

# Chapter-1

## INTRODUCTION

**Objective:** To understand the potential of the increasing influence of an “aware” customer on the market. And to study ways by which this influence can be captured by a component manufacturer.

### **Scope:**

With the recent developments in the global automotive industry, new challenges have emerged. There is a need to think out of the box for Indian component manufacturers to maintain competitiveness in an inflationary environment and compete with the best keeping market trend in consideration. According to the present scenario, the final customer has started looking for values (a mix of aesthetics and performance) before buying or looking for a vehicle. This project will aim to understand what is that the customer is looking at in India and Europe is. As we have this notion revolving that the technologies that exist in the west penetrates India in the longer run. Hence the international markets and customer requirements are studied to understand the next trend in the automotive segment in India. This approach will help Indian component manufacturers gain a futuristic view of how the markets evolve in the coming years and what needs to be presented, an independent component/trend, that helps them capture the attention of the final potential customer in the passenger vehicle segment and niche markets. With this understanding, we can predict how to pitch this product to the customer. **The project hence aims to find the trend that will prevail in automotive industry in India and how a component manufacturer capture more and more market share in this regard.**

As the industry is evolving, the customers too are evolving. Hence there is a change in the thinking of the potential customer as seen in different automotive sectors. The focus segment for him/her is changing from the final product to individual components assembled inside the final product. And a connection or a bond can be seen between a customer and a component which is based on the interest of the

customer and the brand image of the component. This is the emerging market, first prevalent in the European nations, that is penetrating the Indian industry. The study of these interests and find a way to satisfy these interests is our aim.

This market, since it will be based on component charisma, can be exploited by a Tier 1 supplier. The reach and image of a component manufacturer can be upgraded and accelerated by adopting various strategies that correspond with Business to Business marketing and Business to Customer marketing keeping aesthetics and performance as driving aspects. Ways by which support can be provided to a component manufacturer, to grow its network and profits due to the emerging market trend, needs to be studied.

## Chapter-2

### **LITERATURE SURVEY**

The entire report was made on this understanding that the emerging markets needs to be studied with respect to a Tier 1 or a component manufacturer. A lot of journals have been studied to actually understand how and why the markets are evolving. There were few market surveys that helped in building this report. And they are listed below with a brief description.

1. IPO Publication PWC: Global Top 100 Companies by Market Capitalization. This gave me an insight about the top companies all over the globe.
2. Mckinsey and company: Road to 2020 and beyond journal gave me an insight about industry trend.
3. ACMA Relationship Enablers journal and research paper gave me an insight about relationship building factors and their connection with business.
4. The Henry Fund research: Auto parts and equipment manufacturing industry gave me an insight about different kinds of OEM's and OES's globally.
5. Ernst & Young LLP research paper: Top 100 global suppliers of 2010.
6. Ernst & Young LLP research paper: Top 100 global suppliers of 2012. Both giving information about component suppliers approach and changing thinking.
7. London School of Economics: The global process-Auto-Component supply chains in India and China gave me insight about component manufacturer thinking and networking with respect to supply risk management.
8. IIM Ahmadabad: Haritha Saranga: Competitiveness of Indian Auto Component Industry gave me insights about conditions of Indian auto component manufacturers.
9. Rane Madras Limited research paper enabled me to understand market.
10. Rane auto parts business plan helped me understand aftermarket potential and requirements.

## Chapter-3

### MODELS:

The potential of the emerging market (After visualizing the growth year on year) will be an important factor for understanding the way product is developed for the market and the product is placed in the market. Since the Market is increasing more in the favour of an equipment manufacturer, this market can be explored by them. Hence it is necessary to come out with few models that will help a Tier1 or OES to increase its reach. Three models are given below which talks about how connections or bonds can be explored for increasing customer satisfaction and giving him/her what they exactly require. These are ways by which one can incorporate aesthetics values with the performance values and attract the potential final customer.

