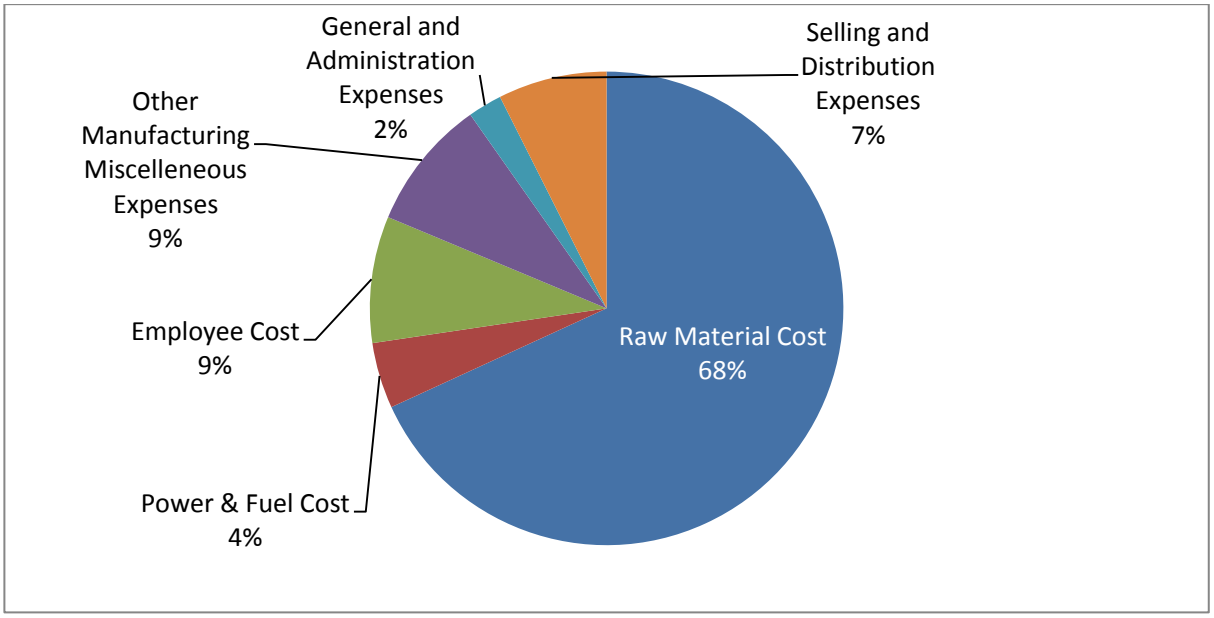
Raw Material

Raw material cost forms the largest cost head in the tyre industry accounting for about 65-70% of the total. The main raw materials used to manufacture tyres are natural rubber, poly butadiene rubber (PBR), styrene butadiene rubber (SBR) and nylon tyre cord fabric. All these raw materials impart different properties, which are combined to develop tyres with particular characteristics.

Rubber including (natural and synthetic), nylon tyre cord fabric (NTC) and carbon black constitute a significant portion i.e. ~60-65% of the overall raw material cost of the industry. Hence any change in the prices of these materials impact the overall industry's profitability. However, since FY13 the rubber prices witnessed a correction thereby reducing the overall raw material cost as a percentage of total expenditure to 68% on aggregate basis in FY16 as compared to 80% in FY11.

However, the price of rubber is prone to fluctuations and in 2016-17 (Apr-Feb), domestic and international rubber prices increased by about 28% after declining by 24% and 15% y-o-y for two consecutive years. The demand-supply gap in production and consumption of rubber in the country remains the reason for higher natural rubber prices in the domestic market and competitive prices in the international market leads to high imports from the international market. With high rubber prices in the domestic market on account of lower production, imports of rubber has increased over the past few years to about 45% in the 2015-16 from about 18% in 2010-11.

