‘Make in India’ – Making it happen!

Indian Auto Component Industry

ACMA Annual Session
3 September 2015
'Make in India'

**Intent**

India to establish itself as a manufacturing and export hub for the world

**Announcements**

- Foxconn commits USD 5 bn to manufacturing in India
- GM announces USD 1 bn investment to turn India into a manufacturing and export hub for emerging markets

**Recent events**

- Yuan devaluation could pressurize Indian exports; threat of increased imports
- Increased volatility of the Rupee and its decreased valuation

**Policy**

- Government pushing for land and labor reforms in spite of several handicaps
- On the back of power reforms, India seeing record capacity addition over the past year

**Progress**

- Manufacturing PMI declines from 54.5 at the end of 2014 to 52.3 in Aug\'15
- IIP growth stabilising after a volatile two years

**Make in India : Signal or Noise?**
**Key messages**

- **Strong all-round performance and exciting ‘Make in India’ aspirations**
- **Economic profit\(^1\) and country competitiveness critical to attract ‘Make in India’ investments**
- **Nine-point agenda could take the sector to top-quartile position on economic profit generation**
- **ACMA, Government and the industry ecosystem must strengthen country competitiveness**

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1 Returns on capital employed over and above the cost of capital
Strong all-round performance by the Indian automotive components sector

**Size**
- `000 crore

- **2006**: ~39
- **2015**: ~3x growth

**Exports**
- `000 crore

- **2006**: 13+
- **2015**: ~5x growth

**Contribution to Manufacturing GDP, Percent**

- **2006**: 3%
- **2015**: 5%

**Exports**
- **2006**: 160 countries
- **2015**: ~1 mn direct jobs

**Contributions**
- **Value in USD bn**
- **2006**
- **2015**

SOURCE: ACMA; Automotive Mission Plan 2026
Diverse and disruptive trends will shape the global industry

**Disruptive forces impacting every sector globally**
- Urbanisation
- Digital technologies
- Ageing world, young India
- Greater global connections

**Key changes seen in vehicles**
- Emission and safety compliance
- Unique emerging-market consumer needs
- Enhanced convenience (e.g., ADAS)
- Mobility services and autonomous vehicles

**Major trends in auto components**
- Increasing electronics penetration
- OEM-supplier co-development and innovation
- Shortening supply chain ("near-shoring")
- Consolidation and diversification

1 Emerging economies, including industrialisation

SOURCE: ‘No Ordinary Disruption’, a McKinsey and Company publication, July ’15
The sector has set exciting ‘Make in India’ aspirations

**Size**
- `000 crore
- 2015: ~39
- 2026: ~200
- ~5x
- 1050-1210 USD bn

**Exports**
- `000 crore
- 2015: ~11
- 2026: ~80
- ~7x
- 437-462 USD bn

**Contribution to Manufacturing GDP**
- Percent
- 2015: 5%
- 2026: 10%
- ~2x
- 10% Value in USD bn

SOURCE: ACMA; Automotive Mission Plan 2026
Aspirations translate into an exciting vision

USD 85-100 bn (≈ 550K-650K crores\(^1\)) additional investments required

Vision for automotive components sector in 2026

1. Global MNCs manufacturing at-scale in India for the world
2. Multiple Indian auto components suppliers in top 100 globally
3. Several new automotive clusters emerge
4. World-class logistics corridors and efficient port infrastructure
5. Indian automotive components sector - a ‘frugal innovator’

SOURCE: Indian Brand Equity Foundation, AMP 2026, World Industry standards

1 USD 1= INR 63
Some people want it to happen, some wish it would happen, others make it happen.

Michael Jordan
‘Make in India’: Two most crucial pre-requisites

Companies in the sector generate sufficient economic profit (i.e., returns greater than cost of capital)

Attract investments of USD 85–100 bn into the sector

The country becomes competitive on the ease of doing business
Most manufacturing companies in India are not creating economic profit\(^1\)