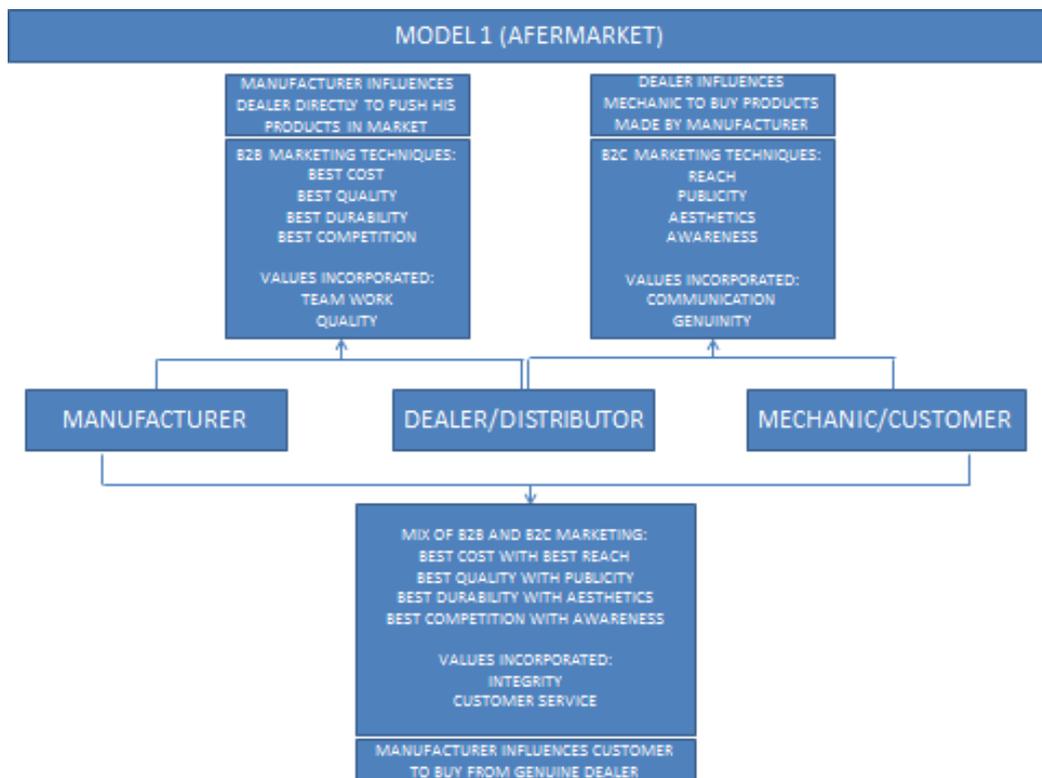


Fig 1

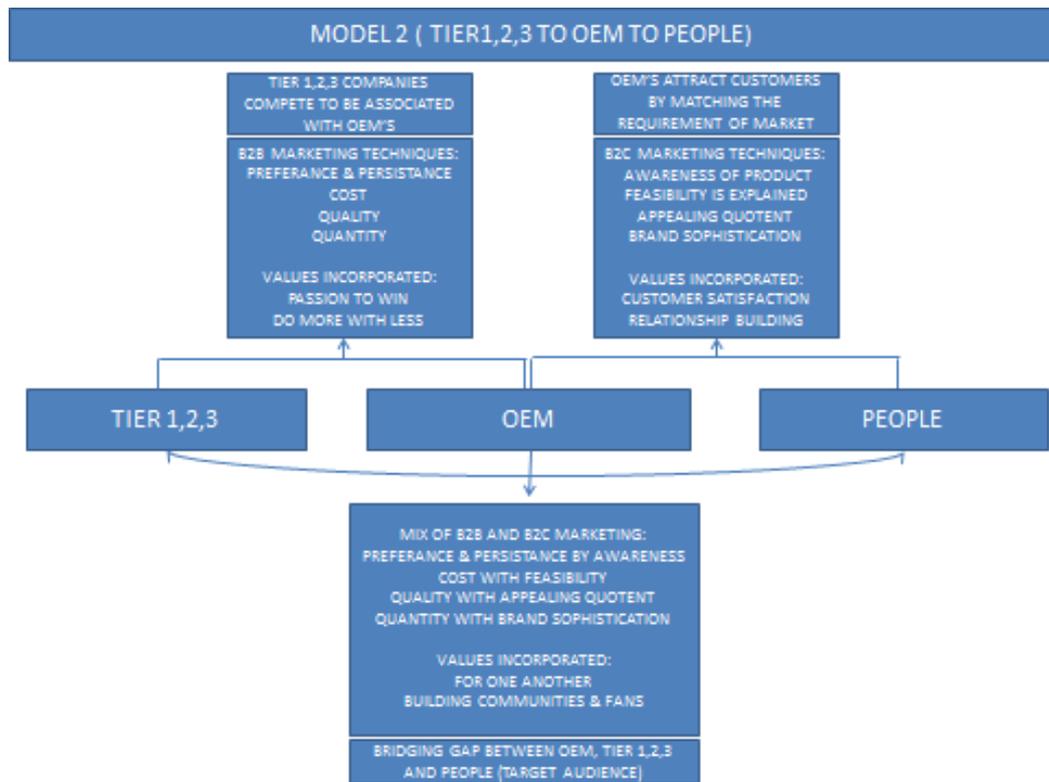


Fig 2

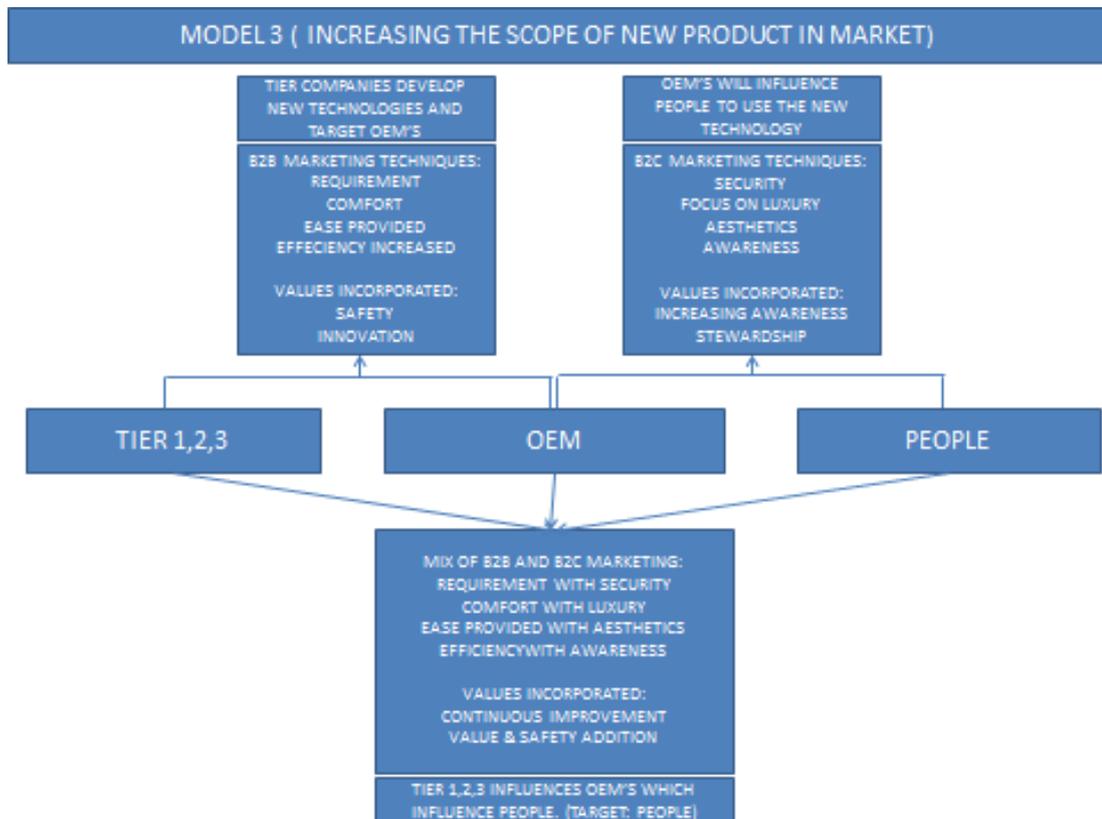


Fig 3

## **Chapter-4**

### **INDUSTRY TREND: WHAT PEOPLE IN USA, EUROPE AND INDIA REQUIRE**

This report will act like a survey to the project. Here we try to compare and contrast the Industry trend that has been prevailing in USA and European nations by understanding what are the products/services provided by the top component manufacturers in these countries. With the analysis of this, we will be able to understand the root USP's of these component manufacturers that people get attracted to. The approach will be to understand these USP's. This will be useful in understanding the next trend that will come to Indian markets. Since we anticipate that the next trend is component attraction, we try to understand details on those grounds. For understanding the change that needs to be implemented by the component manufacturers, we must try to understand the values that are presently given by present top players in Indian industry. This will help us get a background. And with this background, we will try to understand what and how the trends from US and European markets needs to be implemented in Indian markets. With all this permutation and combination, our main aim is to find a segment that attracts the customer of next generation. And after finding the segment, we will try to experiment with the components that come under that particular segment. One of these components, if well developed and positioned, can be sold to a target audience that will make great profits.

According to analysts at IHS, 2015 was characterized as a good year in the mature car markets, though it was largely offset by a very poor year for many of the world's emerging markets. The net result is estimated to be a sub-par 1.5 percent growth in global auto sales – the slowest pace of growth since 2010 – once all numbers are reported and analyzed.

Incremental volume growth in the US and Europe is forecast to be solid but less spectacular, while on the other side of the balance sheet, further downside from Russia, South America and some big ASEAN car markets will be less of a drag on global volumes as their impact lessens, having already suffered severe market contractions. This, combined with the new autos targeted stimulus in China, is likely

to provide a mild uptick in global sales growth of 2.7 percent. The 2016 global forecast calls for sales of 89.8 million units -- just shy of the possibility of a global automotive light vehicle market reaching 90 million units.

The **U.S. auto market** has been powered by a combination of low interest rates and low gas prices, allowing for market momentum to remain strong. Although interest rates will be a slight headwind, buying conditions will remain positive, allowing the market to continue to grow in 2016 and 2017. There is still strong upside potential as a strengthening US economy and stronger employment takes the US market to 18 million units over the next two years or so. In **West Europe**, momentum is also strong, even after the recovery last year being well above expectations. The current forecast for a 2.5 percent to 3 percent uplift in sales in Europe could be even stronger. However, some northern European markets are peaking. In Spain, some payback is expected after eight consecutive scrapping incentives in recent years comes to an end.

“Despite ongoing political and partial economic troubles in the European Union, West Europe, together with the U.S., will build the fundamentals for solid global demand growth in 2016,” said Henner Lehne, senior director, global light vehicle forecasting at IHS Automotive. Optimism for sales activity in the **Chinese market** has increased dramatically since the government announced measures to reduce the vehicle purchase tax on smaller cars. However, continued stock market volatility may intimidate some buyers. Despite a slowing economy, IHS Automotive now expects light vehicle sales growth to increase 5 to 6 percent in 2016 – enough to add more than 1.3 million units of additional sales.

For several markets in the **ASEAN region**, 2016 will be a year of transition from the disappointing sales slump in recent years. In the key volume markets of **Thailand and Indonesia**, a return to growth should begin by the second half of 2016 and build momentum the following year. **India’s** auto market should accelerate as lower energy prices and falling interest rates allow a return to double digit growth for the first time since 2010, according to IHS forecasts. For **Brazil and Russia**, 2016 is likely to be a difficult period. Both markets have now been in decline for three consecutive years and 2016 will likely extend that to four years as their economies continue to contract. Brazil’s vehicle market is likely to decline 14 percent this year, according to IHS

Automotive. In Russia, the market will continue to contract as well, due to the lingering effects of low oil prices and sanctions on the Russian economy and its exchange rate. North America and Europe are expected to see production output levels rise again in 2016. In addition, improvement in a number of key emerging markets leads to an estimated 3.2 percent growth globally in 2016. During 2015, a number of emerging markets had stalled, but with the exception of South America, all major regions are expected to see output grow in 2016. **Forecast is that Europe** will grow by 1.7 percent and surpass 21.0 million units of production in 2016 after 3.3 percent growth in 2015. Western Europe is expected to grow by 2.4 percent with support from the ongoing recovery in domestic markets and exports to the buoyant U.S. market. The pull of China remains, but growth will slow and localization will continue. Eastern Europe remains constrained, but Russia could halt the sharp declines of 2014 and 2015. Central Europe is effectively flat, according to IHS forecasts.

**The NAFTA region** should demonstrate continued strength in 2016 as the domestic U.S. market reaches new peaks and key investments continue at a number of European and Asian manufacturers. While exports to China and South America might be blunted, opportunities elsewhere are enhanced by new, globally-focused products. The outlook is for growth to accelerate and production levels to exceed 18.0 million units. **Japanese output** fell during 2015, but 2016 offers more support as exports continue to benefit from exchange rates and as the impact of domestic tax changes made during 2014 and 2015 are worked through the system. In 2016, IHS Automotive expects production growth of 2.3 percent.

**In China**, recent stimulus is expected to be the most influential development, likely to support a 5.2 percent increase in output in 2016, offsetting the weaker fundamentals. International joint venture operations are expected to grow most strongly during 2016 as they respond to the strength of the SUV sector with new or revised offerings. **ASEAN** output declined during 2015, largely due to the slowdown in Indonesia, the region's second biggest market. The ASEAN market should post a modest increase of 1.3 percent in 2016, in part due to Thailand's ability to grow exports despite a slowing domestic market, according to IHS forecasts. **Indian** growth may have disappointed during 2015, but is still expected to

have increased by nearly 6 percent. We expect this to accelerate further in 2016, rising 9.2 percent. **South America** saw output fall sharply during 2015, down an estimated 20 percent for the region as a whole and 22 percent in Brazil. Unlike Asia, or even Eastern Europe, there is very little evidence to support anything other than a further decline in output during 2016. Without a dramatic change in conditions, IHS forecasters expect output to fall a further 5 percent in 2016.

## **Chapter-5**

# **AUTOMOTIVE INDUSTRY GLOBALLY**

For the last century, the car culture has spread over the entire globe. As much as any other product, the car has shaped not only the global economy but how billions of people live. In Europe alone, the automotive industry accounts for roughly 12 million jobs (including related jobs); in the US, more than 8 million; and in Japan, more than 5 million.<sup>1</sup> For all of its staying power, though, the industry has also seen constant change. Today's cars – with their drive-by-wire electric systems or drive assistants – would have astonished Henry Ford, Ferdinand Porsche, and Kiichiro Toyoda. They would also have been taken aback by the increasingly demanding environmental requirements and the rise of new players, particularly in China. So what's next?

This in-depth research offers a perspective on where the automotive industry is headed. It is based on many discussions and interviews with the top management of leading automotive original equipment manufacturers (OEMs) and an analysis of data from the top 17 (by sales) global OEMs, which comprise 80 percent of global sales. This work was designed to answer the most crucial questions:

- How are the industry and the market evolving?
- What are the future challenges and opportunities?
- How can OEMs benefit from these new challenges and opportunities?
- What are the implications for different market segments?

McKinsey's analysis tells a story that is largely optimistic and sometimes surprising. But the most important narrative thread is this: the global automotive industry is about to enter a period of wide-ranging and transformative change, as sales continue to shift and environmental regulations tighten. The lesson: companies that want to have a successful, long-term future need to get key strategic decisions right in the next decade. The future will not play out the same way for every country or type of car, so this report segments the markets accordingly and breaks down the industry geographically as follows: Europe (excluding Russia), North America (US, Canada, Mexico), Japan and South Korea, the BRICs (Brazil, Russia, India, China), and the rest of the world (RoW). The report also divides the industry into three major vehicle segments according to the brand and the market

positioning of vehicles in different regions. The premium segment (representing highest prices and margins) comprises 10 percent of the market. The value segment is the mid-price range; this comprises the vast majority of vehicles sold in all markets (70 percent). The entry segment refers to the least expensive vehicles in the different vehicle classes, making up the other 20 percent.

Overall, the global automotive industry is in better shape than it was five years ago, especially in the US, where profits and sales have recovered following the recent economic crisis, and in China, where growth remains strong. This progress will likely continue. By 2020, global profits for automotive OEMs are expected to rise by almost 50 percent. The new profits will come mainly from growth in emerging markets and, to a lesser extent, the US. Europe, Japan, and South Korea will be stagnant in terms of profit growth.

There are four key challenges that OEMs need to address to get a piece of future profitability. The analysis of this report projects to 2020, but these challenges will shape the industry until at least 2025.

- *Complexity and cost pressure.* There will be more platform sharing and more modular systems. At the same time, regulatory pressures will tighten, and prices in established markets are likely to be flat.
- *Diverging markets.* OEMs need to adapt to changing regional and segment patterns of supply and demand with respect to their production and supply base footprints, supply chains, and product portfolios; and the emerging Chinese aftersales market offers new growth opportunities.
- *Digital demands.* Consumers want more connectivity, are focused on active safety and ease of use, and are increasingly using digital sources in making their purchase decisions.
- *Shifting industry landscape.* Suppliers will add more value in alternative powertrain technologies and in innovative solutions for active safety and infotainment; Europe needs to restructure and adjust its capacity to better match demand; and competition is emerging from China.

To capture future growth and find profit from these challenges – and to mitigate their risks – OEMs cannot simply turn to their traditional toolbox. They need to review and adjust their strategic priorities, deploy the appropriate investments and resources, and develop new skills to execute these strategic objectives.

