

Automotive industry transformation - a transfer pricing perspective

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Setting the context

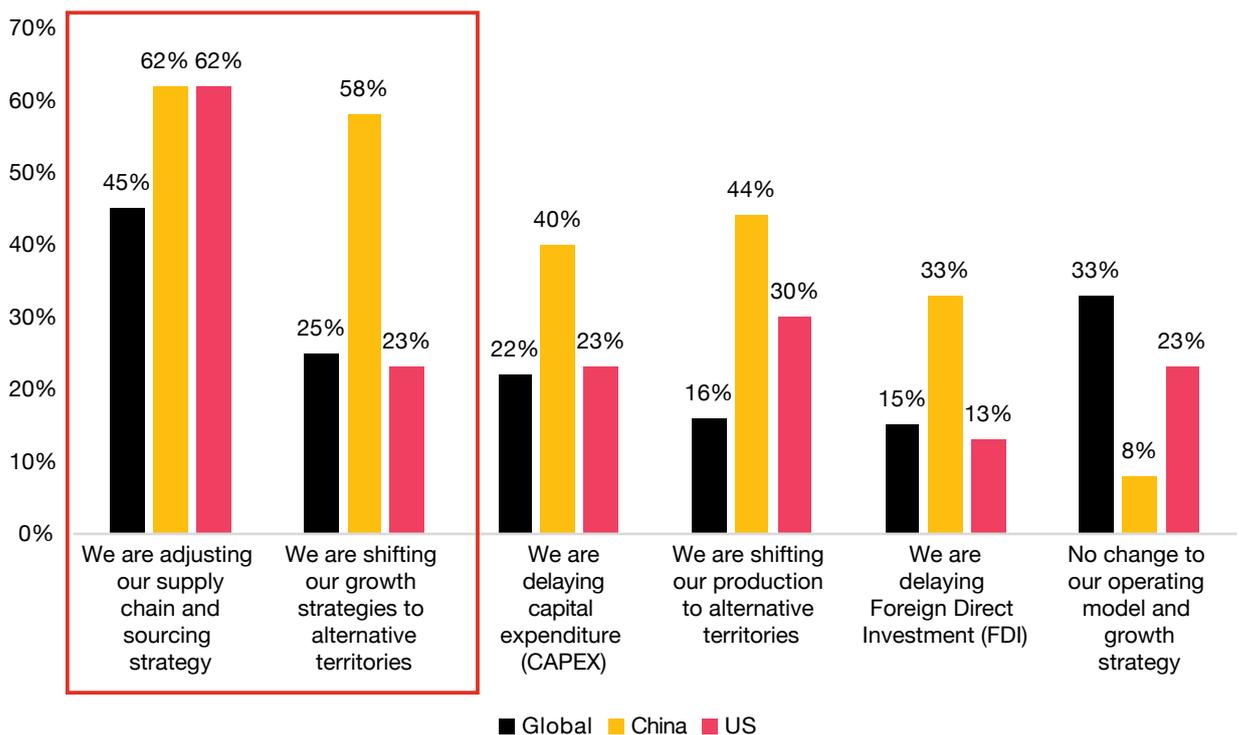
Change is an inevitable part of business. Organisations are constantly identifying and boldly adopting innovative strategies to tackle business challenges, leading to collaboration, disruption and hence transformation.

The impact of global megatrends¹ on business have resulted in a close review of supply chain and business value drivers in board room discussions. Given the ever-changing business environments, PwC conducted a survey in 2018 to understand the top priorities of the C-suite, titled PwC's 21st CEO Survey². Two excerpts

from the survey are provided below to demonstrate the radical shift in the thought process in tackling some of these issues. The expected developments in the macro-economic front in various regions and the response to such developments have led to the recalibration of financial decisions and tax positions.

At this juncture, it is pertinent to note that this paper has been written from the perspective of emerging markets like India.

Figure 1: Strategies being adopted by CEOs to adapt to trade conflicts



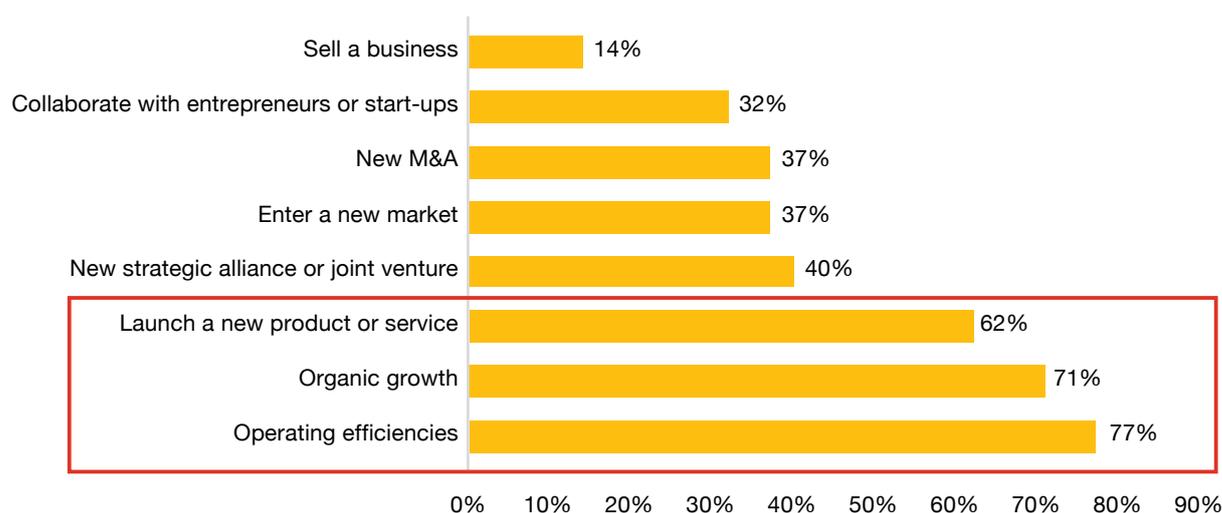
CEOs have acknowledged supply chain alterations or shifting growth strategies to alternative territories as a means to deal with trade conflicts. This may lead to value-driven or business-critical functions moving into emerging markets like India. While strategic decision

