

Strategies for Enhancing Competitiveness of Indian Automobile Industry

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Abstract

Automobile industry is a symbol of technical marvel by human kind. The automobile industry referred as “the industry of industries” around the world has continuously invented and reinvented itself, always driven by innovation. During the last two decades, the automobile industry has been a bright spot in India’s progress and has become one of the largest manufacturing sectors in India. During the past few years, the production and management systems in the Indian automobile industry have been revolutionized. One of the major changes in the industry has been the opening up and growth of several emerging markets. The delicensing of the sector and the subsequent opening up of 100 per cent Foreign Direct Investment (FDI) through the automatic route marked the beginning of a new era for the Indian automobile industry. However, the industry is now facing new and pressing challenges. Globalisation, digitalisation, changing consumer preferences and increasing competition are changing the face of the industry. The purpose of this paper is to present a short overview of the automobile industry in India and mention challenges facing the industry. In this context, several strategic steps have been discussed which will enable the automobile firms in India to enhance their competitiveness and establish a strong foothold in the international market.

Introduction

Peter Drucker called the automobile industry as “the industry of industries”. The automobile industry has continuously invented and reinvented itself, always driven by innovation. During the last two decades, the automobile industry has been a bright spot in India’s progress and it has adapted itself well to the demands of globalisation. Due to its deep forward and backward linkages with several key segments of the economy, the automobile industry has a strong multiplier effect on the growth of a country and hence is capable of being the driver of economic growth. It plays a major catalytic role in developing transport sector in one hand and help industrial sector on the other to grow faster and thereby generate significant employment opportunities. The Indian automobile industry ably fulfils this catalytic role by producing a wide variety of vehicles such as passenger cars and multi-utility vehicles, light, medium and heavy commercial vehicles, two-wheelers such as scooters, motorcycles, mopeds as well as three-wheelers. The Indian automobile industry is currently experiencing an unprecedented boom in demand for all types of vehicles. This boom has been triggered primarily by two factors: (1) increase in disposable incomes and standards of living of middle class Indian families and (2) the Indian government’s liberalisation measures such as relaxation of the foreign exchange and equity regulations, reduction of tariffs on imports and banking liberalisation that has fueled financing-driven purchases. These trends have encouraged many multinational automakers from Japan, U. S. A., and Europe to enter the Indian market mainly through joint ventures with Indian firms. The Indian automobile industry has attained a substantial growth and has become one of the largest manufacturing sectors in India. In the export market, the industry has earned a strong reputation and Indian vehicles as well as components are in great demand the world over. The delicensing of the sector

Keywords

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and the subsequent opening up of 100 per cent Foreign Direct Investment (FDI) through the automatic route marked the beginning of a new era for the Indian automobile industry. The Indian automobile industry is expected to be the world's seventh-largest automobile market by 2016 and the third largest by 2030, only behind China and U.S.A. The major automobile manufacturing companies in India are Tata Motors Ltd., Maruti Suzuki India Ltd., Bajaj Auto Ltd., Hero MotoCorp Ltd, Hyundai Motor India Ltd. and Mahindra & Mahindra Ltd.

Table 1 shows that two- wheelers constitute more than two- third of the Indian automobile market followed by

passenger vehicles which occupies about 16% of the market. Table 2 & 3 show that the passenger vehicles segment however, holds the highest growth potential growing at a CAGR of 17.92% during the period 2007-11, while exports of passenger vehicles grew at a CAGR of 22.95% during the same period. It is further observed that while overall production of automobiles has grown at a CAGR of 12.74% during the last five years, the export of automobiles have grown at a significant CAGR of 23.32%. Thus it can be said that India holds huge potential in the export market and exports should be encouraged as they help in making the industry globally competitive.