**Economic profit (EP)**

ROIC \(-\) WACC

**Invested capital**

### Top 1,000 manufacturing companies in India

- 2007-2011: 44%
- 2011-2014: 29%

### Automotive components companies in top 1,000

- 2007-2011: 36%
- 2011-2014: 36%

**Sectors included:** Automotive, Pharmaceuticals, Textiles, Apparel and luxury goods, Food & beverage, Household durables, Chemicals, Utilities & energy equipment, Metals & Mining, Capital goods, Construction materials

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\(^1\) Returns on capital employed over and above the cost of capital

SOURCE: Corporate Performance Analysis Tool™ – a McKinsey Solution
While majority of suppliers in India are profitable, few generate economic profit

90 percent of players make positive EBIT...

100% = 99

Positive EBIT

2010-14

... but only about a third make positive economic profit

SOURCE: McKinsey analysis
The Indian automotive components sector is in the ‘mid zone’ on economic profit creation

Average economic profit\(^2\) generated by key sectors; 2010–14; N=2,576\(^1\)

INR millions

- **Automotive OEMs**: 22%
- **Pharma**: 12%
- **IT services**: 22%
- **Automotive components**: ~1%

1 Includes all publically listed non-financial Indian companies covered by CPAT, less firms with insufficient data to calculate an accurate average economic profit for 2010-14; 2 Economic profit divided by number of companies

SOURCE: Corporate Performance Analysis Tool™, a McKinsey Solution
Indian automotive components sector has the opportunity to transform its economic profit position

**Operating margins**, %

- High EP
- Low EP

**Asset turnover**

- High EP³
- Low EP³

**Share of global auto components investment**
- High EP³: 66%
- Low EP³: 21%

**Increase in invested capital base**
- High EP³: 45%
- Low EP³: 8%

1. Net operating profit adjusted for taxes
2. Revenue per unit of capital employed
3. High: EP/IC > 5%; Low: EP/IC < 5%

SOURCE: Corporate Performance Analysis Tool™, a McKinsey Solution; IHS Global Insights
Three part recipe to move to top 20% position in economic profit (EP)

Company/sector-specific factors that affect the starting odds

<table>
<thead>
<tr>
<th>Global EP research</th>
</tr>
</thead>
<tbody>
<tr>
<td>● 3,000 companies</td>
</tr>
<tr>
<td>● Top 20% companies generate 90% EP (average EP USD 1.2 bn)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Endowment</th>
</tr>
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<tr>
<td>“Who you are”</td>
</tr>
<tr>
<td>● Company/sector attractiveness</td>
</tr>
<tr>
<td>● Differentiation bases</td>
</tr>
<tr>
<td>● Capital structure</td>
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<tr>
<td>● Productivity level</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Trends</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Where you are”</td>
</tr>
<tr>
<td>● Sector and geographic trends</td>
</tr>
<tr>
<td>- Ride on tailwinds</td>
</tr>
<tr>
<td>- Mitigate headwinds</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Big moves</th>
</tr>
</thead>
<tbody>
<tr>
<td>“What you do”</td>
</tr>
<tr>
<td>● Programmatic M&amp;A</td>
</tr>
<tr>
<td>● Capital reallocation to new projects (&gt;70%)</td>
</tr>
<tr>
<td>● Transform productivity and differentiation (&gt;30%)</td>
</tr>
<tr>
<td>● Raise capital efficiency</td>
</tr>
</tbody>
</table>

Odds to jump from mid-zone to top 20% EP over 10 years

- 10% → 40% → 70% → 95%

SOURCE: McKinsey analysis
The South Korean automotive components industry adopted a similar recipe

**Endowment**
- Capability in co-designing with OEMs
- Highly skilled labour
- Long-term and exclusive anchor OEM relationships

**Trends**
- Piggy-backing global OEMs (e.g., Hyundai)
- Growing demand for affordable technology
- Modular systems design and manufacturing