making will continue at the group level, there may be a radical shift in the sourcing market, etc. The impact of this on the overall group may not be significant; however, the impact on the group's companies in emerging markets like India would be very high.

1. <https://www.pwc.co.uk/issues/megatrends.html>

2. <https://www.pwc.com/gx/en/ceo-survey/2019/report/pwc-22nd-annual-global-ceo-survey.pdf>

Figure 2: CEO revenue growth strategies



CEOs have acknowledged that in order to enhance revenue growth, organisational efficiencies, organic growth and new product and/ or services offerings are being explored.

As will be discussed in the following sections, business transformation is likely to challenge an organisation's classical tax and Transfer Pricing (TP) strategies, which have been in force in the past. As the survey excerpts above make apparent, deeply exploring value chain changes or recalibration of value drivers may be the means to keep up with substance and form alignment and ensure that each activity is being compensated as per the value it is creating in the entire value chain.

Further, in a future scenario where multiple post-transformation cost structures and revenue streams will coexist, a blanket application of traditional TP methods may fail to provide a true and complete picture of the value contribution in the Multinational Enterprises (MNE's) value chain and the consequent pricing of inter-company transactions.

Furthermore, the OECD BEPS Action 8-10³ has added stronger emphasis on determination of value creation in all global supply chains. Additionally, the adoption of global reporting standards (such as Country by Country Reports and Master File) and the plethora of financial and business information now available with

revenue authorities (through Exchange of Information protocols) will increase the focus on identifying gaps in substance and form in relation to global supply chain and value allocation.

Identification and analysis of the impact on global TP models needs a controlled but agile approach that involves performing an incisive functional analysis and economic analysis. In certain cases, a Value Chain Analysis (VCA)⁴ should be performed to study and assign values to industry trends and functional parameters of the organisation's value chain.

This paper aims to equip readers to look at transformation from the viewpoint of economic value contribution and TP principles. The concepts have been illustrated with the help of current and anticipated changes occurring in the Indian automotive industry and its possible impact on global TP models. While the paper uses the automotive industry as a case study, similar principles and approaches can be applied to any industry that is facing or is expected to face similar transformative changes in the immediate or longer term.

3. OECD BEPS Action 8-10 : Aligning Transfer Pricing Outcomes with Value Creation

4. <https://www.pwc.com/gx/en/services/tax/value-chain-analysis-for-tax.html>

01 What is transformation?

Business transformation can be defined as “making fundamental changes in business to achieve organisational goals and to improve processes, technologies and productivity”. Most MNEs are welcoming multifaceted changes in economic conditions (encapsulated in the global megatrends⁵) as an opportunity to innovate and improve, rather than perceiving them as a threat. Measurably, the long-term

phenomena of these global megatrends may visibly impact the supply chain or value drivers of a business.

1.1. Megatrends and transformation

The global megatrends catalysing economic and business metamorphosis (including the Indian context) are tabulated below:

Megatrend	Certain impact on transformation
Urbanisation, demographic and social changes	<ul style="list-style-type: none"> increased consumer awareness, preferences and bargaining power consumer-centric competitive product/ service strategies customisation to adapt to local market requirement
Technological breakthroughs	<ul style="list-style-type: none"> classical “low risk – low value” delivery hubs in India or low risk distributors growing in the value chain adopting or customising new age technology tools and digital services disruptive technologies such as artificial intelligence, machine learning, big data analytics, etc.
Shift in global economic power	<ul style="list-style-type: none"> shift in recognition and increasing economic power are expected enhanced localisation of functions and assets creation of exponential level of opportunities
Climate change and resource availability	<ul style="list-style-type: none"> introduction of corporate programs and government initiatives impact on operational model of entities due to initiatives

1.2. Measuring transformation

In order to measure transformation from a global value chain and TP perspective, a four-step process can be adopted, which is as follows:

evaluating whether the company and their relevant industry is facing or expected to face a transformative change	understanding how the classical functions, assets and risks (FAR) profile changes due to recalibration of value drivers
evaluating the impact of such transformation on the global supply chain and business model	understanding how the TP model gets impacted due to such transformation

The primary challenge of MNEs, governments and stakeholders is to identify the trends resulting in transformation and correlating their relevance to the value chain and strategic decision making, as these have a multiplier effect on the global and local scheme of things. Studying the value chain effect and underlying decision-making process, both in terms of the present and expected future trends, would help in identifying the relevant impact areas and create a course of action to avoid uncertain TP risks or tax consequences.

Certain set of questions that any business can ask itself to identify the qualitative impact of the megatrends are provided in Appendix 1.

5. Refer <https://www.pwc.co.uk/issues/megatrends.html> for an overview on how the megatrends are shaping business and society today and are expected to do so in the future.