Table 1

Segment-wise market share of automobiles in India (2010-2011)

Category	Market Share
Two- wheelers	76%
Passenger vehicles	16.25%
Commercial vehicles	4.36%
Three- wheelers	3.39%

Source: SIAM (Society of Indian Automobile Manufacturers)

Table 2

Trends in Automobile Production

(no. of vehicles)

Category	Passenger vehicles	Commercial vehicles	Three-wheelers	Two-wheelers	Grand Total
2006-07	1,545,223	519,982	556,126	8,466,666	11,087,997
2007-08	1,777,583	549,006	500,660	8,026,681	10,853,930
2008-09	1,838,593	416,870	497,020	8,419,792	11,172,275
2009-10	2,357,411	567,556	619,194	10,512,903	14,057,064
2010-11	2,987,296	752,735	799,553	13,376,451	17,916,035
CAGR	17.92%	9.69%	9.50%	12.11%	12.74%

Source: SIAM

Table 3

Trends in Automobile Exports

(no. of vehicles)

Category	Passenger vehicles	Commercial vehicles	Three-wheelers	Two-wheelers	Grand Total
2006-07	198,452	49,537	143,896	619,644	1,011,529
2007-08	218,401	58,994	141,225	819,713	1,238,333
2008-09	335,729	42,625	148,066	1,004,174	1,530,594
2009-10	446,145	45,009	173,214	1,140,058	1,804,426
2010-11	453,479	76,297	269,967	1,539,590	2,339,333
CAGR	22.95%	11.40%	17.03%	25.55%	23.32%

Source: SIAM

Recent Trends

- ♦ The turnover of automobile industry in India is estimated to reach US\$ 145 billion by 2016
- ♦ FDI inflow in 2009–2010 for the auto components sector was recorded at US\$ 1.2 billion, which

was 4 per cent of the total FDI inflow in the country in the same period.

- ♦ India is the world's second-largest two-wheeler market

- ◆ Largest three-wheeler market in the world
- ◆ India is Asia's third-largest passenger vehicles (PV) market
- ◆ India is the world's fourth-largest commercial vehicle (CV) market
- ◆ The country is the world's fifth-largest bus and truck market (by volume)

- ◆ Presence of strong industry associations and supporting industries
- ◆ Large market with significant potential for growth in demand

India: Competitive Advantages

India enjoys various competitive advantages in the automobile sector which are mentioned below:

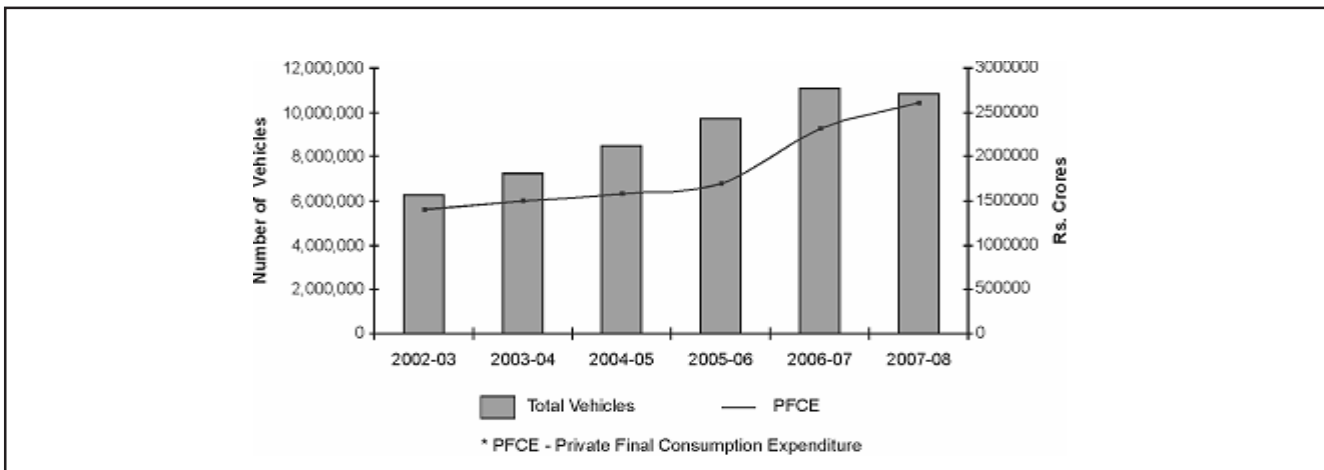
- ◆ Availability of skilled manpower with engineering and design capabilities
- ◆ Large target consumer base and rising income levels
- ◆ Changing lifestyles, driving demand for new segments
- ◆ Proximity to emerging and key markets
- ◆ High Quality Standards
- ◆ Product Development Capabilities
- ◆ Stable Economic Policies adopted by Successive Governments