Chart 6: Industry Cost Structure (2015-16)



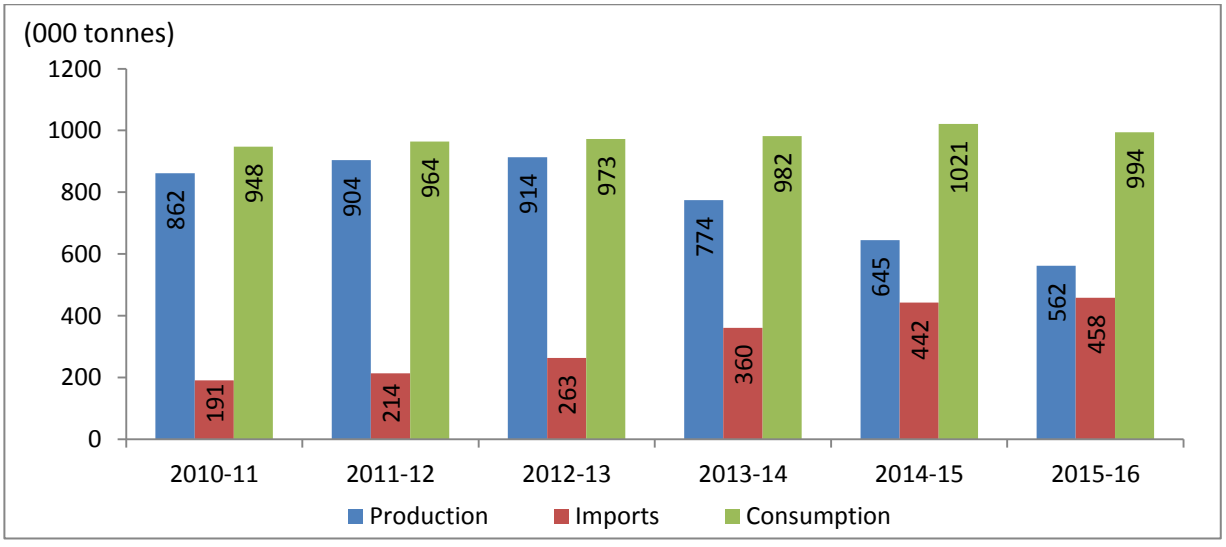
Source: AceEquity

Rubber

Rubber is a major component in manufacturing of a tyre. There are three categories of rubber used in the manufacturing process viz natural rubber (NR), styrene butadiene rubber (SBR) and poly butadiene rubber (PBR).

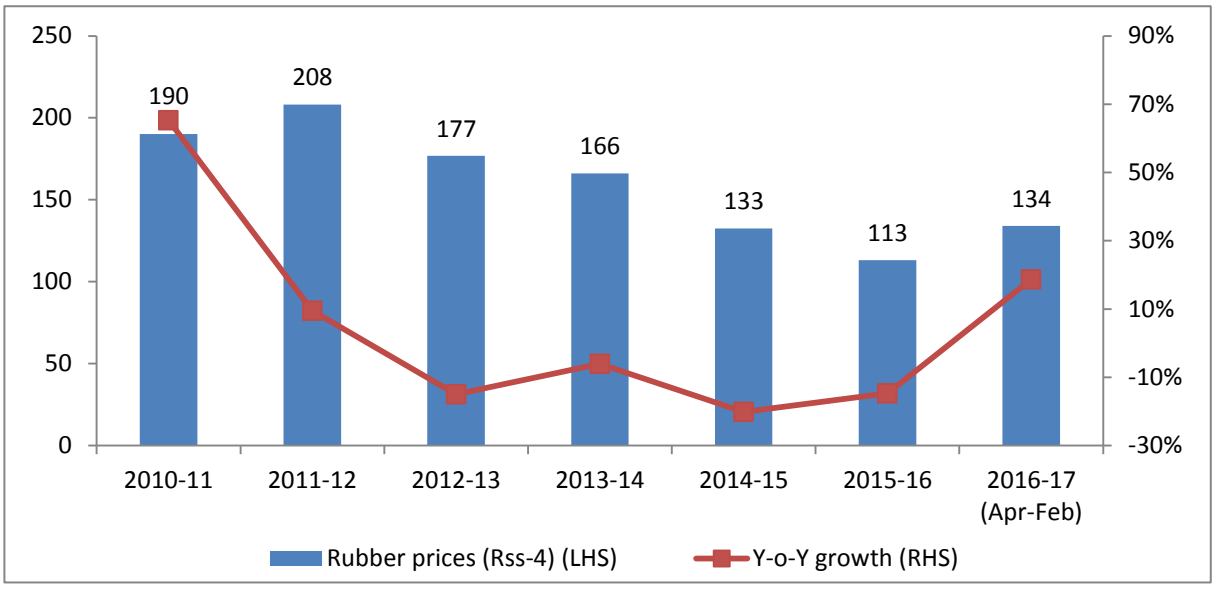
Natural rubber is an elastic hydrocarbon polymer that is originated from milky colloidal suspension or latex found in the sap of some plant. Natural rubber forms around 70% of the total rubber content, which is a sharp contrast of its usage in the developed markets like USA, Europe and Japan, where it is estimated to be around 35-40%. One of the primary reasons for more usage of natural rubber in India is its local availability with India being one of the largest producers in the world. In addition to this, natural rubber absorbs greater amount of heat and is more adaptable to poor road condition and overloading compared to synthetic rubber.