A quantitative outcome of transformation can be noticed in an organisation's financial characteristics, which may be twofold:

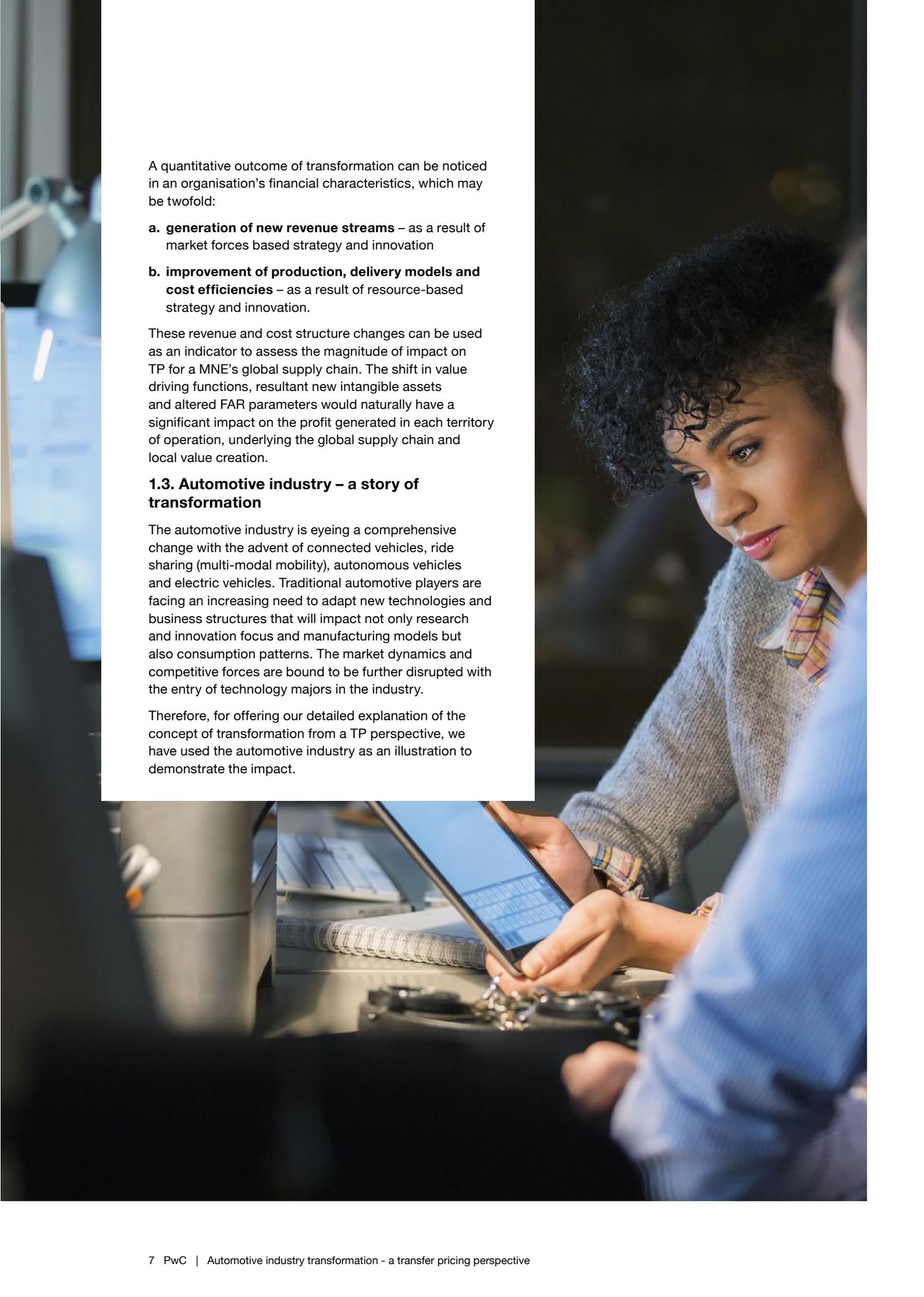
- a. generation of new revenue streams** – as a result of market forces based strategy and innovation
- b. improvement of production, delivery models and cost efficiencies** – as a result of resource-based strategy and innovation.

These revenue and cost structure changes can be used as an indicator to assess the magnitude of impact on TP for a MNE's global supply chain. The shift in value driving functions, resultant new intangible assets and altered FAR parameters would naturally have a significant impact on the profit generated in each territory of operation, underlying the global supply chain and local value creation.

1.3. Automotive industry – a story of transformation

The automotive industry is eyeing a comprehensive change with the advent of connected vehicles, ride sharing (multi-modal mobility), autonomous vehicles and electric vehicles. Traditional automotive players are facing an increasing need to adapt new technologies and business structures that will impact not only research and innovation focus and manufacturing models but also consumption patterns. The market dynamics and competitive forces are bound to be further disrupted with the entry of technology majors in the industry.

Therefore, for offering our detailed explanation of the concept of transformation from a TP perspective, we have used the automotive industry as an illustration to demonstrate the impact.