Challenges faced by Indian Automobile Industry

However, inspite of the advantages enjoyed by the automobile firms in India, the industry still has a long way to go before it becomes globally competitive. It is because of the numerous challenges faced by the automobile manufacturers. They are:

- ◆ Growth in input costs
- ◆ Fuel price volatility
- ◆ Changing consumer preferences
- ◆ Low R&D orientation
- ◆ Infrastructure constraints
- ◆ Low ICT interface
- ◆ Incidence on levies/duties
- ◆ Production cuts
- ◆ Growing competition from foreign players
- ◆ Human resource challenges

Trends between India's PFCE and Automobile Sales



Need for Competitiveness

Firms need strategy to sustain and grow profitability, revenues, market share and most importantly-acceptance. Standalone strategies are not enough. Competitive strategy is concerned

with how a company competes in a particular business and gains a competitive advantage through a distinctive

way of competing. Competition determines the appropriateness of a firm's activities that can contribute to its performance, such as innovations, a cohesive culture and good implementation. Competitive strategy helps to search for a favourable competitive position in an industry, aims to establish a profitable and sustainable position against the forces that determine

industry competition. The ability of a company to capture the opportunity that an industry gives depends on its core competency.

The Indian automobile industry is striving to achieve sustainable competitiveness. The factors, which are driving the Indian automobile industry to be more competitive, are threefold. Firstly globalisation, which is the dominant trend across many industrial sectors, is affecting the Indian automobile industry which is unusual in the extent to which truly global alliances and mergers have formed and have led to the creation of supply networks based around a new tier of supplier companies with the scale and expertise to match the vehicle manufacturers' requirements. A second driver is over-capacity which is spread unevenly across companies and across the different segments of the industry. This factor is likely to increase in importance as new capacity comes on-stream. Thirdly, the need for automobile manufacturers to develop new models and get them to market quickly has assumed new importance as the market fragments and manufacturers look to new model niches rather than traditional product offerings. This has led Indian automobile manufacturers to push responsibility for design increasingly down the supply chain and to value suppliers that are able to offer innovative products and technologies which will differentiate that manufacturer's product. The Indian automobile industry's performance has improved significantly in recent years but it still trails the best of its competitors and is some way from being globally competitive.

Strategies to Enhance Competitiveness

The concept of attaining competitiveness on the basis of low cost and abundant labour, favourable exchange rates, low interest rates and concessional duty structure is becoming inadequate and therefore, not sustainable. In the light of the above, it is felt that a greater emphasis is required on the development of factors which can ensure competitiveness on a long-term basis. The strategies mentioned below will be helpful in providing guidelines for improving the competitiveness of the automobile firms on a sustained basis:

Increased Investment in Research & Development (R&D):

It has been realised all over the world that sustained competitiveness in the automobile industry comes through improvement in productivity, which calls for continuous innovation by the manufacturers. However, it is observed that the total expenditure of the Indian automobile companies on R&D as a percentage of their total sales value is relatively low as compared to the global players such as Honda, Toyota or General Motors. The R&D cost shares are higher in Europe (2-4%) than in India which is less than 2%. This is primarily due to

the fact that Indian firms are mainly focused on designing vehicles for the domestic markets and other developing markets and not for competing with international brands in the global markets. The Indian automakers are under growing pressure to scale up R&D expenditure by 25-30%. This is necessary in the face of fierce competition from global rivals looking to lure consumers with superior product innovations and cheaper compact models in the Indian automobile market. There is also a need for India to have world class logistics, testing & certification centres. The foreign players in the Indian automobile market have already started investing huge amounts in their R&D activities. General Motors has set up an R&D centre in Bengaluru, the company's first outside U.S.A., at an investment of more than US\$ 21 million. This is expected to cater to the needs of countries in the Asia-Pacific region. Hyundai Motors India Ltd.'s management plans to make the company's Indian R&D centre a hub for the development of small cars such as the i10 and the i20 for global markets at an investment of US\$ 50 million. Suzuki Motorcycles India aims to set up its R&D facilities in India and integrate its R&D activities with those of Maruti Suzuki India Ltd. Hence conscious efforts are required from both the Indian automobile manufacturers and the Govt. for spending more on R&D so as to make the automobile industry globally more competitive. The Govt. of India has already established the National Automotive Testing and R&D Infrastructure Project (NATRIP) with an investment of Rs.1718 crores to create core global competencies in the automobile sector and facilitate its integration with the world economy. During the year 2009-10 Tata Motors spent Rs.1, 170.97 crores on R&D activities including expenditure on capital assets purchased for Research and Development which was 3.29% of the net turnover.