**Big moves**
- Specialising in system-level design, rich in innovation
- Focus on being talent magnets
- Strong government push (KAPPs - Korea Auto Part Parks)

Global share of top 5 Korean auto parts suppliers

- **2008**: ~3%
- **2013**: ~6% growth

SOURCE: McKinsey analysis
In addition to EP, India’s competitiveness on the ease of doing business needs to strengthen

### Rankings on 10 themes of doing business

**Ranking (out of 189), 2014**

<table>
<thead>
<tr>
<th>Key enablers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td></td>
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<tr>
<td>Labour</td>
<td></td>
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<tr>
<td>Infrastructure</td>
<td></td>
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<tr>
<td>Product-market regulation (e.g., taxation, trade agreements)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Theme</th>
<th>Ranking</th>
</tr>
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<tr>
<td>Enforcing contracts</td>
<td>186</td>
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<td>Dealing with construction permits</td>
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<tr>
<td>Starting a business</td>
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<tr>
<td>Paying taxes</td>
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<tr>
<td>Trading across borders</td>
<td>132</td>
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<tr>
<td>Resolving insolvency</td>
<td>121</td>
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<tr>
<td>Getting electricity</td>
<td>111</td>
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<tr>
<td>Registering property</td>
<td>92</td>
</tr>
<tr>
<td>Protecting investors</td>
<td>34</td>
</tr>
<tr>
<td>Getting credit</td>
<td>28</td>
</tr>
</tbody>
</table>

**SOURCE:** World Bank Ease of Doing Business report 2014
Key messages

- Strong all-round performance and exciting ‘Make in India’ aspirations

- Economic profit\(^1\) and country competitiveness critical to attract ‘Make in India’ investments

- Nine-point agenda could take the sector to top-quartile position on economic profit generation

- ACMA, Government and the industry ecosystem must strengthen country competitiveness
# Transformation agenda for Indian automotive components industry

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<thead>
<tr>
<th>Build on Endowments</th>
<th>Win over Trends</th>
<th>Execute Big moves</th>
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<tbody>
<tr>
<td>1 Graduating from ‘Make to Print’ through frugal innovation</td>
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Emissions: Opportunities for suppliers along the powertrain evolution

% CO₂ reduction
% increase in Powertrain cost

ICE upgradation
- Direct fuel injection
- Light weighting
- Braking energy recapture
- Less friction, resistance
- Electric steering and pumps
- Aerodynamics
- Downsizing

Hybrid
- Two or more power sources, generally an ICE and electric motor
- Integrated power management

Full hybrid
Plugin hybrid

Hybrid
- Fully electric vehicle
  - Range extended EV
  - Battery EV
  - Fuel cell EV

REEV
BEV
FCEV

SOURCE: McKinsey analysis
Safety: Global active safety market expected to grow faster

**Passive safety market**
USD billion

- 2015: 19
- 2020: 24

5% p.a.

**Active safety market**
USD billion

- 2015: 25
- 2020: 37

8% p.a.

- Airbags
- Seat belts
- Head restraint
- Parking warning (ultrasonic)
- Parking Camera
- Tyre pressure warning

- Significant imports into India
- As Indian adoption increases, will lead to scale and local manufacturing

SOURCE: McKinsey analysis
Leverage current scale; benefit as Indian vehicle market grows

India has significant scale in certain segments for ‘Make in India’...

- Two wheelers
- Segment A cars
- Tractors

... with significant scope for growth to compete globally...

Grow with India vehicle market

- 3x growth
- 23 mn
- 66-76
- 2015
- 2026

... which can be realized by achieving scale in additional segments

- LCV²
- Small UV³
- MHCV⁴
- Other PV⁵

1 Sedans; 2 Light Commercial Vehicles; 3 Utility Vehicles; 4 Medium Heavy Commercial Vehicles; 5 All PV, except Seg A & Seg B

SOURCE: Automotive Mission Plan 2026; IHS Global Insights; Society of Indian Automobile Manufacturers
Automotive electronics – Opportunity or headwind?