## How are the industry and the market evolving?

Globally, the automotive industry has recovered from the economic crisis. Industry profits in 2012 (EUR 54 billion) were much higher than in 2007 (EUR 41 billion), the last precrisis year, and the prognosis for future growth is even better. By 2020, global profits could increase by another EUR 25 billion, to EUR 79 billion. That is good news, but the benefits will not be distributed equally across all geographies or all types of cars. Instead, some regions and segments will do much better than others. What is most striking about the recent past is how profoundly the source of profits has shifted. In 2007, the BRICs and RoW accounted for 30 percent of global profits (or EUR 12 billion). In 2012, that share rose to nearly 60 percent (EUR 31 billion), as sales in these regions rose 65 percent and outpaced growth in Europe, North America, Japan, and South Korea (Exhibit 1). More than half of this growth came from China (EUR 18 billion). Europe went in the other direction: in 2007, its automotive industry recorded profits of EUR 15 billion. By 2012, that profit had become a loss of EUR 1 billion. There are two main reasons for the decline. First, fewer people bought new cars. Across the region, the number of new registrations declined by more than four million units over this period, and car sales today are at levels last seen in the early 1990s. Second, Europe's well-developed automotive industry suffers from overcapacity; fierce competition is keeping prices (and therefore profits) down. Japan and South Korea are also looking far from robust. Both markets suffered from the economic crisis, and Japan endured another hit in 2011, with the tsunami-earthquake disasters in March. But in 2012, both countries saw their first profitable year since 2008.

**Automotive profits now exceed precrisis levels, but the sources have changed**



Fig 4

In Japan, exports and production rose and domestic sales also increased sharply. But this trend does not look likely to be sustained, as car purchase subsidy programs expire. Sales in Japan have fallen so far in 2013, and projections indicate a continued drop. By contrast, North America is in good shape: profits improved from EUR 9 billion in 2007 to EUR 23 billion in 2012. Sales in North America reached 17 million units in 2012 – the most in five years – and are rising again this year. The product mix has also started to shift to higher-value pickups and SUVs. Finally, following some painful balance sheets and labor and non-cost restructurings, the cost structure of leading OEMs has significantly improved, providing a basis for enhanced profitability.

Not only did emerging markets (the BRICs and RoW) account for almost 60 percent of worldwide automotive profits in 2012, these regions are poised to significantly outpace growth in established markets over the next seven years. Profit in the BRICs and RoW is projected to grow more than three times as fast as in established markets. By 2020, emerging markets will account for approximately two-thirds of the total automotive profit, and China will be the driving force (Exhibit 2). The vast majority of the estimated additional profits (EUR 25 billion) will come from steady sales growth (an estimated 3.8 percent a year, including 4.4 percent for the premium segment). The sources of those profits, however, will be rather lopsided. McKinsey's research indicates that China will account for a little more than half – EUR 13 billion, including EUR 9 billion from the premium segment alone. Other emerging markets will add about EUR 6 billion, while established markets will likely contribute only EUR 4 billion in additional profits, almost all of that from North America. Additional challenges and opportunities could add EUR 2 billion to total profit.

**The next 7 years will be profitable with emerging markets driving the majority of gains**

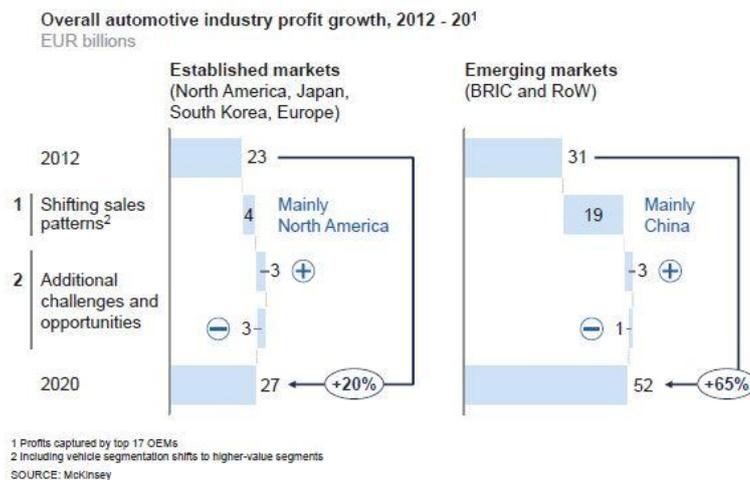


Fig 5

## What are the future challenges and opportunities?

Apart from sales volume growth, four challenges will shape the near and medium-term future. The industry response to these challenges could raise profitability by EUR 2 billion in a base case scenario. These challenges will matter much more for established markets than for emerging ones.

**Complexity and cost pressure.** The increase in regulations with respect to environmental and safety standards will raise costs but also increase complexity, as they need to be managed apart from domestic markets. The growing number of derivatives serving different vehicle segments and markets based on a single platform also raises complexity. At the same time, OEMs will have to develop alternative powertrain technologies for lower-emission vehicles without knowing what will end up being the prevailing technology of the future. This will require significant investment. Given all these pressures, plus flat net price development due to fewer budgets available for new features, it will be more difficult for OEMs to differentiate themselves with new features while extracting economic value from these forces.

**Diverging markets.** Emerging markets' share of global sales will rise from 50 percent in 2012 to 60 percent by 2020, while their share of global profits is also set to rise by 10 percentage points. However, the location of current production and supply bases is not sufficiently aligned to future sales. Moreover, there is potential for "portfolio mismatch," as smaller vehicle classes are growing more strongly than others, particularly in fast-growing

emerging markets. Finally, OEMs need to prepare for the Chinese aftersales market, which will grow an estimated 20 percent per year.

**Digital demands.** When it comes to buying a car, research shows that digital channels are already the primary information source for customers. For many, the next step could be online purchasing. This might be an opportunity for OEMs, but it also means the potential threat of competition from online retailers and puts pressure on the existing dealership structure. The growing role of digital also applies to the driving experience. Consumers want to combine mobility with communication. This could be an opportunity for OEMs, but only if they can figure out how to make money from this desire.

**Shifting industry landscape.** As OEMs seek to develop alternative powertrain technologies, suppliers will likely provide more of the value-added content per car. In addition, OEMs need to ensure that their suppliers' production footprints – especially in emerging markets – match future market demands and their own production plans. OEMs in Europe have one unique challenge: managing the restructuring that is clearly required. And everyone will have to deal with emerging Chinese players entering new segments and markets.

Beyond base case assumptions, these challenges could give rise to further risks to automotive profits. Recent restrictions on China's pharma and dairy industries could foreshadow a tightening of regulations to the automotive industry. Therefore, assuming a negative scenario, which might induce a 50-percent margin drop, a negative profit impact of up to EUR 15 billion is possible.

Moreover, OEMs would have to pass on the expense of developing new powertrains. However, market constraints in a less positive scenario could lead to lower markups. Assuming a 5-percentage-point drop in markup for electric vehicles (EVs) and a 2 percentage-point decline in markup for hybrids (HEVs), this could add up to EUR 4 billion less in future profits. These two examples indicate the necessity for defining appropriate strategies, as business as usual would probably not be sufficient to tackle those risks from the overarching challenges. Similar penetration and pricing scenarios need to be modeled and understood for the adoption of new features in active safety and the wide range of connectivity offerings for customers.

## How can OEMs benefit from these new challenges and Opportunities?

The lion's share of profit growth will come from higher sales. But beyond selling more cars, the industry is changing in more fundamental ways. The research points to nine major imperatives for the automotive industry, especially for OEMs.

### **1. The price-cost gap narrows**

Price and regulatory pressures mean that OEMs in the established markets of Europe, North America, Japan, and South Korea have little margin of error when it comes to making the right decisions on how to differentiate themselves. An analysis of 76 vehicle models shows that prices have been almost flat in real terms since 1998, while more and more features and improvements have been added due to competition, customer demands, and regulation. The net effect has been a decline in profit per vehicle (Exhibit 3), but OEMs have been able to manage this so far because they have been able to make efficiency and quality gains of 3 to 4 percent a year. However, tighter regulations for emissions or safety will add further costs to the average vehicle. Evidence suggests that the share of this regulation-driven content will increase to 60 percent in these markets (up from 40 percent). This will narrow the price-cost gap, and OEMs will face difficulties in prioritizing among differentiating features and basic customer demands. Therefore, OEMs need to find ways to impose markups for mandated content and to tighten annual cost improvement beyond 3 to 4 percent.

## Price growth at the pace of inflation plus added content have led to a decline in profit per vehicle

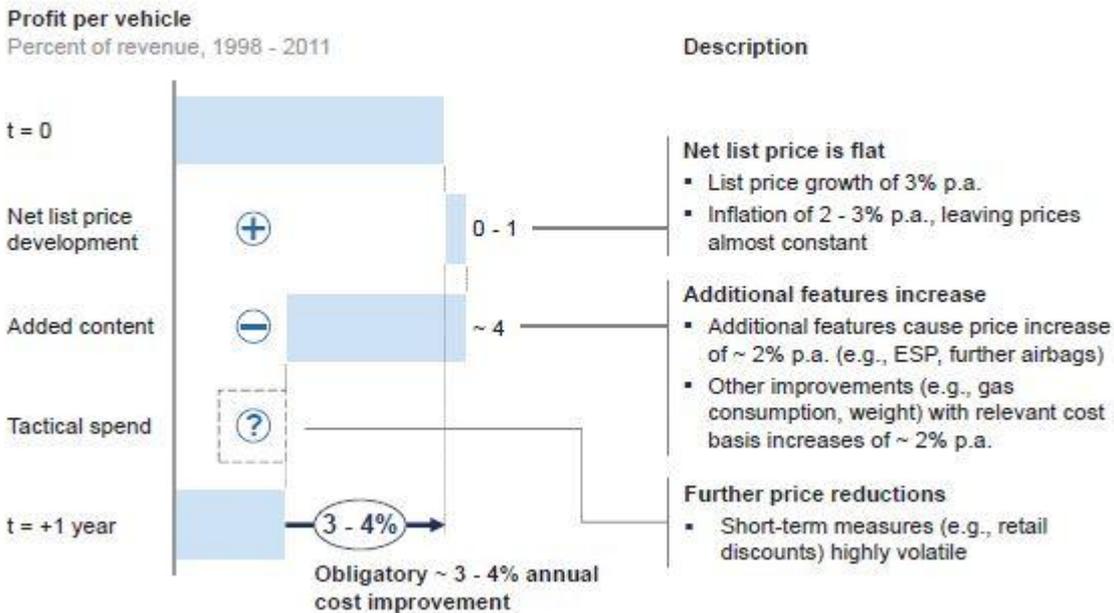


Fig 6

### 2. Rising complexity encourages more platforming

Well into the 1990s, major brands would build four or five different models off a single platform. But car buyers worldwide continue to be more and more demanding, seeking region-specific features, performance, and styling as well as an element of uniqueness even in mass market products as a way of differentiating and emphasizing individual taste and status. Most automakers respond to this demand with an increasing number of derivatives subject to markups compared with standard models. It is not uncommon to have 20 or even more such “derivatives,” as companies seek to profit from different market niches. In effect, derivatives share common non-consumer-facing product elements (e.g., common chassis underpinning, body structures, core components) in order to make differentiation of consumer-facing features profitable. In the entry and value segments, the pace of introduction of new derivatives will likely peak, and the number of new models will level off. Continuing to create even more derivatives will simply exert pressure on profitability (Exhibit 4). Just in the premium segment, there are some remaining market niches that offer opportunities. For non-premium players, the key to profit is to produce higher volumes on fewer platforms.