Cost Efficiency:

Cost efficiency is very necessary for Indian automobile manufacturers to enhance their competitiveness in the global automobile market. Cost efficiency is considered the only real means in as mature an industry as automobiles to retain or improve market share. Many global auto-manufacturers especially from Japan, have initiated cost reduction exercises. Some firms have also shifted from standard costing to Kaizen costing and target costing. Kaizen costing is the process of cost reduction during the manufacturing phase of existing product. Cost containment strategies may also include working with suppliers to reduce the costs in their processes, implementing low cost designs / segments of the product, or through reduction of wastages. Strengthening the lean manufacturing practices, being adopted in India by firms such as Maruti Suzuki as also across the world, would also help improve competitiveness of Indian industry. Such practices show greater efficiencies in machine utilization, fewer labor

hours per machine, shorter machine setup times and identification of bottlenecks and cost reduction opportunities swiftly. Both the automobile and the auto component industry are interlinked and are dependent on each other for survival, and hence they should collectively work towards cost reduction. In a country like India, where customers are highly price sensitive, localisation of industries are of paramount importance. The automobile manufacturing firms should help in establishment of auto-component units around their assembly plants, and help them in technological improvement, R&D, and identification of machineries and equipments. The auto-component units concentrate on on-time supply and servicing of orders and cost containment in production, and thereby promote competitive pricing among the industry players.

Improving Capacity Utilisation:

Capacity utilisation has a significant positive effect on technical efficiency and in improving the competitiveness of Indian automobile manufacturers. Capacity utilisation and better maintenance also help in reducing the cost of manufacture of automobile firms to a great extent. Hence automobile firms should enhance their efficiency by fully utilising their capacities. It is observed that capacity utilisation has been rising in the recent years in the automobile manufacturing sector, particularly in the commercial and passenger vehicles segment. Maruti Suzuki's actual production of 10, 27,879 vehicles in 2009-10 as against an installed capacity of 9, 43,000 shows that the trend is changing. However the increase in capacity utilisation is not significant enough to remain globally competitive. Most of the automobile manufacturers in India produce less than their installed capacity. This is because of various reasons. First, capacity utilisation is totally demand dependent. Secondly, some of these firms intentionally keep their installed capacity higher than what is required to let it serve as a buffer capacity to cater for growth and demand uncertainty. Thirdly, the production is flexible and gets adjusted based on market forecasts. The automobile manufacturers need to improve their capacity utilisation and minimise their inventories, by better market research and a greater focus on exports, since that would provide additional market to absorb inventories and maximise capacity utilisation. Many firms in the automobile sector operate below their capacities, probably because they generally focus on domestic markets and occasionally over-estimate the demand for their products.

Strategies to Tackle the Rising Cost of Inputs:

The automobile manufacturers in India are adversely affected by the rise in aluminium and steel prices which are the most crucial inputs in automobile production. According to analysts, the aluminium and steel prices which were up nearly 15% y-o-y and 14% respectively

has affected the profit margins of the Indian automobile companies. However, input prices have eased a little over the past few months but still they continue to be comparatively higher than the prices that prevailed a few years ago. Therefore, the automobile manufacturers should adopt appropriate strategies to tackle with the problem of rising cost of inputs and to enhance its competitiveness. The strategies include reallocation of product mix, cost reduction through better adoption of 'lean manufacturing' practices, and negotiation with suppliers and vendors. Strengthening lean manufacturing solutions would be helpful for the automakers to tackle the challenge of input cost escalations. However the success of lean production at the industry level depends not only on the efforts of the manufacturers, but also on the suppliers and on institutional and cultural factors. Many automobile manufacturers in India such as Tata Motors, Ashok Leyland and Maruti Suzuki Ltd. have already introduced cost reduction programmes to avoid wastages, to improve their productivity and enhance their global competitiveness. Maruti Suzuki Ltd. has introduced a programme of 'one component, one gram', thereby bringing down the overall weight of a car by 2.5 Kg., and thereby save about Rs. 10 crores per annum. Ashok Leyland Ltd has introduced the 'Mission Gemba', which aims to improve productivity while reducing the cost of production.