02 Analysis of redefined supply chain in the automotive industry

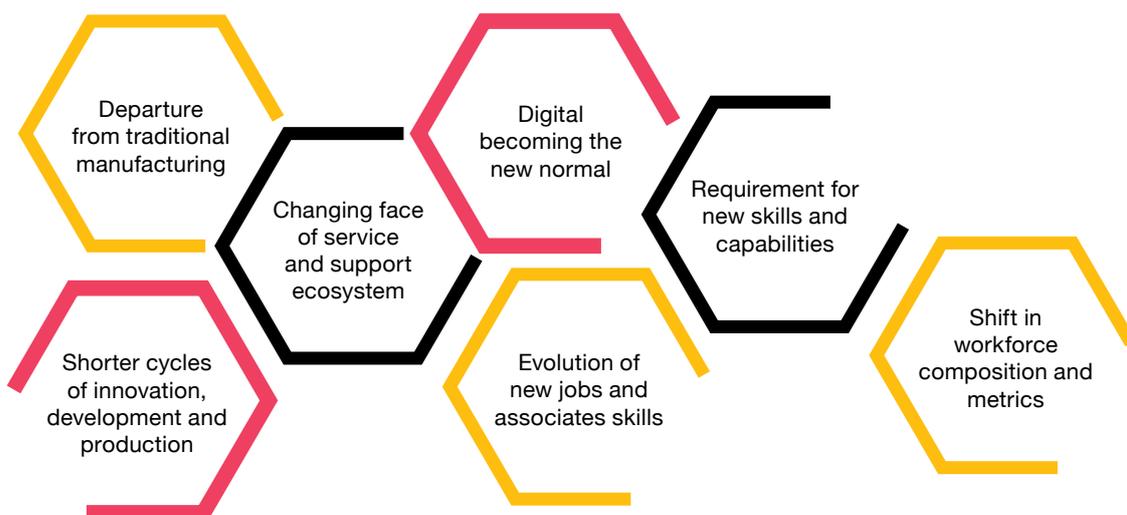
Using the automotive industry as an illustration and the megatrends as an indicator, we observe the transformation in this industry as follows:

Megatrend	Impact on transformation*
Urbanisation, demographic and social changes	Rapidly evolving consumer needs and awareness of technological advancements have resulted in companies constantly introducing new product offerings and services.
Technological breakthroughs	The automobile industry is going through technological and digital transformation throughout its value chain with the digitalisation of day-to-day operations. Companies are emphasising on introduction of autonomous vehicles, connected vehicles and embedded digital and mobility services.
Shift in global economic power	India is expected to emerge as the third largest passenger vehicles market by 2025 ⁶ , resulting in a surge in the roles of Indian companies in the automobile value chain, product localisation, decentralisation of decision making, etc. in certain Indian automobile companies.
Climate change and resource availability	Emission controls put in place and closely monitored by regulators such as CAFE norms ⁷ introduced in India, use of electric vehicle or alternate fuels to replace fossil fuels (FAME schemes ⁸) and increased investments for regulatory compliance.

The various trends impacting the Indian automotive sector as detailed in the PwC publication of **“Indian Automotive sector: creating future-ready organisations”**.⁸ is

depicted below in Figure 3 By plotting these trends using the questionnaire in Appendix-1, the qualitative impact of transformation on the business can be identified.

Figure 3: Impact of megatrends on automotive organisations



* This paper has been written from the perspective of an emerging market like India.

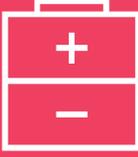
6. <https://www.pwc.in/assets/pdfs/industries/automotive/indian-automotive-sector.pdf>

7. CAFE norms stands for Corporate Average Fuel Efficiency norms

8. Faster Adoption and Manufacture of (Hybrid and) Electric Vehicles

9. <https://www.pwc.in/assets/pdfs/industries/automotive/indian-automotive-sector.pdf>

The changes in the automotive business can be briefly classified into various themes as indicated below:



Electrified

To reduce the use of fossil fuels and emissions, cars are being redesigned to operate on electricity. The idea is to use electricity to ensure emission-free travel and ensuring carbon neutral mobility.



Autonomous

Also known as self-driving cars or robotic cars which operate without a human driver, reducing the cost of transportation and improving convenience and safety.



Sharing

Ride sharing provides an infrastructure in which mobility solutions are offered to customers, without the need of making an outright purchase of vehicle



Connectivity

These vehicles have access to the Internet and a variety of sensors, and are thus able to send and receive signals, sense the physical environment around them, and interact with other vehicles or entities.



Continuous upgrades

Innovation cycles of five to eight years is soon becoming a thing of the past. Instead, the range of models will be updated annually in order to integrate the latest hardware and software developments.

The detailed explanation of the above terms and industrial impact can be found in the PwC publication - **Five trends transforming the Automotive Industry**¹⁰. Apart from direct impact, the megatrends have caused cross-industrial changes in complimentary industries such as technology companies, media and content developers, insurance and after-market industries, etc¹¹.