Chart 7: Production and consumption of NR



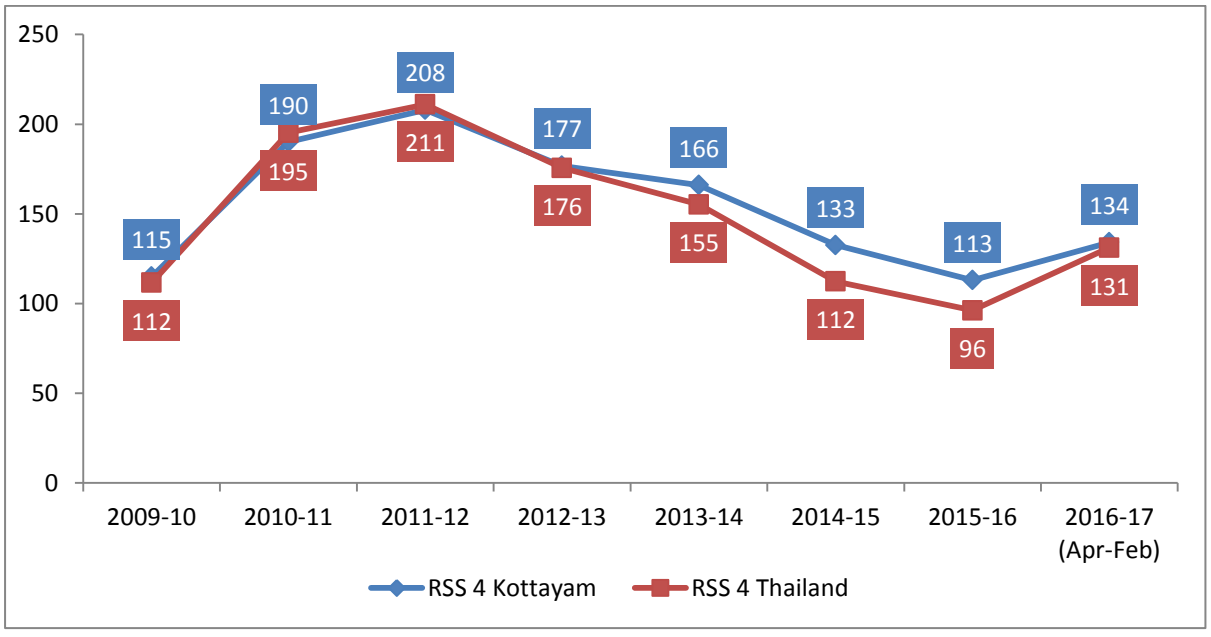
Source: Rubber Board of India, CMIE

Chart 8: Annual trend in rubber prices (Rs/kg)



Source: Rubber Board of India

Chart 9: Annual trend in Domestic and International rubber prices (Rs/kg)



Source: Rubber Board of India, CMIE

Styrene Butadiene Rubber (SBR) is a synthetic rubber which imparts abrasion and fatigue resistance in tyres and is used in blend with natural rubber and accounts for about 5-7% of the total raw materials costs. The content of SBR is higher in radial tyres than cross-ply tyres. However due to its poor tear strength especially at high temperatures its usage is observed to be comparatively lower in heavy duty truck tyres. In India, the demand for SBR has picked during past few years as penetration of radial tyres in passenger car industry has increased considerably. Non-tyre applications of SBR include footwear industry, car mats, battery containers, gaskets, toys etc.

