

INDIAN AUTOMOTIVE INDUSTRY - 2003

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CHANDIGARH

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1. AN OVERVIEW

The far reaching economic reforms undertaken since 1991 have unleashed the growth potential of the Indian economy. A series of “Second Generation Reforms” aimed at deregulating the country and stimulating foreign investment have moved India firmly into the front ranks of the rapidly growing Asia Pacific region.

The automobile sector comprises of all vehicles, including 2-3 wheelers, passenger cars and multi-utility vehicles, light and heavy commercial vehicles, and the allied engineering sector comprises largely of the auto components sector. Agricultural tractors and Earth Moving Machinery is an associated sector, which keeps the wheels of the agrarian economy moving. It is heavily reliant and aligned to the automobile and allied engineering sector and plays a significant role in India. The Automobile and Allied Engineering Industry may alternatively be termed the Automotive industry.

The automotive Industry in India is now working in terms of the dynamics of an open market. Many joint ventures have been set up in India with foreign collaboration, both technical and financial with leading global manufacturers. Also a very large number of joint ventures have been set up in the auto-components sector and the pace is expected to pick up even further. The Government of India is keen to provide a suitable economic, and business environment conducive to the success of the established and prospective foreign partnership ventures. C\$ 5.7 billion is the investment envisaged in the new vehicles projects.

Improved business confidence, better agriculture production and infrastructure industry. In the financial year 2001-2002, the Automobile Industry recorded a growth of 13% over FY 2000-2001. It achieved a turn over of C\$ 16 billion with an investment of more than C\$ 10 billion and the expectations of a good performance by the manufacturing industry have increased. From April to Dec. 2002, the demand expansion in practically all vehicle segments indicated a growth of over 22%. The on-going trend continues to be positive, signifying further recovery in the coming months.

The industry is characterized by a very high percentage (75%) of production in the 2/3 wheeler sector. India ranks as the largest manufacturer of motorcycles and second largest in manufacturing of scooters in the world. India today is also the second largest manufacturer of tractors, as well. The industry has intense forward and backward integration

The joint venture list indicates a wide variation ranging from 10% to 100%, i.e., wholly owned foreign subsidiaries. The equity participation is not regulated by Government but is market driven. It depends upon the market perceptions of the joint venture partners and their business perceptions primarily in terms of technological, financial and market strengths of the partners. The setting up of joint ventures has also led to enhanced capacity creation in the vehicle sector, particularly in the passenger car sector and the additional capacity is expected to mount by one

million passenger cars in the next 4-5 years.

The large volumes of investment including foreign direct investment in the automobile manufacturing ventures and technical collaboration are propelling a quantum jump in up gradation of technology. Domestic demand for passenger cars and multi utility vehicles is projected at 800,000 cars by 2004 A.D. With increased production and capacity creation in the passenger car sector, foreign countries may use India as an export hub. This tremendous growth is likewise triggering growth of the auto-component segment.

Concentrated efforts are going on in India for inducting and absorbing the latest technology and upgrading the quality of products to an international level and a partner search mission is on. Indian firms are on the look out for Joint Ventures and Technology Transfers specializing in niche technology and to complement their range of products as well as bench marking with the world's latest and the best.

India - Canada cooperation in the Auto sector leaves much to be desired. In India, there are more than 450 foreign collaborations, there only three are from Canada. In Canada, the Automotive industry is one of Canada's main engines of economic growth. The industry produces light duty vehicles - cars, vans, pickup trucks; heavy duty vehicles - trucks, transit buses, school buses, military vehicles; and a wide range of parts, components, and systems used in vehicles of this nature. The manufacturing including aftermarket organizations have grown into a world-class distribution systems and service providers.

Canada's strengths reside in competitive practices in manufacturing input costs, lean manufacturing techniques, Best Global Practices. Canada also has an attractive business climate, good economic fundamentals plus integration in the North American market which would appeal to the expansion of Indian business interests in Canada. The world automobile leaders have evinced keen interest in India and are making their entry through joint ventures and technology cooperation agreements.