10. https://www.pwc.at/de/publikationen/branchen-und-wirtschaftsstudien/easycy-five-trends-transforming-the-automotive-industry_2018.pdf

11. <https://www.autocar.co.uk/car-news/industry/how-apple-icar-could-crack-automotive-industry>
<https://www.autocar.co.uk/car-news/industry/bmw-and-daimler-confirm-urban-mobility-joint-venture>
<http://www.forbesindia.com/blog/technology/disruptions-in-the-global-automotive-industry-solutions-from-india/>
<https://www.autocarindia.com/car-news/hyundai-door-to-door-service-launched-411545>

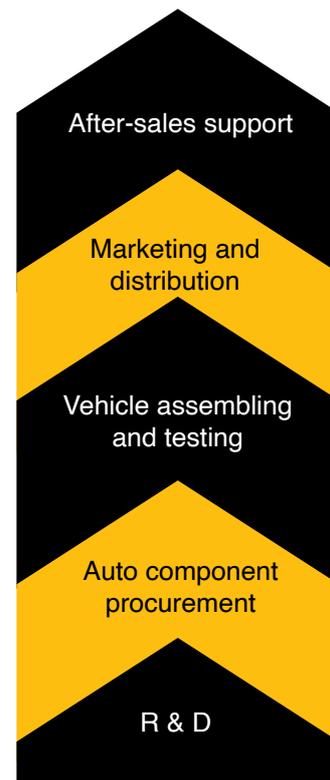
03 Impact of transformation on global supply chain

Typical supply chain

A typical global value chain considered from a TP perspective would include (i) the central entrepreneur – responsible for value driving/ strategic functions such as product innovation, Research and Development (R&D), intangibles development and ownership, brand management etc., (ii) limited risk manufacturers/ assemblers and (iii) limited risk distributors and service providers etc. The component/ service providers also build up “hub-and-spoke” systems where each participant in the global supply chain (buy-make-sell) has operations co-located and integrated with the global plants and supply chain facilities.

Organisations in the value chain that perform routine functions, deploy routine assets and bear limited risks typically earn stable operating returns commensurate with their functions and risks. The residual system profit, which mostly relates to the performance of strategic functions and ownership of intangibles, belongs to the central entrepreneur. Where more than one entity performs non-routine activities, more complex TP models are adopted to identify the rightful share of profit of each entity.

Typically, the automotive industry would comprise the following supply chain components:



Impact of transformation on supply chain

The impact of transformation on supply chain may be gradual or rapid, depending on market dynamics, competitive forces and speed of innovation by an individual organisation. From an Indian context, the role

of the Indian entity may evolve much faster to facilitate local implementation of global business transformation as a result of local market forces and rapidly evolving sector regulations.

The degree of transformation (high-moderate-low) envisaged in an automotive Group segment's supply chain components is depicted below and discussed subsequently:

Particular	Electric vehicles	Autonomous vehicles*	Ride sharing*	Connected vehicles	Continuous Upgrade*
R&D	High	High	Moderate	High	High
Procurement	High	High	Moderate	High	Moderate
Assembly & testing	Moderate	Moderate	Moderate	Moderate	Low
Marketing & distribution	High	High	High	High	Low
After-sales services	High	High	High	High	High

*** Note:**

- The autonomous vehicle segment is not discussed in detail since it is not expected to impact India in the near future.
- The ride sharing business model would evolve from distinguishable consumer behaviour, which in turn will impact the sales model.
- Continuous updates may form part of connected vehicle, electric vehicles or autonomous vehicle trend and also have a high impact on the continuous R&D updates and after sales implementation under these trends.

Automotive companies are observed to be investing heavily in leading-edge technology companies or sourcing from unconventional technology providers. Additionally, these changes could be led by non-traditional automobile companies who develop new technologies or services as add-ons to automobiles, and in doing so, they may disrupt the traditional R&D value chain. Apple, for example, is reported to have invested US\$10 billion in a technology roadmap of iCar, and Google is working on an entire enterprise operating system for connected and autonomous cars¹². Examples of India-based start-ups are Autogrid Mobility that focuses on driver behaviour and assistance¹³ and Spotplay that provides entertainment in the commercial vehicles (buses and cabs) segment¹⁴.

3.1. R&D

It is envisaged that automakers in emerging markets like India are shifting focus from the traditional R&D support (or applied research) based approach to more solution and innovation (localisation and hardware to software solutions) driven R&D. There is a change in the R&D focus in emerging markets like India – for example, a shift from individual components or manufacturing processes, etc., to customer-focused design improvement and innovation.

During the initial phases of transformation, both the traditional and transformed models will coexist but in the long run, novel strategies are expected to gear the operations into different avenues. Given the rapidity and shorter cycles of innovation, the differentiator will be the means of funding and efficiencies in implementing the technological transformation.



12. https://www.techuk.org/component/techuksecurity/security/download/10783?file=Good_to_Great_Connectivity_pages_FINAL.pdf

13. <https://www.autonebula.com/portfolio/>

14. <https://www.autonebula.com/portfolio/>

Certain instances of new R&D avenues due to automotive transformation are provided below:

Traditional R&D	Connected vehicles	Electrical vehicles	Continuous upgrades
<ul style="list-style-type: none"> Reengineering innovation to moderate costs of operation. E.g.: setting up mega-platforms, updating for rapidly changing technology. This would also require substantial human resource revamping to fit the change in skillsets requirements. Identification of alternate parts' suppliers for quality and preparing for regulatory requirements. E.g.: Shift from BS-IV to BS-VI 	<ul style="list-style-type: none"> Building advanced hardware component and sensors that will enable vehicle-to-vehicle communication or vehicle-to-environment communication Development of connectivity features such as infotainment, safety, AI-based voice assistance and digital communication 	<ul style="list-style-type: none"> Researching on alternative core solutions and electrification to reduce powertrain complexities and maintenance needs New suppliers or existing parts' manufacturers channelising development through significant re-engineering and bringing value through product differentiation 	<ul style="list-style-type: none"> Testing and regulating continuous improvements in software and tools adopted Setting up cloud based software platforms, including artificial intelligence-based applications Data analytics and machine learning to recognise consumer behaviour and build solutions