2x increase in electronics % in car by 2030

- 2010: 23%
- 2020: 35%
- 2030: 45%

Functional area

- **Safety**
  - Pedestrian recognition
  - Collision alert

- **Navigation**
  - On-board/removable navigation device
  - Traffic control system

- **Entertainment**
  - In-vehicle OS
  - Internet connectivity

- **Convenience**
  - Toll/gas payments
  - Communication with service centre

Product concept

- Typically done by OEMs/large tier I automotive component players

Child parts

- Parts such as camera lens, IR sensor, etc.

Hardware assembly

- Production of part or complete hardware product

Software

- Typically done by large software/OEMs/auto component players

System integration

- Done across value chain

SOURCE: McKinsey analysis
### Potential to play in the electronic components aftermarket

- **Huge potential play in the electronics aftermarket...**

<table>
<thead>
<tr>
<th>Electronic accessory</th>
<th>% of new cars sold along with accessory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking cameras</td>
<td>3%</td>
</tr>
<tr>
<td>Tyre pressure warning systems</td>
<td>6%</td>
</tr>
<tr>
<td>Parking sensors</td>
<td>12%</td>
</tr>
</tbody>
</table>

- **2014**
  - **2.6 million** PVs sold per year in India
  - **20 million** Total number of PVs in India

- **... with a set of emerging electronic accessories likely to be key drivers**
  - Satellite navigation system
  - GPS-linked panic button for vehicles
  - Boot lights
  - Sensors for remote component diagnostics
  - Advanced, remote security systems

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1. Passenger vehicles

**SOURCE:** Society of Indian Automobile Manufacturers; IHS Global Insights; Team analysis
Transformation agenda for Indian automotive components industry

**Build on Endowments**

1. Graduating from ‘Make to Print’ through frugal innovation

2. **Grow scale** and professionalize for the next wave of **cost excellence**

3. Improve quality capability of **Tier-2 and Tier-3** suppliers

**Win over Trends**

4. Invest to stay on top of evolution of **emission & safety** standards/adoption

5. Grow plant capacity, people skills and technology to support **domestic and global expansion** of OEMs

6. Build **auto-electronics** supply capabilities; leverage large **aftermarket**

**Execute Big moves**

7. **“Make in India for the World”** by leading in simplified and low cost technology

8. Build scale & manage cyclicity through **M&A and diversification**

9. Embrace **‘Digital Manufacturing’** to transform productivity and quality
### ‘Digital Manufacturing’: Disruptive technologies that will change the manufacturing sector

<table>
<thead>
<tr>
<th>Technique</th>
<th>Example</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data, computational power &amp; connectivity</td>
<td>Cloud technology</td>
<td>Use of cloud technology (SaaS ERP) to centrally track orders across plants in 18 countries</td>
</tr>
<tr>
<td></td>
<td>Internet of things/ M2M</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Big data/ open data</td>
<td></td>
</tr>
<tr>
<td>Analytics and intelligence</td>
<td>Digitization &amp; automation</td>
<td>Real time error correction at Alabama facility annually saving USD 550,000</td>
</tr>
<tr>
<td></td>
<td>Advanced analytics</td>
<td></td>
</tr>
<tr>
<td>Human machine interaction</td>
<td>Touch interfaces and next-level GUIs</td>
<td>Use of augmented reality glasses “KiSoft Vision’ to assist warehouse workers</td>
</tr>
<tr>
<td></td>
<td>Virtual &amp; augmented reality</td>
<td></td>
</tr>
<tr>
<td>Conversion to physical world</td>
<td>Additive mfg. (i.e., 3D Printing)</td>
<td>3-D printing enabled rapid prototyping for testing, reducing time-to-market</td>
</tr>
<tr>
<td></td>
<td>Advanced robotics (e.g., human-robot collaboration)</td>
<td></td>
</tr>
</tbody>
</table>