But running more derivatives per platform also increases complexity. To manage this complexity, control costs, prevent cannibalization, and ensure that differentiation is aligned

with consumer preference, OEMs need to develop new global platform strategies, including modular concepts. They would have to thoroughly analyze niches where derivatives still might create additional value. However, this would require more sophisticated research on customer preferences and diligent assessments of customer trade-offs and cannibalization effects. Moreover, OEMs need to balance global scale, complexity, and local or segment-specific customer demand. Specifically, they should consider ways to cooperate with other OEMs and how to enhance platform usage across segments, regions, and price levels.

### Profits based on derivatives are likely to stagnate in the medium term



Fig 7

### 3. Greening gets more expensive

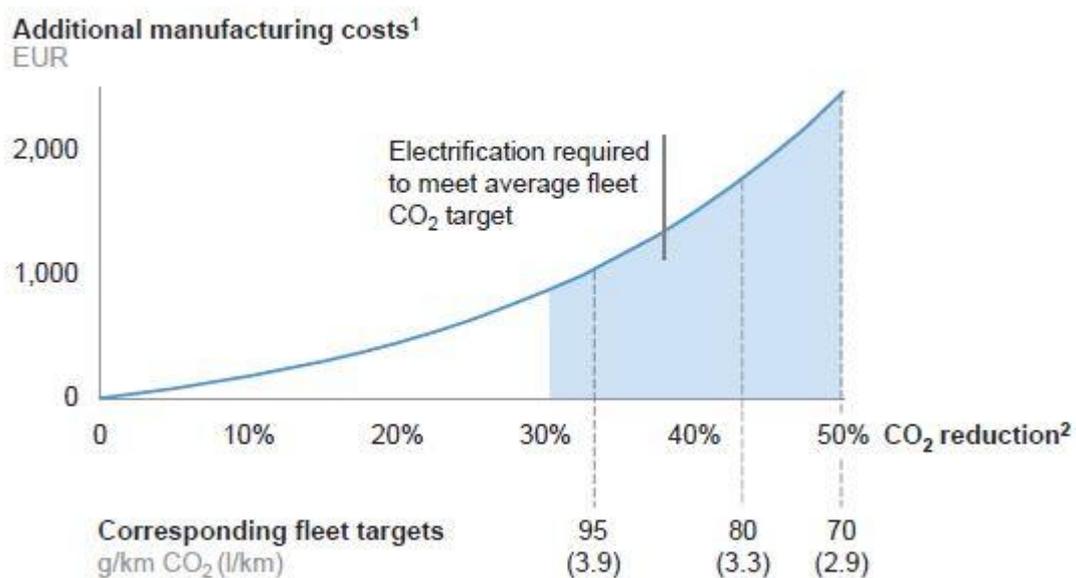
Carbon dioxide regulation is likely to continue to tighten, and not just in Europe. China, the US, and Japan have also enacted laws to reduce emissions. One immediate result will be higher costs. Because the easy things have already been done, the price of cutting future emissions is rising (Exhibit 5). In Europe, the 2020 target might be reached with the help of advanced conventional technologies, but to meet the overall fleet targets, more electrification could be necessary (especially for premium players). This will push OEMs to invest more in e-mobility, meaning electrical/hybrid powertrains, including batteries, as well as in lightweight and aerodynamic drag-reducing technologies. Ultimately, electric vehicles may be the answer, though the transition will not happen fast, or soon. In 2020, conventional

internal combustion engines (ICEs) will still account for more than 90 percent of cars. OEMs will have to continue developing more advanced ICEs, including cylinder deactivation or variable valve timing and lift. On the other hand, they need to invest in alternative powertrain technologies to meet future emissions targets – without knowing which kind will prevail. Managing these pressures will be a fact of OEM life to 2025 and beyond.

One way to lower investment outlays and to drive innovation is to create strategic alliances with other OEMs and preferred suppliers. OEMs could also experiment with alliances with car sharing companies as a way to push EVs into the market, and thus help customers get used to them. Finally, OEMs need to build up their capabilities to anticipate – or at least be prepared for – foreign regulations, especially regarding imports.

**Tougher emissions regulations will encourage OEMs to invest in e-mobility**

C-CLASS VEHICLES



1 Anticipated for 2020, average for gasoline and diesel internal combustion engines  
 2 Relative to 2010 baseline  
 SOURCE: ICCT; McKinsey

Fig 8

**4. The aftersales market in China becomes more important**

China is already the world’s largest automobile market, with 19 million vehicles sold in 2012. But new car sales growth is slowing, from 18 percent a year between 2006 and 2012 to a projected 6 percent a year between 2012 and 2020. That is still a lot of cars, but an even more promising, and less obvious, opportunity is the aftersales market, including spare parts,

service, used car sales, and financing, which serves as an integral component of brand building and sales funnel management. Aftersales automotive parts revenues on its own could grow from approximately EUR 20 billion in 2012 by 20 percent a year and reach nearly EUR 100 billion by 2020. A strong aftersales network could also enable OEMs to build brand loyalty. To capture this opportunity, OEMs need to enhance their dealer capabilities, as today the dealership is mainly focused on new car sales.

## **5. Growth continues to shift**

The automotive industry's economic center of gravity will continue to shift, as sales volumes and market share keep moving toward emerging markets. The global sales share of established markets will decline from 50 percent in 2012 to 40 percent in 2020; these will account for only about 25 percent of future volume growth. The premium segment will account for more than half of future profit growth. One major growth opportunity is in smaller vehicles (subcompacts, microcars, and superminis); these already account for more than 30 percent of global sales and could reach more than 30 million vehicles in 2020. More than 60 percent of this market is located in emerging economies, where sales are set to grow 5 to 6 percent a year until 2020 (Exhibit 6). The majority of this growth will be in urban areas, offering OEMs the opportunity to address a large share of growth with relatively few, focused footprint adjustments. Competition in this segment, however, will be intense, as many emerging market players are expanding. Success requires a low-cost business model, such as a limited number of body types based on one platform and a lean sales approach with a limited offer range due to despecification. In addition, OEMs would have to think about differentiating their brand perception.

## Small cars show big potential in emerging markets

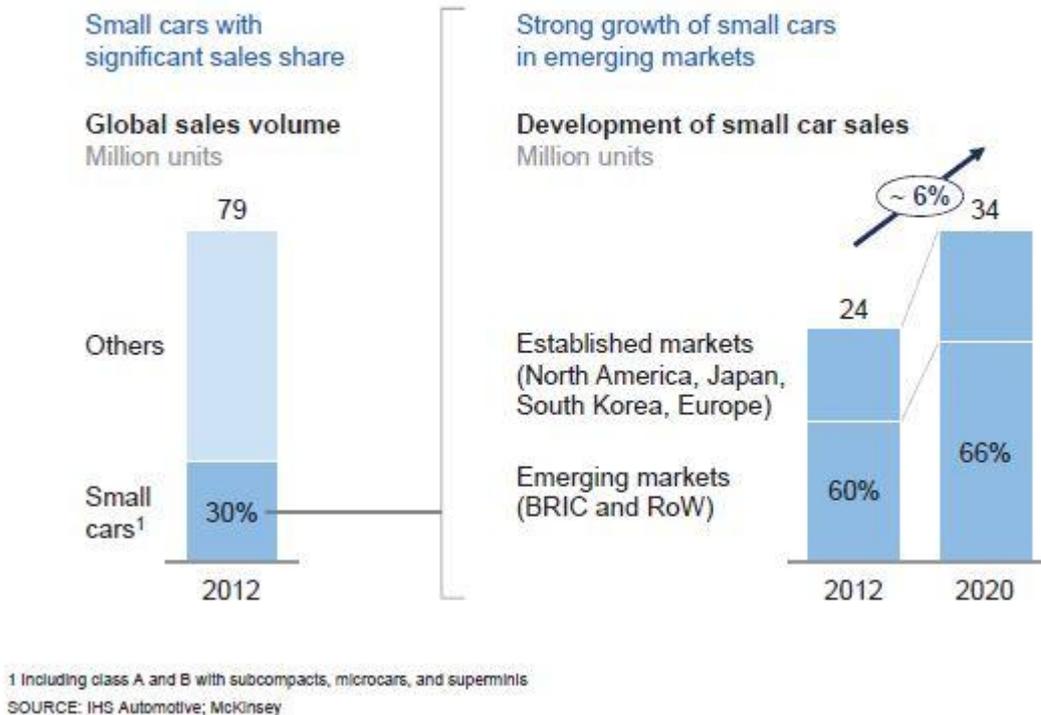


Fig 9

### 6. Connectivity becomes more important

Just as phones got smart, so will cars. They won't quite think, but they will respond and remind. Cars on the road are being equipped with danger-warning applications, traffic information services, and a host of infotainment features and increasingly active safety features as well. The number of networked cars will rise 30 percent a year for the next several years; by 2020, one in five cars will be connected to the Internet (Exhibit 7). These cars will be in the premium segment (approximately 50 percent) and increasingly in the value segment as well, where many of them will have network solutions by 2020 (compared to 3 percent in 2011). Delivering services through the car – Internet radio, smartphone capabilities, information/entertainment services, driver-assistance apps, tourism information, and the like – is a promising area for future profits and differentiation. So is the creation of new technical features for safe, comfortable, and eventually, autonomous driving. To deliver on this, OEMs will have to manage shorter product and service development cycles, such as software and other technology updates. They will also need to build relationships with affiliated firms that build apps tailored to the car. Given that car owners spend about 50 minutes a day in their vehicles, there is a real opportunity to monetize digital media revenues and generate

additional, highly profitable revenue streams. But again, the competition will be intense, particularly if new players from the non-automotive “digital arena” enter the market. Ultimately, end consumers will seek applications that make driving more convenient and a seamless element of their daily routines and lifestyles. This entire space is still in the early stages of development, both from a technology/service offerings perspective as well as from the perspective of the dominating players.