Apcotex is the only major manufacturer of SBR in India. However, the grades SBR S1712 and S1502 which are used in tyre manufacturing are not manufactured domestically. Hence total demand of SBR for the tyre industry is met through imports from Thailand, Indonesia and Vietnam.

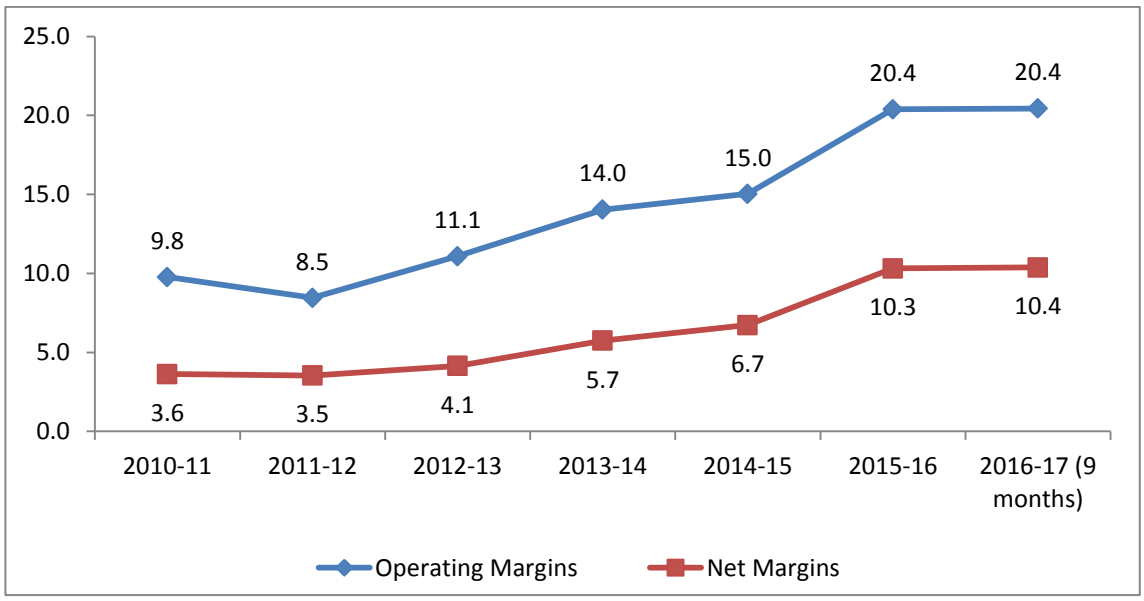
Poly Butadiene Rubber (PBR) is the other variant of synthetic rubber used in the tyre industry which accounts for about 5% of the total raw material cost of tyre manufacturers. It is used as tyre treads, sidewalls, carcass and beed fillers which gives tyres increased mileage and flex cracking properties. Reliance Industries is the sole producer of PBR in the country.

Financial performance of Tyre players

The top 10 players account for about 80% market share in the domestic tyre industry. Raw materials prices impact the margins of players as the raw material cost accounts for about 65-70% of total. Raw material prices have declined on a y-o-y basis over the past two years. As a result, tyre players have been able to report strong growth in the margins.

In 2016-17, with surge in rubber costs, overall raw material costs are expected to increase. During April 2016 to Feb 2017 period, domestic natural rubber prices have increased by a sharp 19% y-o-y after declining for two consecutive years. This led to a marginal decline of 1.2% in aggregate operating profits of the 9 companies for 9 month period in 2016-17. However, despite this increase in prices of raw materials and marginal decline in operating profits, the tyre industry's operating profitability remained range bound during the Apr-Dec 2016-17 on account of about 1.6% increase in sales during the period.

Chart 10: Margins of Tyre players



Note: The industry margins are based on the financial results of 9 listed tyre companies

Source: AceEquity

Also, with the significant capex in the industry, the industry's aggregate debt increased by about 7% to reach Rs 80.30 billion in 2015-16. However, with higher operating profit, the interest coverage of the industry has improved to 11.5 times in FY16 from about 7 times in FY15.