Co-operation between Canada and India can be put on the fast track, now that the Government of India has categorized it as a priority sector and removed all Industrial and capacity constraints for setting up new projects or substantial expansion of existing units.

2. The Industry Background

In 1998 the Society of Indian Automobile Manufacturers (SIAM) was formed with a goal to promote sustainable development of the automobile industry, focusing on technology up gradation for environment and safety. SIAM is an important channel of communication for the industry with Government and National and International organizations. In keeping with a liberalized economic environment, the Society is committed to playing a proactive role in all issues of relevance to the industry.

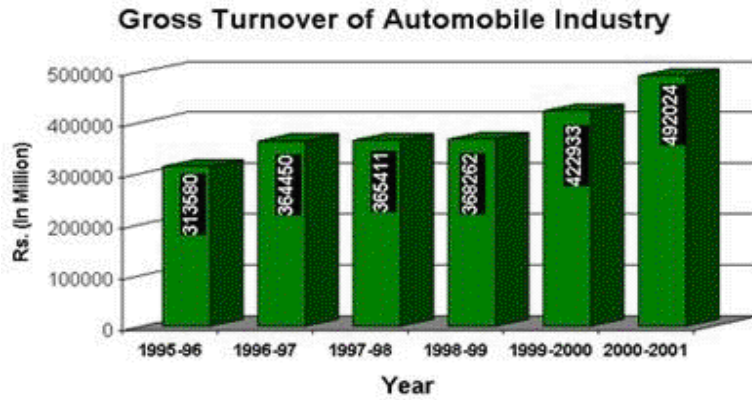
SIAM organizes, biennially, the Auto Expo series of Trade Fairs in cooperation with Confederation of Indian Industry (CII) and Automotive Component Manufacturers Association of India (ACMA). SIAM promotes the advancement of vehicular technology in India, which would ensure that the products are environment friendly, with enhanced safety features, are cost effective and provide mobility to most people.

3. STATISTICS

Production Figures (In Numbers)

CATEGORY	1996-97	1997-98	1998-99	1999-2000	2000-2001	2001-2002
M & HCVs	155696	95854	80528	112308	88210	90849
LCVs	84855	65040	55363	61213	63869	55348
TOTAL CVs	240551	160894	135891	173521	152079	146197
CARS	411145	401002	390709	577243	504654	564126
MUVs	134583	134653	113328	124307	125938	123748
TOT. CARS & MUVs	545728	535655	504037	701550	630592	687874
TOTAL 4 WHEELERS	786279	696549	639928	875071	782671	834071
SCOOTERS	1312920	1279467	1315055	1259423	879707	870213
MOTORCYCLES	988233	1125958	1387286	1794078	2183785	2961906
MOPEDS	678074	667242	672167	724510	694974	491525
TOTAL 2 WHEELERS	2979227	3072667	3374508	3778011	3758466	4323644
3 - WHEELERS	221619	234867	209033	205543	203234	212753
GRAND TOTAL	3987125	4004083	4223469	4858625	4744371	5370468

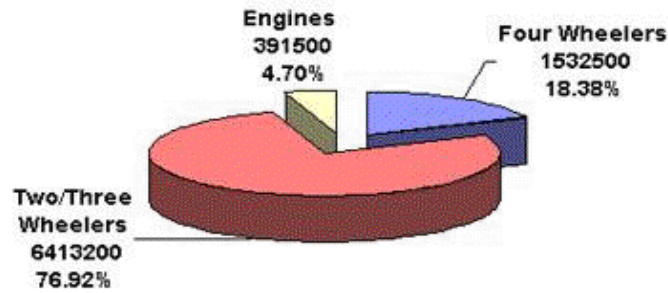
INSTALLED CAPACITIES IN INDIAN AUTOMOBILE INDUSTRY - 2000-01