Enhanced Use of Information Technology:

The significant nature of changes to the Information technology area and the manner in which information will be processed will be drastic over the next 10-15 years. The enhanced use of IT in the automobile industry is very important for improving the productivity, growth and competitiveness of the industry and in achieving its global aspirations. The Indian IT industry needs to streamline its operations into automobile technology also. This will help in designs and automation. In addition, IT interface helps the automobile manufacturers to interact frequently with vendors and consumers also, and leverage their ideas/preferences into vehicle design. Increased IT adoption in the automobile industry not only enhances the competitiveness of the

industry in the existing markets but also creates new markets for the industry. An example in this regard is Tata Motors Ltd. which uses Digital Product Development, Digital Manufacturing Solutions and better integration with vendors in order to improve significantly its product development processes and capabilities. The NANO website has been launched which facilitates online booking along with exhibiting all other product details. Launch of a web based supplier portal fulfills the business requirement of capturing potential supplier's information, communication platform for suppliers and news about supply chain. The company has instituted an online Dealer Management System for the channel partners

that have helped the dealerships keep a step ahead of the increasing challenges of the automobile industry. The company is leveraging its connected dealer network for communication and training.

Supply Chain Management:

The Indian automobile manufacturers face stiff international competition in the wake of all major US and European car manufacturers entering the Indian market. In the contemporary scenario, supply chain management practices can be adopted to improve competitiveness, operational efficiency and profits. Supply chain management (SCM) practices, which aim to streamline and optimize the processes involved in acquiring input from suppliers; converting these inputs into finished products, and delivering these products to the consumers help in improving efficiency of automobile firms. Indian automobile players today face several key challenges in managing their supply chains such as integrating the end- to- end supply chain, managing inbound logistics, managing supply chain costs, etc The process of planning, implementing and controlling cost effective flow of materials; maintenance of in-process inventory, finished goods and related information from the point-of- production to the point-of consumption; and efficiency in conforming to customer requirements in the Indian automobile sector need to be improved to compete efficiently in a global market place. In India, logistics account for significant amount of inventory carrying cost, which is affecting the cost competitiveness of the auto component industry. Supply chain management thus forms as an important strategy for Indian automobile industry. Just-In-Time (JIT) production processes as adopted by Maruti Suzuki India Ltd., Tata Motors Ltd., identification of shorter transportation routes, e-sourcing are some supply chain strategies which can be helpful in enhancing competitiveness of Indian automobile industry.

Export Promotion:

India is not a major exporter of automobiles in the world. However, India's automobile exports have grown significantly over the last few years. As per Ernst & Young analysis, revenues from automobile exports from India are estimated to increase from US\$ 40 billion in 2002 to US\$ 300 billion in 2015, thereby increasing its share from 0.8 percent to 3.5 per cent. Vehicle exports of India (in most of the sub-categories) are mainly directed towards developing countries of South Asia, Africa and Latin America. It is seen that most of the automobile manufacturers in India are more domestic-oriented, though they do export a small proportion of their production. Most of them have a better future outlook for domestic market than the international one, mainly because of the huge demand potential in India. Since exports: sales ratio has a significant positive impact on enhancing competitiveness, it is imperative for the

government to encourage exports by means of higher Market Development Assistance (MDA) grants and by further strengthening the provisions under different promotional schemes. The most important measure that the government could take is to ensure that the rupee does not appreciate unduly vis-à-vis other currencies. In addition, Special Economic Zones (SEZs) can avail other exclusive incentives such as exemptions in almost all taxes and duties, tax holidays for 15 years and world-class infrastructure. The incentives could be given to all those export oriented firms who continuously export more than 50 per cent of their output, irrespective of their location. Export promotion is helpful in enhancing competitiveness of automobile firms because of the learning and technological upgradation facilitated by exporting to markets that impose sophisticated standards, speedy delivery schedules by importers abroad and the possibility of market risk diversification by exporting. Hyundai Motor India Ltd is the largest exporter of passenger vehicles in the country, with a 64 per cent share in 2009–2010. Hyundai currently exports 40 per cent of its small cars produced in India, including the Santro, which sells in 97 countries across the world and is produced only in India.