### Internet-connected cars are on the rise

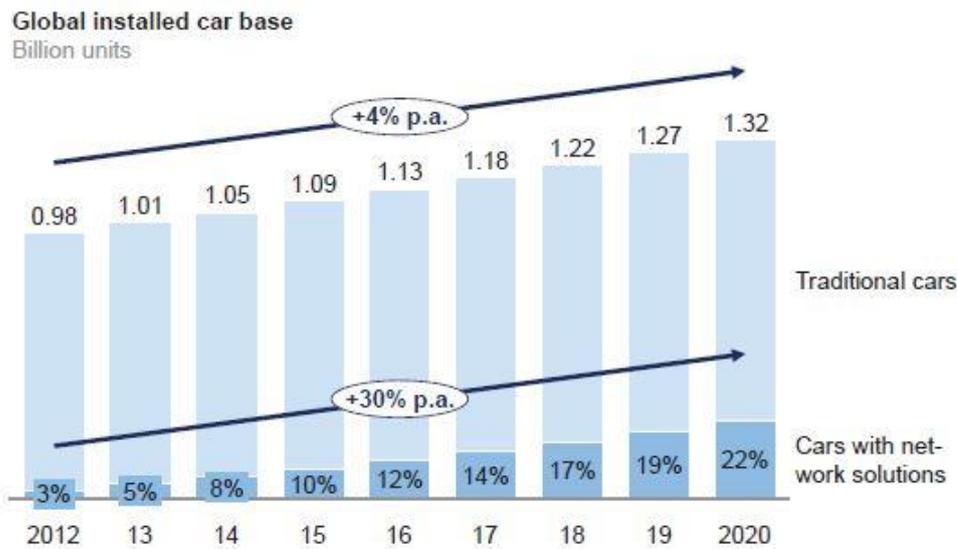


Fig 10

## 7. Retail of the future comes closer

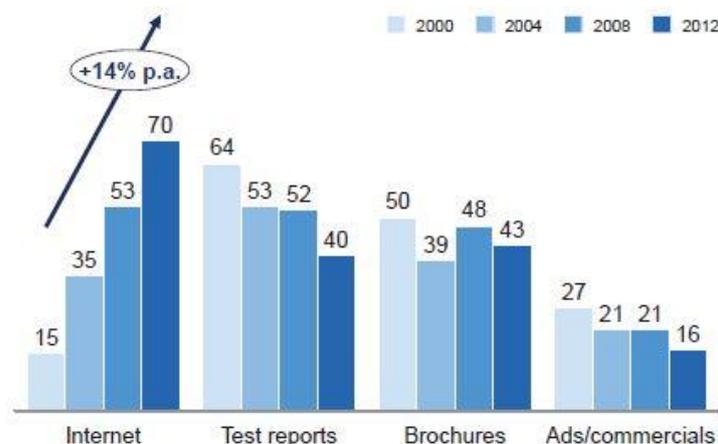
With a few clicks, potential car buyers can already access a tremendous amount of information, and the volume and breadth of the material available on the Internet will only increase. In 2012, 70 percent of buyers stated the Internet as a major source for information gathering, displacing brochures, ads, and test reports (Exhibit 8). Five years ago, customers visited dealers an average of five times before purchasing a car; now they enter the showroom well-informed, giving the dealer one chance to turn the browser into a buyer. Dealerships are still important in decision making and in the customer’s overall experiences but less so in the research and product comparison phases. This presents OEMs with contrasting challenges. On the one hand, they need to create a state-of-the-art Web presence that provides customers with a digitally supported purchasing experience based on, for example, comparison tools, car configurators, and other online tools. On the other hand, they

need to provide an engaging interaction and compelling experience across all touch points on the customer decision making journey and in the post-purchase experience.

The path to purchase and the post-purchase experience are comprised of multiple touch points and are two of the most innovation-ripe areas for a truly superior customer experience. Innovative retail concepts, such as brand experience centers that feature high-tech digital, personalized visualization tools or “pop up” stores that advertise a specific product to create buzz, could help. This development would require joint investment from dealers and OEMs and intense cooperation to create a seamless experience for the customer throughout the pure online and digitally supported offline channels. Another cost-efficient strategy would be to establish an online presence to foster direct sales. Half of car buyers say they would make the transaction online as long as they got a test drive opportunity or an equivalent experience. OEMs will need to determine the best combination of online and offline touch points to shape the customer’s decision making and experience along the purchase journey. The rewards are great for those that get it right.

**The Internet has become a significant influence on buyers’ purchasing decision**

Top influencing sources for new buyers’ purchasing decision in Germany  
Percent<sup>1</sup>



<sup>1</sup> Multiple answers possible

Fig 11

**8. Suppliers add more value**

OEMs will have to manage rising production volumes – up to 70 percent in Asia by 2020. That means building a local supplier base, designing an enhanced supply chain, and bolstering supplier capacities. This is particularly important because the imperative to improve green mobility means that suppliers will become more important in terms of how

much value they add, especially for the constantly improving ICE but also for the various electrified powertrain alternatives. On the one hand, conventional ICE-powered vehicles have to be optimized with the help of engine control systems, downsizing, and lightweight or automatic transmissions. On the other hand, there are the long-term possibilities of the various electric powertrain alternatives – and these have not been core competencies of most OEMs. They will need technological and logistical support to manage the long-term transition from ICEs to EVs or augmentation of ICE-based vehicles with electrified powertrain solutions, with increasing adoption to be expected beyond 2020, given tighter regulation requirements and continued technological progress. But OEMs could consider positioning themselves long-term in the areas of e-motor design and/or manufacturing, battery packaging, and integration. In addition, electronics and software will play a dominant role in vehicle innovation. Approximately 90 percent of automotive innovations in 2012 featured electronics and software, especially in active safety and infotainment options. Since those capabilities will be crucial, OEMs should consider solutions like developing “vertical partnerships” with their preferred suppliers. These would allow OEMs to cut R&D costs while also developing and implementing new features faster.

## **9. The OEM battle intensifies**

Europe is in a particularly difficult position because it is maintaining significant overcapacity, according to the European Automobile Manufacturers Association (ACEA).<sup>2</sup> Moreover, a number of lower-cost brands have recently entered the market, heightening competition further. European OEMs have announced capacity reductions of 750,000 vehicles by 2015. But with regard to how the market is likely to develop, that may not be enough. If OEMs in Europe do not revise their production footprint beyond the announced capacity adjustments, it could be five years before the industry gets back to its precrisis utilization rate and related profitability levels. Similar challenges apply to OEMs in Japan and South Korea, where capacity adjustments have already been initiated. Closing a plant poses severe challenges on the people side, particularly given Europe’s high and prolonged rates of unemployment. The recent history in North America, however, shows the possibilities of restructuring and its ultimate benefits. Though restructuring the industry was painful, sales and profits have rebounded. Capacity is running higher than before the crisis, and almost double that of 2009 (Exhibit 9). Therefore, OEMs in Europe ought to revise their production footprint beyond the announced capacity adjustments. China’s automotive sector is also suffering from significant

overcapacities with an average utilization rate of only about 60 percent in 2012. The top 17 OEM joint ventures outperform this level with an average utilization rate of roughly 70 percent, which is similar to Europe’s current level (selected OEMs even have fully utilized capacity). Generally, those Chinese overcapacities are somewhat offset by the ongoing growth of Chinese vehicle sales at 6 percent annually. This triggers even further production capacity expansion. Complicating the slowing Chinese economy and the risk of political constraints for production expansion of foreign OEMs, market volatilities and uncertainties are also on the rise. Thus, OEMs need to invest in precise market forecasts for their segments, and they need to manage production expansion with higher flexibility over the short and medium term to be able to respond to market shifts.

### Consolidation in the US may be a model for addressing overcapacity in Europe

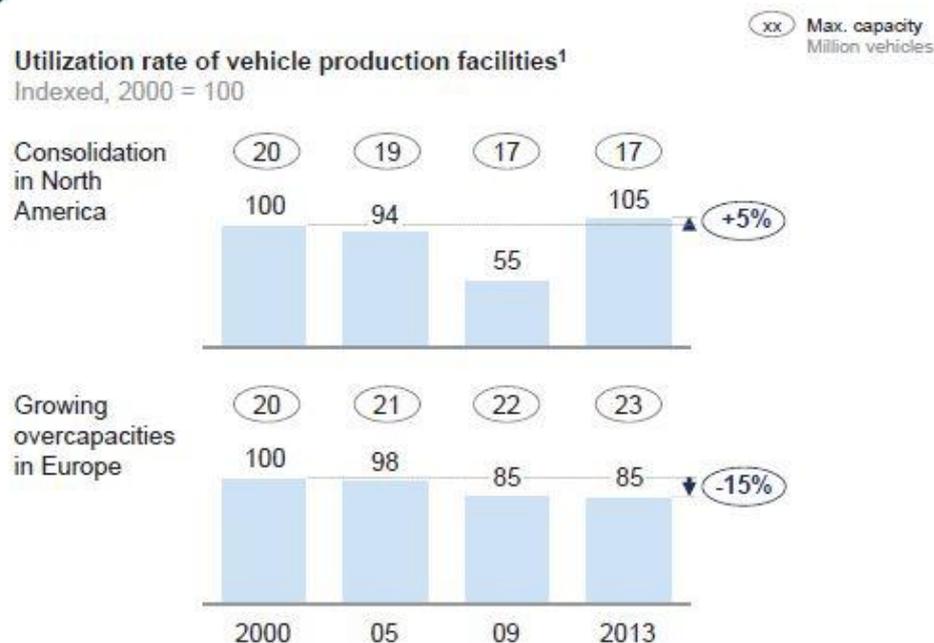


Fig 12

### What are the implications for different market segments?

Just as the implications of global developments differ by region, they are also a function of the specific automobile segment. Players will find that their strategies will have a lot to do with the types of cars they manufacture.

#### Premium segment

In recent years, premium players have responded to customer demands by creating more and more derivatives and expanding their portfolios, an approach that has delivered

both profits and growth. This will likely continue for the next few years. But after that, finding profitable market niches will be more difficult. Therefore, it will become more and more complicated for premium OEMs to differentiate themselves through derivatization. At the same time, creating such differentiation is vital to maintaining a premium perception. Inside the car, premium OEMs could differentiate themselves with the help of design elements, new features in infotainment, and innovations directed at safety and comfort. Among the possibilities for differentiation, intuitive feature design and usage holds significant value potential but is currently one of the least tapped innovation areas. Beyond the tangible elements of products and features, these OEMs should provide offerings that enhance the customer experience and build loyalty through, for example, brand experience centers and superior interactions with the customer across all major touch points along the decision making and experience journey. All of this will require more investment. Because prices, in real terms, have basically been flat for the last 15 years, and the costs associated with mandated content are going to rise, the amount of money available to invest in differentiation will be constrained. Given these limitations, managers at premium OEMs will want to consider the following questions:

- What are the next horizons of differentiating features and services, especially in the domain of consumer-intuitive solutions for active safety and infotainment?
- How can we differentiate our customer experience along the entire customer decision journey? How can we design and execute a consistently positive experience?
- How do we ensure that our unique features and services and our approach to customer experience are aligned with the brand perception we want to cultivate?
- How can we enhance “vertical” and “horizontal” partnerships with suppliers in order to share development costs, establish common platforms, and improve economies of scale?
- How can we find ways to pass on costs for CO2 reduction to customers?

### **Value segment**

The prospects for the value segment vary from region to region. In Europe, many markets are suffering economic trauma, and the industry has yet to restructure. Japan and South Korea are barely profitable. By contrast, North America and the emerging markets are seeing healthy profits; the latter are also experiencing sales increases of 5 to 6 percent a year. One trend to watch is that entry segment OEMs are beginning

to enter the value segment, and this will complicate and heighten competition. On the other hand, premium OEMs are reaching further toward price points of the upper end of the value segment and offering competitive products in that space. So, clear product positioning and competitive underlying cost are becoming more and more critical for OEM players in the value segment.