3.2. Procurement of parts and components

The procurement function would be aligned to the specific transformation in the industry towards which

the automotive Group is focusing. Examples of changes in procurement function under various segments are provided below:

Traditional R&D	Connected vehicles	Electrical vehicles	Continuous upgrades
<ul style="list-style-type: none"> Consolidation of parts for various vehicles under one platform, thereby reducing the number of whole parts consumed in building a vehicle (as required for mega-platforms) Manufacturing standardised parts that are conducive to a variety of models Building parallel technology-enabled manufacturing capabilities e.g. use of 3-D printing 	<ul style="list-style-type: none"> Increased sourcing of technology-enabled components and digital solutions Digital platforms, applications and technology-enabled hardware parts such as safety sensors and diagnostic tools would take precedence to address customer experience. 	<ul style="list-style-type: none"> Alternate sourcing network established that would be conducive to electric vehicles and with the focus of reducing carbon footprint 	<ul style="list-style-type: none"> Periodical updates, gamut of data collated and content created, to command consumer loyalty

3.3. Assembly and testing

The core components manufacturing and car assembly function are traditionally performed as per drawing, designs and specifications provided by the IP owning entrepreneur to the licensed manufacturers (in lieu of royalty streams) or to contract manufacturers (under principal structures). The assembly function in the hands of the manufacturer is expected to undergo complete automation and / or digitisation, where not only the assembly but also the process and facilities would undergo transformation.

Digital solution technology in the supply chain ecosystem and logistics mechanisms such as implementing blockchain, predefined manufacturing methods and remote monitoring may lead to improved processes and optimisation of costs. Further, fields such as mechatronics, machine learning, AI and robotics will be introduced to enhance performance efficiencies, thereby reducing human interface as in the traditional ways. However, availability of funds, skills' enhancement and proactive management functions will be the definitive measure of success.

Additionally, data generated from the introduction of the above systemic changes will create additional avenues of analytics, feeding into improving the manufacturing and assembly procedures.

3.4. Marketing, sales and after sales

Due to the impact of various megatrends, automotive sales have been showing a declining trajectory, whilst the traditional automakers continue to introduce newer models and constrict the supply chain to ensure cost

reduction. Going forward, need for increased customer loyalty and interplay of technology and software will influence automakers to develop innovative marketing and sales strategies. Resultantly, new revenues models would emanate in the form of ride-sharing, robo-fleet, digital services such as onboard entertainment and location-based information providers, etc. The various trends that may be expected in marketing and sales function are summarised below:

Connected vehicles	Ride sharing	Continuous upgrades
<ul style="list-style-type: none"> Automakers may choose to sell vehicles at a standard base price, and the customer would pay additional service fee for customised value added services. Additional revenue streams would emerge from advertising, in-vehicle experience, mobility analytics, data analytics, etc. 	<ul style="list-style-type: none"> From the existing B2C sales model, automakers' business model could shift to comprise a B2B for shared vehicles or technology components along with traditional sales models. Shared mobility services could lead to the establishment of leasing companies or joint ventures with mobility services' aggregators. The role of distributors would decline substantially, where fleet owners may directly coordinate with the central/ regional automakers (entrepreneurs). 	<ul style="list-style-type: none"> As the sale of vehicles would be dependent on the bundle of services offered, a variable royalty charge or lump sum revenue share may be attributable to the technology owner and/ or software developer providing continuous improvements. Further, since the value to the customer would be spread over the useful life of the vehicle, revenue recognition for the automaker may undergo a change. Upon implementation, the automakers would own plethora of information on consumer behaviour, requirements and preferences that could be monetised. E.g. developing customised vehicle insurance policies

Note: In the case of electric vehicles, the sales model may be impacted by any of the above transformations. In the formative years of implementation, electric vehicle segment would be cost intensive. However, revenue models would be akin to the other sales related transformations in the industry. With the proposals in budget specifically for electric vehicles (customs duty exemptions on certain parts for electric vehicle and lower GST rates/ tax breaks), it is expected that funds would be directed towards swift delivery into the market, thereby increasing revenue share for electric vehicles.

3.5. Distribution of vehicles and after-sales services

In relation to the dealer networks, the automaker may set up digital platforms for virtual reality or augmented reality based customer experiences, thereby minimising the traditional product demonstration and selling functions of dealers. In addition, the automaker may incur increased investments for facility build-up and management and systems' maintenance. Analysis of data and customer preferences would feed into the manufacturing and R&D processes to better shop-to-market delivery.

Based on the consumer behaviour and through data analytics, the automaker can easily identify the preferences of the customer and use platforms

such as navigation tools combined with telematics and infotainment systems to inform the customer of any pending after sales requirements or repairs. Customised advertisement feeds or other promotional inputs for various third parties may also be communicated resulting in additional revenue streams for the local entity, a part of which may have to be shared with the core IP owning group entity.

3.6. Conclusion

It can be observed from this chapter that transformative changes in any business can impact more than one component of its global supply chain and also realign the classical function-risk-reward matrix underlying the global TP policies of the MNE, based on the strategic decisions made in board rooms.

In order to evaluate the true impact of transformation, the four-step analysis can be performed, accompanied by an incisive functional analysis and assigning of value to Group companies based on each of their contributions. An in-depth VCA could be a possible approach to supplement the functional analysis and identify the profit contribution at various stages of the supply chain. Thereby establishing the TP and evaluating its tax impact.