IC\$ million = Rs. 30 million

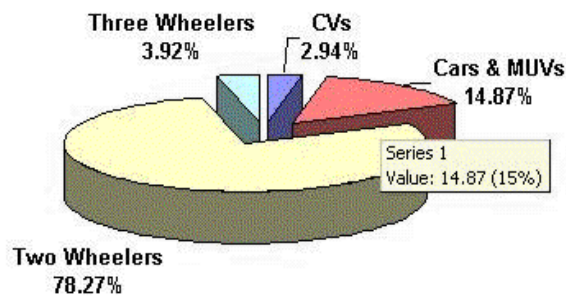
MARKET SHARE OF SALES DURING 2000-01

Installed Capacities in Indian Automobile Industry - 2000-01



MARKET SHARE OF SALES DURING 2000 - 01

Market Share (2000-01)



4. FISCAL POLICY

Import Policy: Import of passenger cars and other automotive vehicles is restricted and an import licence is required for these items. Import of capital goods and automotive components/parts come under Open General Licence (OGL) and so, they require no Government approval.

SKD/CKD Imports: Some ventures in the passenger car sectors envisage initial import of cars in SKD/CKD kits that requires a licence from Directorate General of Foreign Trade (DGFT). While the Government has decided to grant the required licence for the venture, they require the firm/s setting it up to give import details about their import programme, the indigenisation planned, the export possibilities and sign a memorandum of understanding (MOU) with DGFT in this respect. The underlying idea is to discourage low tech applications and to have assurances that the firm/s have a long term commitment to the undertaking.

Import Duty: The import of cars under CBU and two wheelers attract a basic duty of 60%. The import of used cars is discouraged and carries a duty structure of around 150%. The import of SKD/CKD kits has been pegged at 25%. The import of vehicles meant for the transport of goods including dumpers - 50.80%. Special purpose vehicles-crane lorries, road sweepers, concrete mixers attract a duty of 50.80%. Specialized vehicles used in infrastructure construction projects are permitted duty free. Spl. National Calamity Contingent Duty (NCCD) of 1% is charged over and above the custom duty on motorcars, MUV's and two wheelers.

Import of capital goods in the auto sector overall is attracting an import duty of 25%. However, under the Export Promotion Capital Goods (EPCG) Scheme, capital goods including CKD/SKD as well as computer software systems at 5% custom duty subject to an export obligation equiv. to 5 times CIF value of capital goods to be fulfilled over a period of 8 years reckoned from the date of issue of licence over a period of 8 years. However, in respect of EPCG licences for C\$ 33 million or more, the export obligation is required to be fulfilled over a period of 12 years.

Import duty on automotive accessories including spark plugs is 50.80%. The duties are inclusive of additional duties. The import of certain items that would help in reduction of emission level of vehicles has been reduced viz. CNG kits and its parts and catalytic converter is 5%.

Tires: All categories of new tires can be imported freely. No WTO Bound Rates for tires & tubes. Second hand / used tires can also be imported freely if per tire CIF value is CS\$ 255 and above for Truck & Bus Tires and CS\$ 36 and above for passenger car tires, otherwise only with license. The standard rate of duty for import of tires is 35.2 %.

Excise Duty: Vehicles designed for transport of 6 - 12 persons the duty is 24%. In case of public transport vehicles and vehicles for transport of goods, the duty has been fixed at 24%. The duty on passenger cars, two wheelers, auto components and bodies of motor vehicles are 24%. Excise duty on electrically operated vehicles is 8%.