A global footprint (production, supply base, and product development) will be required to be globally competitive. It will not be possible for OEMs to compete against local players in the BRICs and RoW if they do not produce on site with the support of local supply bases and supply chains. Profits are too thin, and the added costs of labor and shipping too high. Therefore, the key challenge of how to manage this global presence at a competitive level arises. OEMs have to manage the complexity of a global production footprint combined with a global sourcing network. There is the need to balance global scale on the one side with the necessary local adaptations on the other. But global players will benefit from a diversified production as they can mitigate market volatilities and keep pace with developments in future key technologies.

Moreover, having a local presence offers the chance to venture into promising adjacencies, such as the Chinese aftersales market.

OEMs in the value segment that do not have a global presence will find it difficult to succeed. Addressing five key strategic questions will help them begin making the necessary moves:

- How can we rearrange product portfolios in our core markets to enter more profitable segments, such as cross-overs or SUVs?
- How can we expand by cooperating with other OEMs or local players?
- How do we react to the looming threat of entry segment players expanding into the value segment?
- How can value segment OEMs continue to create a differentiating customer experience across all touch points of purchase and post-purchase and create more consumer loyalty?
- Can OEMs in the value segment further differentiate or sharpen their brand/value proposition and translate this into economic benefit in an increasingly competitive market, or are there limits to brand differentiation?

## **Entry segment**

Apart from the Chinese market, it is the entry segment that offers the next set of growth opportunities. Emerging markets already account for 70 percent of entry segment sales, and these are growing 4.5 percent a year. The research indicates that global profits in this category will rise an estimated 3 percent a year, to a total of EUR 7 billion in 2020. These trends present a solid growth opportunity for current players. They also could be an incentive for value players to enter the segment and gain additional volume. While this is a demanding idea from an operational point of view, given rising competition and emerging Chinese players, there is also a strategic challenge. As market dynamics indicate that entry segment OEMs are emerging into the value segment, and more and more drivers show a growing affinity for the entry segment, there arise strategic questions for OEMs to address:

- How can we tap into new customer groups (in many cases, first-time car buyers) and start building brand loyalty?
- How can we implement the low-cost approach of the entry segment, e.g., offshore development facilities or a lean product portfolio, addressing the mainstream needs of consumers in this segment?
- What supporting customer experience does the entry segment require? How can they be cost efficient and still appeal to the customer?
- What is the appropriate brand value proposition and positioning? Do we need different brands or sub-brands to sharpen the offering in the entry segment and differentiate it from other offerings in the value segment?
- How might we translate cost efficiencies from the entry to the value segment?

Beyond these major trends and key strategic questions, interesting areas of exploration for the future will doubtlessly emerge. For example, automakers will need to define their market approach to new alternative powertrain technologies, i.e., determining their statuses as either first movers or followers. They will also have the opportunity to explore the development of their platforming and modular systems to cover an extended range of price and vehicle segments across global regions. Finally, shaping the entrance of a budget car segment with a low-cost approach that avoids brand dilution is another near-horizon opportunity area for some OEMs.

Overall, evidence indicates that future opportunities will outweigh the challenges. However, those developments will significantly drive changes in the industry over the next decade. OEMs that understand and anticipate those future challenges and opportunities and address them proactively and early will be better positioned to succeed in this complex industry.

## Chapter-6

### List of most successful component manufacturers in USA

Based on market capitalization

COMPANY	PRODUCT MADE (Main)	VALUES THEY WORK ON
ZF TRW Automotive holdings corporation	Active and passive safety systems	<ol style="list-style-type: none"> <li>1. Balanced market penetration</li> <li>2. Innovation and cost leadership</li> <li>3. Diversified product portfolio</li> <li>4. Financial Independence</li> <li>5. Globally attractive employer</li> </ol>
Borgwarner Inc	Powertrain applications	<ol style="list-style-type: none"> <li>1. Respect for each other</li> <li>2. Power of collaborations</li> <li>3. Passion for Excellence</li> <li>4. Personal Integrity</li> <li>5. Responsibilities to our communities</li> </ol>
Bridgestone Americas	Tire	<ol style="list-style-type: none"> <li>1. Integrity and teamwork</li> <li>2. Creative pioneering</li> <li>3. Decision making based on verified on-site observations</li> <li>4. Decisive action after thorough planning</li> </ol>
Cummins Inc	Diesel Engines	<ol style="list-style-type: none"> <li>1. Integrity</li> <li>2. Innovation</li> <li>3. Delivering superior results</li> <li>4. Corporate responsibility</li> <li>5. Diversity</li> <li>6. Global Involvement</li> </ol>
Delphi Automotive PLC	Automotive parts manufacturing	<ol style="list-style-type: none"> <li>1. Diversity</li> <li>2. Respect</li> <li>3. Integrity</li> <li>4. Value</li> <li>5. Excellence</li> </ol>
Exide Technologies	Batteries	<ol style="list-style-type: none"> <li>1. Integrity</li> <li>2. Respect and teamwork</li> <li>3. Innovation</li> <li>4. Continuous learning</li> <li>5. Pride in excellence</li> </ol>
Federal mogul Holdings Corporation	Powertrain components	<ol style="list-style-type: none"> <li>1. Innovation and diversification</li> <li>2. Quality</li> <li>3. Trust</li> <li>4. Creative solutions</li> </ol>
Johnson controls Inc	Automotive safety and interiors	<ol style="list-style-type: none"> <li>1. Integrity</li> <li>2. Innovation</li> <li>3. Customer satisfaction</li> <li>4. Sustainability</li> <li>5. Employee Engagement</li> </ol>

Remy International Inc	Alternators, Starters and Hybrid motors	<ol style="list-style-type: none"> <li>1. Innovation</li> <li>2. Technology</li> <li>3. Service</li> <li>4. Training</li> </ol>
Goodyear tire and rubber company	Tire	<ol style="list-style-type: none"> <li>1. Delivering the highest quality in all that we do</li> <li>2. Acting with honesty, integrity and respect</li> <li>3. Encouraging wellness and safety, both on the job and away from work</li> <li>4. Caring for our environment and communities</li> <li>5. Supporting a team-based culture of continuous learning</li> <li>6. Discussing problems openly and solving them as a team</li> </ol>

## Chapter-7

### List of most successful component manufacturers in Europe

Based on market capitalization

COMPANY	PRODUCT MADE (Main)	VALUES THEY WORK ON
Borgers AG	Textiles in automotive	<ol style="list-style-type: none"> <li>1. Satisfaction of our customers</li> <li>2. Experience, competence and top quality</li> <li>3. Absolute reliability, pronounced service orientation and highest possible flexibility</li> <li>4. Innovative capacity and willingness to continue improving</li> <li>5. Good quality of training</li> <li>6. Contribution to environment</li> </ol>
Bosch (Robert Bosch GmbH)	Mobility solution	<ol style="list-style-type: none"> <li>1. Future and result focus</li> <li>2. Responsibility and sustainability</li> <li>3. Initiative and determination</li> <li>4. Openness and trust</li> <li>5. Fairness</li> <li>6. Reliability, credibility and legality</li> <li>7. Diversity</li> </ol>
Continental AG	Tires and Brakes	<ol style="list-style-type: none"> <li>1. Trust</li> <li>2. Passion to win</li> <li>3. Freedom to act</li> <li>4. For one another</li> </ol>
Continental Emitec GmbH	Catalytic convertor	<ol style="list-style-type: none"> <li>1. Trust</li> <li>2. Passion to win</li> <li>3. Freedom to act</li> <li>4. For one another</li> </ol>
Deutz AG	Diesel powered engines	<ol style="list-style-type: none"> <li>1. Innovations</li> <li>2. Quality</li> <li>3. Success</li> <li>4. Trust</li> <li>5. Responsibility</li> </ol>
Draexlmaier group	Wiring harness systems, interior components and electrical components	<ol style="list-style-type: none"> <li>1. Innovative minds</li> <li>2. Future-oriented technologies</li> <li>3. We create character</li> </ol>
Freudenberg & CO.KG	Rubber and plastic products	<ol style="list-style-type: none"> <li>1. Innovating together</li> <li>2. A leading technology group</li> <li>3. Strong company values</li> <li>4. Excellence</li> </ol>

		<ul style="list-style-type: none"> <li>5. Responsibility for society</li> <li>6. Diverse teams</li> </ul>
Schaeffler AG	Precision products for engines, suspension and chassis	<ul style="list-style-type: none"> <li>1. Spirit of innovation</li> <li>2. Focus on the future</li> <li>3. Mobility for tomorrow</li> <li>4. We move the markets</li> <li>5. Further thinking, lateral thinking and rethinking to stay ahead</li> <li>6. Trend setting and successful</li> <li>7. Being not just good but excellent</li> </ul>
Mahle GmbH	Engine Components	<ul style="list-style-type: none"> <li>1. Future and result focus</li> <li>2. Responsibility and sustainability</li> <li>3. Initiative and determination</li> <li>4. Openness and trust</li> </ul>

## Chapter-8

### AUTOMOTIVE INDUSTRY IN INDIA

#### Automobile Industry in India

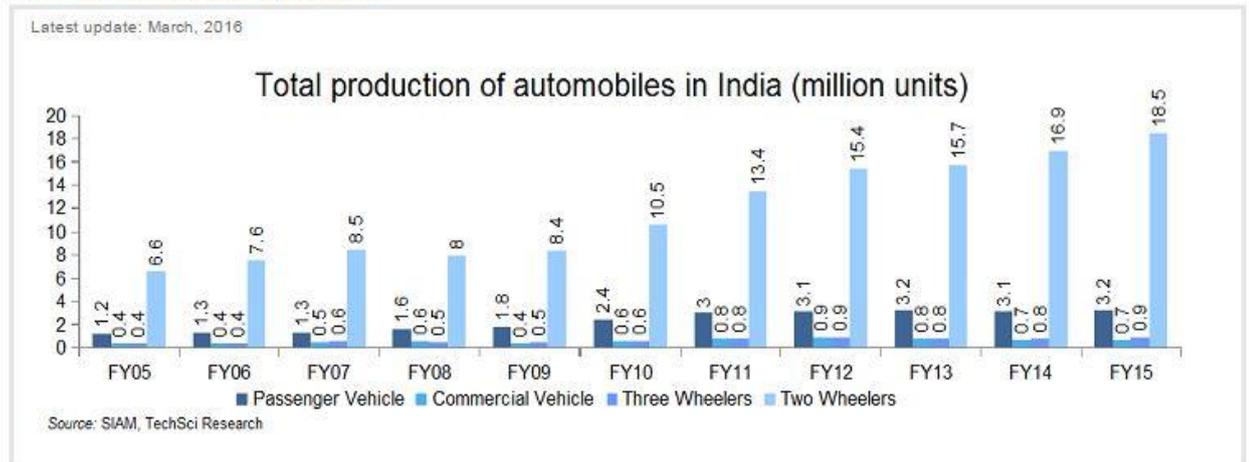


Fig 13

The Indian auto industry is one of the largest in the world. The industry accounts for 7.1 per cent of the country's Gross Domestic Product (GDP). As of FY 2014-15, around 31 per cent of small cars sold globally are manufactured in India. The Two Wheelers segment with 81 per cent market share is the leader of the Indian Automobile market owing to a growing middle class and a young population. Moreover, the growing interest of the companies in exploring the rural markets further aided the growth of the sector. The overall Passenger Vehicle (PV) segment has 13 per cent market share.