TP impact: Call to action

Given the transformation discussed in the previous chapter, it is essential to document the impact on fundamental substance of conduct between inter-companies while performing TP analysis. One of the founding pillars would be to factor the changing dynamics and bringing out the underlying value contributions. This will not only be based on understanding the expected contribution of the Indian entity to the global value chain but will also extend beyond and correlate the transformative changes in the industry and business environment to pre-empt the impact of the same on TP models and profit sharing models.

As mentioned in the previous chapters, a quantitative measure to demonstrate impact is by observing the value drivers (derived from the supply chain and would be subjective to every organisation's transformation journey) and identifying the changes in revenue and cost models impacting these value drivers. In making such observations, the appropriate characterisation of the intra-group transactions is key. An incisive functional and risk analysis would be the primary step in analysing these value drivers and determining their measurement mechanism.

Traditionally, preparation of TP documentation by the tax or finance function has been an ex-post function, with business teams having limited involvement for provision and review of facts. However, given the rapid transformation, while undertaking FAR analysis, an active involvement of the business teams that are at the forefront of the dynamic business environment is crucial.



In order to perform incisive FAR, the following non-linear steps can be applied:

- a. Discussions with the finance head to understand whether and how business plans, capital budgets and/ or revenue or cost streams are changing or expected to change due to any major strategic decision at local level or group level.
- b. Discussions with relevant business leaders responsible for transformation or innovation in the company to understand what active measures are adopted to face industry dynamics, competitive advantage of the company and potential impact on business operations of the company.
- c. Based on a) and b) above, the direction in which the company envisions to go forward, its business operations and value chain management can be analysed by engaging with the business leaders of each function. For example, if the company's transformation strategy is centred on development of new local market intangibles, the discussions in b) would essentially involve the strategy team members and head of R&D division. Similarly, if the low risk distributor earmarks a large marketing budget for new customer acquisition, it would be vital to discuss with the marketing and sales team to identify transformative changes in product portfolio, marketing strategies and revenue models.

A flexible but agile approach towards FAR analysis and TP documentation is essential for achieving the required results based on the organisation's personal transformation journey.

Based on the analysis of megatrends in automotive industry and identifying supply chain and business model transformations in the previous chapter, certain immediate and long-term implications on TP can be plotted as provided below.

Other tax implications owing to customs and GST amendments may impact the cash flows of the automotive entity.

	What is changing?	Impact on business	TP implications to be addressed
Long-term relevance	1 BS IV vehicles to BS VI transition	<ul style="list-style-type: none"> • Scrapping or exporting of BS IV finished goods and component stocks • Additional investments for BS VI transition • R&D centralisation for global convergence of product standards and synergies • Write-off of past R&D efforts on BS IV 	<ul style="list-style-type: none"> • Treatment of BS VI transition related costs for computing TP margins • Exploring alternative ROI based evaluation for the additional investments • Impact of the change on (i) characterisation and (ii) expected margins of Indian entity and (iii) the selection of comparables
	2 Shift to electric vehicles	<ul style="list-style-type: none"> • R&D centralisation for global convergence of product standards and synergies • Increase in capacity and initial low utilisation 	<ul style="list-style-type: none"> • Impact of change on (i) characterisation, (ii) expected margins of Indian entity and (iii) the selection of comparables • Economic adjustments for lower capacity utilisation • Interplay of shift to electric vehicles vis-à-vis other transformations in the organisation and impact of profit attribution as a result of the same
	3 Investment-linked subsidy	<ul style="list-style-type: none"> • Changing dynamics in the post-Goods and Services Tax Tax (GST) era • Subsidies to aid transition to EV etc. 	<ul style="list-style-type: none"> • Inclusion of incentives for computing TP margins • Impact of incentives on intra-group pricing of products and services
	4 Uncertain foreign exchange fluctuation	<ul style="list-style-type: none"> • Erosion of profit of import driven firms • Gain/ loss from forward contracts 	<ul style="list-style-type: none"> • Possibility of adjusting rupee depreciation impact on import costs for computing TP margins • TP and tax considerations on forward contract gains/ losses

In the long run, implementing transformative changes such as connected vehicle platforms and ride sharing could impact TP in the following manner:

Long-term relevance	What is changing?	Impact on business	TP implications to be addressed
	1 Connected vehicles	<ul style="list-style-type: none"> Higher degree of localisation and customisation of assets Localisation of procurement and market functions as per operational conditions Decentralisation of strategic decision making by setting up regional hub-and-spoke models Increased capital investment in advanced hardware and sensors with short life Packaged revenue models, spread across the life of the vehicle 	<ul style="list-style-type: none"> Development of local intangibles, leading to change in characterisation and geographical pricing of intangibles Lower attribution of profits to traditional automakers and evaluation of profit attributable towards “new-age” technology Decentralised cost sharing models as against centralised intangible licensing models Redefining legal and economic asset ownership and documentation of the same Impact on characterisation of recalibrated procurement and sales function; possibly warranting additional returns Internal profit split analysis, within the automotive entity for revenue recognition across product life cycle
	2 Continuous upgrades / Disruptive innovation	<ul style="list-style-type: none"> Dynamic life of software updates and technology leading to continuous improvements Increased parts standardisation, setting up of mega-platforms and cost reduction strategies Increased automation, 3-D printing, etc. changing capacity utilisation New-entrants of technology and software companies in the market Data generation and use for business optimisation and also regulatory impact of data generation 	<ul style="list-style-type: none"> Reconfiguration of royalty models based on life expectancy of continuous updates Computation of transfer price for local modifications made to base technologies and geographical customisations Impact of standardisation and cost reduction on (i) characterisation of automotive ancillary organisations, (ii) profit attribution to organisations setting up cost reduction strategies Evaluation of return on investment on modified manufacturing and assembly functions Identifying mechanism to price differential bargaining powers of new players in the industry Significant Economic Presence analysis and attribution for data generation and analytics
	3 Ride sharing	<ul style="list-style-type: none"> Substantial size of B2B business operating model Increased collaborations with ride-sharing organisations 	<ul style="list-style-type: none"> Evaluation of choice of comparables under such revenue model Economic analysis of working capital position Analysis of risks of business (such as credit risk) and incorporating impact on inter-company pricing