Policy Environment

- All categories of tyres can be exported freely.
- All categories of new tyres can be imported freely. No WTO Bound Rates for tyres and tubes.
- Imports of Second hand/Retreaded tyres (major categories) are restricted under EXIM Policy and can be done against an import licence.
- Tyres imports under Regional Trade Agreements (Asia Pacific Trade Agreement, Indo-Sri Lanka, SAFTA, India-Singapore, ASEAN, India-Malaysia etc.) allowed at preferential rates of import duty.
- All tyre industry related raw-materials can be imported freely (under OGL).
- Tyre Industry delicensed in September, 1989.
- Natural Rubber (NR) principal raw material of Tyre Industry, is in the 'Negative List` (i.e. not eligible for any concession in Custom duty) under various Trade Agreements, i.e. India ASEAN Free Trade Agreement, India Sri Lanka Free Trade Agreement, South Asian Free Trade Agreement (SAFTA), India Malaysia Comprehensive Economic Cooperation Agreement (CECA), India-Singapore Comprehensive Economic Cooperation Agreement and India-South Korea Comprehensive Economic Partnership Agreement (CEPA).

Source: ATMA

Industry concerns

The Automotive Tyre Manufacturers Association (ATMA) has asked the Ministry of Commerce for duty free import of natural rubber equivalent to deficit in domestic production. The request by the body came after the Rubber Board projected domestic natural rubber deficit of 3.4 lakh tonne during the year 2017-18.

Domestic production of natural rubber continues to be far below its requirement. Lately, sharp volatility in natural rubber prices has led to further crunch in the domestic markets. In the last 2 months, natural rubber prices have zoomed a significant 30% and growers are holding back stock in the hope of a continued rally in the prices. With rise in prices and high import duty, imports have become un-viable.

Tyre industry consumes 65-70% of the natural rubber produced in the country. However, import of natural rubber in India attracts 25% duty which is highest in the world. Higher import duties will hurt the margins of tyre manufacturers as they will be left with no option other than importing natural rubber in case of a deficit in production. Manufacturers are also worried about the rampant dumping of cheap Chinese radial tyres in the domestic market.

Outlook: -

Performance of the automobile industry in FY17 and FY18

Table 2: Growth in automobile sales

Category	Apr-Dec FY17 (Actual)	FY17 E*	FY18 E*
CVs	4.5%	5-7%	12-13%
PVs	10.3%	10-12%	12-13%
Two & Three wheelers	6.2%	8-10%	10-12%
Tractors	16.8%	16-18%	18-20%

E - Estimated

Tyre OEM segment is expected to witness growth in 2016-17 largely driven by the buoyancy witnessed in automobile sales. Post demonetisation, growth estimation of two-wheelers and small cars has been hit slightly. However, lower cost of ownership of auto vehicles triggered by series of interest rate cuts, push on manufacturing and infrastructure segment by the government combined with lower fuel prices have resulted in recovery of auto sector. Tyre industry stands to benefit from this turnaround in OEM demand and stable replacement demand. However, tyre manufacturers supplying to CV, PV and tractors segment are expected to benefit the most in the near term as the outlook for these auto segments in the Indian market is relatively more positive than TW.

Capacity utilisation levels for manufacturing TBRs have come down to 60-65% from 80-85% in couple of years ago due to increasing dumping of TBR tyres from China. Also, the tyres and tubes industry was expected to witness completion of about 5 projects worth Rs 45.9 billion in 2016-17 adding an incremental capacity of about 13.7 million units to the industry. In the next two years (FY18 and FY19) about Rs 70 billion worth projects are to be completed adding another 12 million unit capacity to the industry. Going forward, significant capex will put pressure on the utilization levels and hamper the operational margins of the players.

Over the past few years, the trend in tyre production and sales for OEM market has been in line with the automobile sales for the period i.e., production of tyres has been about 1.5 times that of a vehicle produced. While the demand from replacement market has comparatively been higher. Sales are expected to grow in the range of 10-11% per annum during 2017-18. Both, domestic and export demand for tyres is expected to remain robust during this period on the back of strong growth prospects for Auto OEMs as well as the stable replacement market.

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