India is also a prominent auto exporter and has strong export growth expectations for the near future. In April-January 2016, exports of Commercial Vehicles registered a growth of 18.36 per cent over April-January 2015. In addition, several initiatives by the Government of India and the major automobile players in the Indian market are expected to make India a leader in the Two Wheeler (2W) and Four Wheeler (4W) market in the world by 2020.

#### Market Size

The auto industry produced a total 19.84 million vehicles in April-January 2016, including passenger vehicles, commercial vehicles, three wheelers and two wheelers, as against 19.64 million in April-January 2015. Domestic sales of Passenger Vehicles grew by 8.13 per cent in April-January 2016 over the same period last year. Within the Passenger Vehicles, Passenger Cars rose by 10.18 per cent, during April-January 2016 over April-January 2015. The domestic sales of Commercial Vehicles increased by 9.43 per cent in April-January 2016 over the same period last year. Sales of Medium & Heavy Commercial Vehicles (M&HCVs) increased at 30.19 per cent.

### **Investments**

In order to keep up with the growing demand, several auto makers have started investing heavily in various segments of the industry during the last few months. The industry has attracted Foreign Direct Investment (FDI) worth US\$ 14.32 billion during the period April 2000 to December 2015, according to data released by Department of Industrial Policy and Promotion (DIPP). Some of the major investments and developments in the automobile sector in India are as follows:

- Japanese two-wheeler manufacturer Honda Motorcycle and Scooter India (HMSI) has opened its fourth and world's largest scooter plant in Gujarat, set up to initially produce 600,000 scooters per annum to be scaled up to 1.2 million scooters per annum.
- American car maker Ford has unveiled its iconic Ford Mustang in India and will make its debut in second quarter of FY2016 within the price band of Rs 45 lakh (US\$ 66,146) and Rs 50 lakh (US\$ 73,496) in the Indian market.
- Nissan Motor Co. Ltd is in discussion with Government of India to bring electric and hybrid technologies to India as the government plans to reduce air pollution caused by vehicles.
- Global auto major Ford plans to manufacture in India two families of engines by 2017, a 2.2 litre diesel engine codenamed Panther, and a 1.2 litre petrol engine codenamed Dragon, which are expected to power 270,000 Ford vehicles globally.
- The world's largest air bag suppliers Autoliv Inc, Takata Corp, TRW Automotive Inc and Toyoda Gosei Co are setting up plants and increasing capacity in India.

- General Motors plans to invest US\$ 1 billion in India by 2020, mainly to increase the capacity at the Talegaon plant in Maharashtra from 130,000 units a year to 220,000 by 2025.
- US-based car maker Chrysler has planned to invest Rs 3,500 crore (US\$ 513.5 million) in Maharashtra, to manufacture Jeep Grand Cherokee model.
- Mercedes Benz has decided to manufacture the GLA entry SUV in India. The company has doubled its India assembly capacity to 20,000 units per annum.
- Germany-based luxury car maker Bayerische Motoren Werke AG's (BMW) local unit has announced to procure components from seven India-based auto parts makers.
- Mahindra Two Wheelers Limited (MTWL) acquired 51 per cent shares in France-based Peugeot Motorcycles (PMTC).

### **Government Initiatives**

The Government of India encourages foreign investment in the automobile sector and allows 100 per cent FDI under the automatic route. Some of the major initiatives taken by the Government of India are:

- Mr Nitin Gadkari, Minister of Road Transport, Highways & Shipping has announced plans to set up a separate independent Department for Transport,
  - comprising of experts from the automobile sector to resolve issues such as those related to fuel technology, motor body specifications and fuel emissions, apart from exports.
- Government of India aims to make automobiles manufacturing the main driver of 'Make in India' initiative, as it expects passenger vehicles market to triple to 9.4 million units by 2026, as highlighted in the Auto Mission Plan (AMP) 2016-26.
- In the Union budget of 2015-16, the Government has announced to provide credit of Rs 850,000 crore (US\$ 124.71 billion) to farmers, which is expected to boost the tractors segment sales.
- The Government plans to promote eco-friendly cars in the country i.e. CNG based vehicle, hybrid vehicle, and electric vehicle and also made mandatory of 5 per cent ethanol blending in petrol.
- The government has formulated a Scheme for Faster Adoption and Manufacturing of Electric and Hybrid Vehicles in India, under the National Electric Mobility Mission

2020 to encourage the progressive induction of reliable, affordable and efficient electric and hybrid vehicles in the country.

- The Automobile Mission Plan (AMP) for the period 2006–2016, designed by the government is aimed at accelerating and sustaining growth in this sector. Also, the well-established Regulatory Framework under the Ministry of Shipping, Road Transport and Highways, plays a part in providing a boost to this sector.

### **Road Ahead**

India's automotive industry is one of the most competitive in the world. It does not cover 100 per cent of technology or components required to make a car but it is giving a good 97 per cent, as highlighted by Mr Vicent Cobee, Corporate Vice-President, Nissan Motor's Datsun. Leading auto maker Maruti Suzuki expects Indian passenger car market to reach four million units by 2020, up from 1.97 million units in 2014-15.

The Indian automotive sector has the potential to generate up to US\$ 300 billion in annual revenue by 2026, create 65 million additional jobs and contribute over 12 per cent to India's Gross Domestic Product, as per the Automotive Mission Plan 2016-26 prepared jointly by the Society of Indian Automobile Manufacturers (SIAM) and government.

### **An interesting piece to read**

Indian Auto Trends to Watch Out For in 2016

We are reading about these trends because we are trying to understand the present requirement of the aware customer.

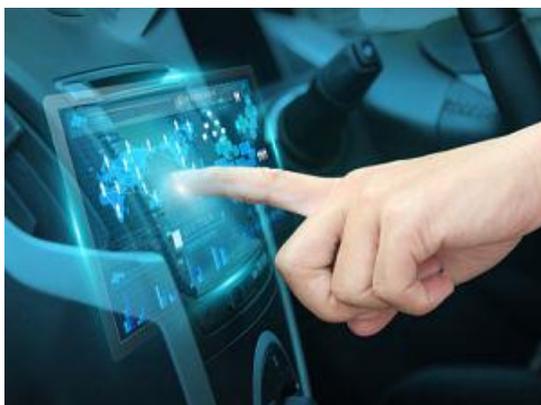


Fig 14

In the Indian market scenario, consumers who drive medium or low cost vehicles are interested to have latest features in their vehicles but they are very price sensitive. Economic growth, government policies, rising interest rates and fuel costs are critical elements which a buyer tends to consider before making a purchase decision. Thus price sensitive customers and suppliers must find innovative and economical ways of producing systems at much lower costs for the Indian market. Most of these are macro-economic in nature and automotive sector has to swim through these.

An area that we see growing is Telematics & Connectivity. Since more App solutions are working closely with Taxi services, and safety apps endorsed by the government itself is coming into the mainstream, people are becoming aware of the various possibilities of using connectivity technology beyond just navigation and vehicle tracking. We are also involved in integration of connectivity features like Wi-Fi, Bluetooth, DLNA and MirrorLink which enables user to have access to content on the move. Another area that we foresee growth would be investments in Hybrids, especially with the Government backing the cause by investing in R&D to bring down the high emissions in the country.

### **What 2016 Holds in Store for OEMs**

15

Sri Karumbati, CIO at Stumpp Schuele & Somappa Springs – The country’s largest automotive spring manufacturer, believes although 2016 will not be a “watershed” year for component manufacturers, there will be a lot of key developments, including cloud migration; automation; and mobility. A notable trend the industry has witnessed is that of car recalls. The concept of a car has changed from being merely a wagon for

transportation into a complex fusion of various technologies.

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We foresee customers tightly integrating with their suppliers. One such example is Auto DX, a collaborative initiative by SIAM and ACMA.



- Sri Karumbati, CIO,  
Stumpp Schuele & Somappa Springs

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Fig 15

Starting from the lowest levels, implementing standards for safety and thorough validation of the product at every stage of production is a sure shot way to tackle this. Tata Elxsi has been providing test engineering & system validation solutions for OEMs & Tier1 suppliers across functional domains. Nevertheless at Tata Elxsi Automotive Center of Excellence, we have invested in test infrastructure and also have setup up sophisticated vehicle labs and Hardware-In-Loop Labs for customers which have proven quite effective in their product development process. **Safety regulations** coming up in India. European regulations are being followed. So, any vehicle being launched from 2017 will have to be complied. In addition to this, more and more customers are looking at safety as a non-negotiable parameter – Part of the reason why Volvo cars are gaining popularity in the country.

With tougher competition in the Indian market, consumers are spoiled for choice, and therefore expecting newer models more frequently. This has brought about a push for ‘top-hat’ programs. ‘Top-hat’ programs refer to proven car models worldwide, which have undergone minimal changes before being launched in India. However, this calls for lot of re-engineering to meet Indian manufacturing capability. ‘Top-hat’ programs are not restricted to India alone, but they’re making their way to other emerging economies as well.



OEMs can no longer afford to design or engineer a car elsewhere and launch it in India. They'll lose out on the price factor.

- Vijay Machigad, Managing Director,  
RLE India



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Fig 16

Another major success-driver that comes as no surprise is the cost – Cost still is the *numero uno* factor for cars to be successful in India. An apt example for this is the Renault Kwid. The company was able to keep prices below that of its competitors by localizing production to an impressive 98 percent, thus giving old-timers like Maruti Suzuki and Hyundai a run for their money. “OEMs can no longer afford to design or engineer a car elsewhere and launch it in India. They’ll lose out on the price factor,” believes Machigad. Most of the recalls we’ve witnessed in the recent past were due to manufacturers not being able to comply with emission regulations. So, how do manufacturers react to contingencies of this sort? Machigad believes that recalls are mostly reactive in nature. If you look at cost incurred by OEMs, warranty and recall costs are quite significant, and are eaten away from their bottom line. OEMs are now taking a more holistic approach, by using data analytics, to minimize the impact on the bottom line.