Conclusion

While there may not be a standardised procedure to identify the impact of transformation, it is essential to note that discussions with the right teams and analysis of financial plans and ratios and documentation of the same would assist in identifying the transformed FAR profile, price setting mechanism and economic analysis going forward.

VCA can be used as an empirical tool in performing an incisive FAR (factoring qualitative and quantitative parameters) and correlating the price to the value driver. Refer Appendix 2 for a broad overview on VCA. Through VCA, appropriate economic return can be transparently allocated to value drivers in the supply chain. This can also assist companies in establishing which supply chain element contributes in what proportion to the overall business.

The importance of binding supply chain transformation with value creation has been further emphasised in OECD BEPS Action 8-10¹⁵ where determination of value creation and allocating the development, enhancement, maintenance, protection and exploitation (DEMPE) functions in all global supply chains has been the key message. The DEMPE analysis needs to be future oriented, since transformative changes in global supply chain may also lead to decentralization of strategic responsibilities wherein the value creating functions or intangibles can be relocated as well.

Accordingly, emphasis on a detailed understanding of the business operation, the transformation in the industry and resultant changes in the organisation are key in evaluating the TP impact. Eventually, it is relevant to bear in mind that TP impact on an organisation would be subjective to the industry and to each organisation's transformation journey. Proactive identification of the transformative change and its impact is important to ensure that the MNEs TP policies remain relevant and supportable in the long run.

15. OECD BEPS Action 8-10 : Aligning Transfer Pricing Outcomes with Value Creation

Appendix 1: Questionnaire for qualitative analysis of transformation

Sr. no.	Question	Response (Yes/ No)
1	Is your organisation witnessing shift in consumer base and/ or their expectations?	
2	Has your organisation changed consumer strategy based on region and/ or customer type?	
3	Have you noticed an increasing trend of public-private partnerships in your industry and are likely to adapt?	
4	Does your organisation have a separate team studying market dynamics and adapting novel business methodologies?	
5	Does your organisation closely link their success or failure to adapting to industry-wide changes?	
6	Is your organisation implementing breakthrough technologies such as artificial intelligence or blockchain to manage its value drivers?	
7	Is your organisation witnessing a continuous change in relationship between people and technology?	
8	Is your organisation increasing investments in technology to implement Omni channel product/ service delivery?	
9	Is your organisation finding ways to address challenges in availability of critical workforce?	
10	Does your organisation plan to enter newer markets based on consumption needs and patterns?	
11	Is your organisation strategising on new revenue streams targeting the younger population with increased disposable income?	
12	Is your industry witnessing increased scrutiny by society and government?	
13	Is your organisation adapting to evolving requirements of the society or new government regulations?	
14	Is your organisation working on regional plans to implement product/ service strategies, linked to market sentiments?	
15	Is your organisation establishing new supply chain models to mitigate trade conflicts?	
16	Has your organisation working towards remodelling or introducing new business models based on regulatory and/ or policy uncertainty?	
17	Is the local organisation experiencing increased in roles and responsibilities in the Group value chain?	
18	Is increasing local investment (manufacturing, R& D , dealer network, etc.) are part of the Group's or local organisation's vision ?	
19	Has the organisation invested in building sustainability of brand in regions of operations?	
20	Is the organisation investing in personal and digital security extensively?	

Appendix 2: Value Chain Analysis¹⁶

VCA may help in identifying the interlinkage of value created by Indian entity with global value drivers. The use of traditional cost plus or limited risk models in many instances may become a thing of the past, and fragmented pricing models backed by suitable TP methodology would reflect reality better. In order to implement tools such as VCA, a thorough knowledge of industry and FAR profile is essential.

The VCA enables entities establish whether the erstwhile captive entity has moved up the value chain and if a change in its remuneration model is to be effected. Similarly, the value of unique intangibles can be established using such this model. The contribution of functions can also assist in identifying the profit to be attributed to each entity in cases of cross-border work split.



Steps in VCA

Business description review

The Company will perform a preliminary review of its own business and identify the operating value drivers from their point of view.

Identifying peers

Based on the business the Company operates in, a broad set of peers will be identified to evaluate their respective supply chain model, value drivers and remuneration mechanism. The peer identification process is different from a traditional comparability test where close comparables are identified and tested. In the case of peer analysis, a broader set is identified, and their value contributions to business are examined.

Quantification of value drivers

An industry analysis and real time discussion within the Company will enable identifying the value drivers. Using quantitative parameters and running sensitivity tests, the value drivers are assigned weightages. These weightages are documented to establish which function can command a higher price.

16. <https://www.pwc.com/gx/en/services/tax/value-chain-analysis-for-tax.html>

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