**SOURCE:** McKinsey analysis
Key imperatives for the automotive components sector

**A Government**

- Consider increasing the ease of doing business
- **Strategic FTAs** with markets like India could be tapped for greater exports
- Consider improvements in infrastructure and tax structure (e.g., GST)
- Continued R&D support
- Consider supporting setting up of a CoE to drive quality

**Labour**

- Labour reforms to incentivise hiring and reduce non-wage labour

**Investment**

**B Ecosystem**

- Continue **promoting** road shows through Brand India summits
- Support auto components players, help acquire **manufacturing technology** (e.g., can invest in developing specialised parts)
- Facilitate tier-2, tier-3 quality certification and programs
- Improve **supporting products** (e.g., liability insurance)
- **Digital partnerships** to improve service (e.g., SIAM-ACMA autoDX)
- **Cost competences** and innovation in raw material

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Skill development is critical
Many countries have implemented best practices to reduce administrative burden on businesses

<table>
<thead>
<tr>
<th>Ease of Doing Business sub-components</th>
<th>Common best practices</th>
<th>Number of countries</th>
<th>Emerging market examples</th>
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<tr>
<td>Enforcing contracts</td>
<td>Specialized commercial court</td>
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<td>Liberia</td>
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<td>Electronic filing of complaints</td>
<td>17</td>
<td>Brazil</td>
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<td>Dealing with construction permits</td>
<td>One-stop shop</td>
<td>36</td>
<td>Chile</td>
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<tr>
<td>Starting a business</td>
<td>No minimum capital requirement</td>
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<td>Mexico</td>
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<tr>
<td></td>
<td>One-stop shop</td>
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<td>Georgia</td>
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<td>Self-assessment allowed</td>
<td>160</td>
<td>Turkey</td>
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<td>Trading across borders</td>
<td>Electronic submission &amp; processing</td>
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<td>Pakistan</td>
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<td>Risk-based inspections</td>
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<td>Vietnam</td>
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<td>Single government window</td>
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<td>Colombia</td>
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<td>Getting electricity</td>
<td>Streamlined approval process</td>
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<td>Cambodia</td>
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<td>Reduced security deposits</td>
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<td>Safety regulations for electricians</td>
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<td>Cadastre information available online</td>
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<td>Access to corporate documents during trial</td>
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<td>Access to corporate documents before trial</td>
<td>31</td>
<td>Bangladesh</td>
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<tr>
<td>Getting credit</td>
<td>Clear definition of directors’ duties</td>
<td>30</td>
<td>Botswana</td>
</tr>
<tr>
<td></td>
<td>Distribution of credit information from retailers, utilities, banks, etc.</td>
<td>57</td>
<td>Argentina</td>
</tr>
</tbody>
</table>

Consider pursuing FTAs and PTAs with India-like markets

Countries where India has a FTA
- Nepal
- Sri Lanka
- Maldives
- Bangladesh
- Bhutan
- Afghanistan
- Pakistan
- Chile
- Argentina
- Uruguay
- Paraguay
- Peru
- Brazil
- Mexico
- Algeria
- Egypt
- Morocco
- Iran

Countries where India has a PTA
- Thailand
- Philippines
- Singapore
- S Korea
- Indonesia
- Myanmar
- Malaysia
- Vietnam
- Brunei
- Darussalam
- Iran
- Russia
- Egypt
- Morocco
- Angola
- South Africa
- Ukraine
- Ukraine
- Algeria
- Nigeria

Strategic FTAs that can be pursued
- Brazil
- South Africa
- Nigeria
- Peru
- Colombia
- Mexico
- China
- Japan
We all have dreams. But in order to make dreams come into reality, it takes an awful lot of determination, dedication, self-discipline, and effort.

Jesse Owens
END