## Chapter-9

### List of most successful component manufacturers in India

Based on market capitalization

COMPANY	PRODUCT MADE (Main)	VALUES THEY WORK ON
Motherson group	Electrical distribution systems	<ol style="list-style-type: none"> <li>1. One Team - respect, trust and an attitude to help each other in all circumstance.</li> <li>2. One Goal - to continuously strive to exceed the expectations of customers, employees, suppliers and shareholders by offering the highest value of products, services and creative solutions.</li> <li>3. One Approach - to achieve excellence in all areas, act with integrity and have a clear focus on customer delight and employee satisfaction.</li> </ol>
Amara Raja Batteries	Batteries	<ol style="list-style-type: none"> <li>1. Introducing latest generation technologies.</li> <li>2. Adapt these technologies to suit the operating environment.</li> <li>3. Develop and manufacture globally competitive, customer-focused products of world class quality.</li> <li>4. Responsibly introduce these products into relevant markets.</li> <li>5. Provide world class customer support.</li> </ol>
Sundaram Clayton	Aluminium die casting	<ol style="list-style-type: none"> <li>1. Trust</li> <li>2. Value</li> <li>3. Exactness</li> <li>4. Passion for customers</li> </ol>
Minda Corporation	Automotive security	<ol style="list-style-type: none"> <li>1. Commitment to stake holders</li> </ol>

	systems	<ol style="list-style-type: none"> <li>2. Passion for Excellence</li> <li>3. Open communication</li> <li>4. Integrity And fairness</li> <li>5. Nurture talent, competency and willingness</li> <li>6. Respect and humility</li> <li>7. Innovation and improvement orientation</li> <li>8. Partnering</li> <li>9. Responsibility</li> <li>10. Cross cultural diversity</li> </ol>
Suprajit group	Electrical control cables	<ol style="list-style-type: none"> <li>1. Customer satisfaction is our only goal in all aspects</li> </ol>
Gabriel India	Ride control products	<ol style="list-style-type: none"> <li>1. Customer first</li> <li>2. Waste elimination</li> <li>3. Respect for the individual</li> </ol>
Rane Holdings	Steering, Brake components and engine valves	<ol style="list-style-type: none"> <li>1. Provide superior products and services to our customers and maintain market leadership</li> <li>2. Evolve as an institution that serves the best interests of all stakeholders</li> <li>3. Pursue excellence through total quality management</li> <li>4. Ensure the highest standards of ethics and integrity in all our actions</li> </ol>
Sharda Motors	Exhaust systems	<ol style="list-style-type: none"> <li>1. To be admired by our customers</li> <li>2. To be loved by our shareholders</li> <li>3. To be preferred employer</li> <li>4. To be appreciated by community and society</li> <li>5. To be a good corporate citizen</li> </ol>

Wheels India	Wheels (Rims)	<ol style="list-style-type: none"> <li>1. To be a customer obsessed company</li> <li>2. No.1 wheel brand in India</li> <li>3. Motivated and committed team for excellence in performance</li> <li>4. Be a green company</li> <li>5. Deliver enhanced values to all stakeholders</li> <li>6. Enhance global presence through acquisition/ JV/ strategic partnership</li> </ol>
Ceat	Tire manufacturer	<ol style="list-style-type: none"> <li>1. To be at the leadership position</li> <li>2. To withstand all the challenges</li> <li>3. To aim for survival</li> <li>4. Capability building</li> <li>5. Growth and expansion</li> </ol>

## Chapter-10

### RELATIONSHIP ENABLERS (Based on ACMA research)

ACMA has analyzed the key parameters that play a critical role in the working relationship between suppliers and OEMs. It presents suppliers the opportunity to distinguish their performance from other suppliers. While Quality, cost, delivery remain critical pre-requisites that define the relationship between OEM and their tier-1 suppliers, the following key enablers help define a stronger business relationship between them.

1. Engagement: OEM's in India are increasingly willing to engage more with their local supply base as they feel there is a tremendous scope of improvement of operational performance. Working together with OEM's to improve
  - Continuous improvements
  - Agility/flexibility/adaptability
  - Emerging customer expectations
  - Cost reduction
  - Development of Tier-2 and 3 supplier base
  - Supply risk management and disruption avoidance
  - Innovation/intellectual property
  
2. Consolidation: It will continue to alter the competitive landscape in the automotive component supplier industry. Large Tier-1's is likely to become responsible for growing number of Tier-2 partners. This is likely to result in opportunities for JV/M&A activity. Key drivers for consolidation are:
  - Better supplier management
  - Improvement in cost saving and profitability potential
  - Ability to better manage continuous improvement initiatives
  
3. Flexibility/Adaptability: The MNC's and Home grown suppliers think differently for this point. MNC's are more demanding and less flexible. Transforming the organization by bringing in a stronger process orientation is likely to help in business continuity over the long-run for Indian home grown companies. Usually flexibility/adaptability are considered to be very unprofessional. Strict schedules and timings need to be followed to achieve recognition and work completion.
  
4. Alignment: A balanced approach is essential to bridge gap in alignment between Teir-1 and OEM. Most common disagreement between OEMs and Tier-1 suppliers are:
  - Payment of tooling

- Payment of R&D activities
  - Price
  - Production volumes
  - Warranty/ Product liability
  - Payment for system/ module/ sub-assembly management to tier-2
  - Intellectual property rights
  - Distribution of genuine parts in the aftermarket by your company
  - Business continuity
  - Logistics and communications
5. Trust: Business partners must be clear on their reasons for wanting to build trust, assess risks and the intention and willingness to take risks, and receive feedback on their trustworthiness. To build trust in a B2B scenario, it is important to manage the dynamics both within and across partner organizations. Also the structure in place between the two organizations can foster increased trust. Channels that help build trust are:
- Communication
  - Feedback
  - Measurement
  - Redressal
  - Organization structure
  - Escalation mechanism
  - Review mechanism
  - Forums
  - Account manager
  - And primary drivers: Cost-quality-delivery
6. Organizational/ Manpower Issues: Increased interactions with various OEM departments may necessitate greater co-ordination (internally) as well as availability of capable manpower at various levels. In India, as suppliers are moving up the value chain, increasingly they are getting into component design. Though marketing still continues to be the front face of an organization, there are greater interactions between OEM and supplier teams from design and quality departments. Quality and design teams at OEMs now exercise far greater influence in supplier selection and evaluation. And finally manpower planning and execution of HR policies is increasingly being used to assess supplier's aspirations and management outlook and OEMs consider it to be a factor that helps them understand the quality they can expect from the component manufacturer.
7. Global Alliance/Footprint: At present, supplier selection is not based on global alliance/footprint. However, it is likely to increase in importance as Indian OEMs design vehicles for the global market. The acquisition of global companies are also helping Indian OEMs to leverage their contacts in international markets where they intend to source parts or set up assembly units.

8. Innovation/Technology & Design: Cars are increasingly being loaded with features- What was once available in luxury segment is now available in mass volume segment. Airbags, ABS, Electronic systems are high on the desire list in the mass volume segment. Technology thus is crucial for OEMs when selecting future suppliers, especially in Electronics and Infotainment area. Cost, however, continues to play a decisive role in the pursuit of technology.
  
9. End-customer know-how: It is the trump card. Knowledge about the end-customer helps gain credibility and respect and connect better with your clientele. Manufacturers keen to rely on suppliers who know more about their end customers and can bring in their knowledge to add value in the proposed product plans and businesses. Currently this is a big gap seen in India more so for local home grown companies than for MNCs.

## **Chapter-11**

### **RESULT**

With the recent developments in the global automotive industry, new challenges have emerged. There is a need to think out of the box for Indian component manufacturers to maintain competitiveness in an inflationary environment and compete with the best keeping market trend in consideration. According to the present scenario, the final customer has started looking for values (a mix of aesthetics and performance) before buying or looking for a vehicle. This project will aim to understand what is that the customer is looking at in India and Europe is. As we have this notion revolving that the technologies that exist in the west penetrates India in the longer run. Hence the international markets and customer requirements are studied to understand the next trend in the automotive segment in India. This approach will help Indian component manufacturers gain a futuristic view of how the markets evolve in the coming years and what needs to be presented, an independent component/trend, that helps them capture the attention of the final potential customer in the passenger vehicle segment and niche markets. With this understanding, we can predict how to pitch this product to the customer. The project hence aims to find the trend that will prevail in automotive industry in India and how a component manufacturer capture more and more market share in this regard.

Hence this report gives an insight to how the industry is changing and what are the measures that have to be taken by an automobile component manufacturer to survive and then to lead in this fast paced world. An in-depth study of factors that effect the present day automobile industry are analyzed and on the basis of the results factors are determined that help us completely control the B2B environment.

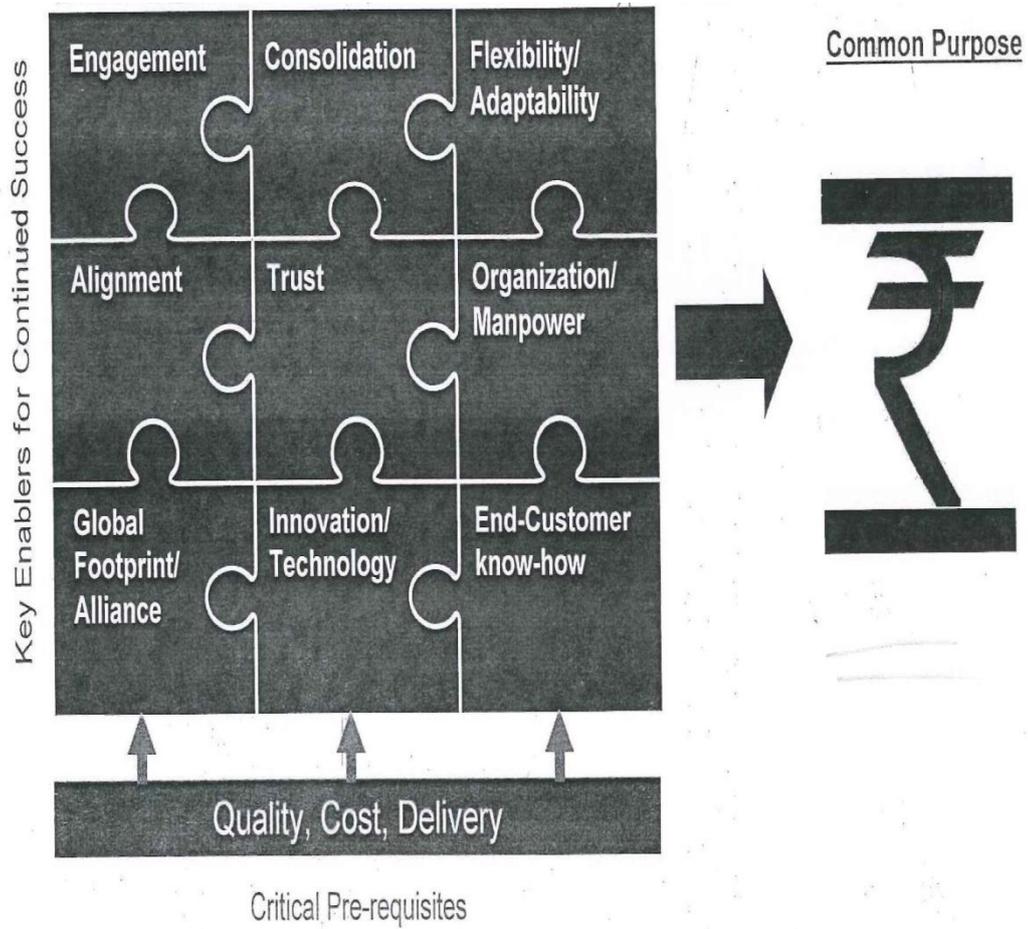


Figure 17

This figure explains a good deal of my learning. The factors mentioned in the tables in the tier 1 and OEM relationships are in detail related to these factors given in the chart. These relationship enablers are the most important for a B2B environment and should be incorporated by component manufacturers for better and more valuable relations.

## **Chapter-12**

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