Development of Alternate Fuel Vehicles and Hybrid Vehicles:

Product development has happened in all aspects in the Indian automobile industry except in utilisation of alternate energy sources for vehicles. Continuous efforts need to be made towards incessant modernisation of the industry by facilitating indigenous design, research and development and to develop vehicles propelled by alternate energy sources. This would further enhance the competitiveness of the Indian automobile industry in the global market. Alternative transportation fuels provide economic advantages while also offering significant environmental benefits. Canada is recognized as a world leader in the development and use of alternative transportation fuels with more than 170,000 alternative fuel vehicles in use across Canada. The automobile manufacturers in India should also therefore take adequate steps for developing hybrid vehicles that mainly use two sources of fuel - one of which is generally an electric battery - and have lower emissions as well as reduced operating costs. Such vehicles deliver the same performance with lower emissions and higher fuel efficiency. The Government, in the latest budget announcements, has cut the excise duty on hybrid vehicles from 24% to 14%, (subsequently by another 4% reduction across the board to boost the demand) to promote hybrid vehicles in the country. The development of the US\$ 2,250 Nano and India's first electric car, the Reva showcased India's ability to innovate and design. Companies such as Mahindra &

Mahindra and Hero Group are also planning to develop electric cars in India. Tata Daewoo, a subsidiary of Tata Motors, recently developed an LPG-based MCV (4.5 tonnes), the Novus, which conforms to Euro V emission norms. Ashok Leyland has developed India's first six-cylinder CNG engine for buses using the multipoint fuel injection system, which conforms to Euro IV emission standards. Two-wheeler manufacturers Bajaj Auto, Hero Honda Motors Limited and Mahindra & Mahindra are planning to jointly develop technology that enables two-wheelers to run on natural gas instead of gasoline. Hence Indian automobile manufacturers can become more competitive if they invest a sizable amount in the development of alternate fuel vehicles.

Human Resource Development:

Development of human resources is an important criteria for enhancing the efficiency and competitiveness of Indian automobile firms. The cost pressure on global auto majors, who are mainly present in developed countries, viz., USA, Europe and Japan, is making the industry shift to developing nations. In addition, these countries are facing shortage of skilled manpower, which is expected to grow multi-fold in the years to come. India has large human resource base; however, India needs to enhance the skill-sets that are required for the industry in order to enhance its competitiveness and become a global automotive hub. The Automotive Mission Plan has projected a workforce requirement of an additional 25 million by 2016. To solve the emerging problem of skill shortages and skill mismatches, training capacities and vocational skill development capacities need to be developed urgently. The proposed National Automotive Institute should be quickly established with active participation of private industry players. The Indian automobile industry also lacks skilled and efficient management professionals, which is one of the constraints for many firms to scale up their operations. This problem also needs to be addressed, by both industry and the government, by organising world-class management training programmes. The training programmes vary according to the need of the employees at various levels. Based on the behavioral traits, some of the trainings introduced in 2009-10 by Maruti Suzuki India Ltd. were 'changing mindset-changing lives'; 'being the best'; 'emotional intelligence'; 'planning organizing problem solving'; 'assertiveness & self confidence'; and 'conflict management'. Some of the trainings based on technical needs include 'market research'; 'capital budgeting'; 'risk management & hedging'; 'unigraphics'; 'business simulation games'; etc. The company also has higher education schemes for its employees.

Conclusion

The automobile industry is a very dynamic industry and so are its challenges and strategies. The Indian

automobile industry has the potential to emerge as one of the largest in the world. It may be mentioned that the Indian automobile industry holds significant scope for expansion, both in the domestic market, where the vehicle penetration level is on the lower side as compared to world average, and in the international market, where India could position itself as a manufacturing hub. In the presence of global competitors and a global market, the Indian companies would be able to acquire most of the share of the automobile market and establish a strong foothold in the global market by following sound business strategies. The Indian automobile and component industry needs to look out for opportunities to cut cost, undertake value engineering and enhance disciplines into the system. The industry may take necessary steps to upgrade the skills of the employees and enhance the focus on market research, product

development and customer interactions. Considering the growing demand for automobiles in India and higher capacity utilisation over the years, key Indian automobile manufacturers have already begun to revisit their strategies to enhance their competitive position.

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