5. VEHICLE SECTORS

In India, the vehicle population, currently at sixty million, is growing at a rate of more than 9% per annum. Of this, 63 % are two/three wheelers. Growth rate has been very high for passenger cars and 2/3 wheeler vehicles. Performance of the sector in terms of production, sales and export growth rates and names of major manufacturers is depicted in the following statements:-

- Medium and Heavy Commercial Vehicles
- Light Commercial Vehicles
- Passenger Cars and Multi-Utility Vehicles
- Two/Three Wheelers

A. Medium and Heavy Commercial Vehicles

India is the fifth largest manufacturer of commercial vehicles in the world. Performance of this sector during the last 4 years is given in the table below:-

	1998 - 1999	1999 - 2000	2000 - 2001	2001 - 2002
Production (in nos.)	80528	112308	88210	90849
% age of Growth in Production		39.0	-21.5	3.0
Sales (in nos.)	83645	111326	87497	88649
%age of Growth in Sales		33.0	-21.5	1.3
Exports (in nos.)	4544	5089	5510	4656
%age of Growth in Exports		12.0	8.2	-1.6

The main manufacturers are :

1. Tata Group (engines in collaboration with Cummins)
2. Ashok Leyland (in collaboration with IVECO, Italy)
3. Volvo India Pvt. Ltd. (wholly-owned subsidiary of Sweden)
4. Defence Vehicle factory (in collaboration with MAN, Germany)

Opportunities for Canadian companies in terms of exports, technology transfers, strategic alliances, financial collaborations and JV's:

- CNG buses - Modification of engines and supply of kits.
- Fuel cell technology for buses
- Bus body building including school bus bodies
- Heavy duty trailers

- Suspension systems for off road vehicles
- Dies and Fixtures
- Auto components - Body parts, Elastomers, Trims, Gear box parts, Engine components - piston and rings, bearings, valve train, timing chains, belts, turbo and superchargers, intercoolers etc.

B. Light Commercial Vehicles

	1998 - 1999	1999 - 2000	2000 - 2001	2001 - 2002
Production (in nos.)	55371	61213	63869	55348
% age Growth		10.5	4.3	-13.3
Sales (in nos.)	56344	60239	62916	55059
%age Growth		7.0	4.4	12.5
Exports (in nos.)	5564	4193	8260	6770
%age Growth		-24.7	97.0	-18.0

Major Manufacturers

1. Tata Group
2. Bajaj Tempo Limited
3. Eicher Motors Limited.
4. Mahindra & Mahindra
5. Swaraj Mazda
6. Hindustan Motors
7. Ashok Leyland Limited
8. Daewoo Motors (India) Limited

The manufacturers of LCVs have more commonly entered foreign technical collaboration while foreign financial collaborations are the exception.

Opportunities for Canadian companies in terms of exports, technology transfers, strategic alliances, foreign collaborations, JV's are:

- Ambulances
- Tools & Equipment., Dies and Fixtures
- Auto Components: Automatic gear boxes, Clutch plates and components, Trims Elastomers, Anti-skid devices, Electrical Systems and Components including digital instrument panels, sensors and actuators, Electronic Systems and Components, Environment and safety related critical items and new materials,

C. Passenger Car and Multi Utility Vehicles

India is the fourth largest manufacturer of cars in Asia. The performance figures for the last four years are as below:

	1998 - 1999	1999 - 2000	2000 - 2001	2001 - 2002
Production (in nos.)	504395	698679	643845	987876
% age Growth		38.5	-8.9	6.8
Sales (in nos.)	521327	762104	717692	743487
%age of Growth		46.0	-5.9	3.5
Exports (in nos.)	28122	28420	27112	53656
%age of Growth		1	- 4.7	97.9

Major manufacturers are:

1. Maruti Udyog Ltd.
2. Hindustan Motors Ltd.
3. Daewoo Motors (India) Ltd.
4. Premier Automobile Ltd.
5. PAL Peugeot Ltd.
6. General Motors (India) Ltd.
7. Tata Group
8. Mahindra & Mahindra Ltd.
9. Mercedes Benz (India) Ltd.
10. Ford India Ltd
11. Hyundai India Ltd.
12. Honda SIEL India Ltd.
13. Toyota India Ltd.
14. Skoda India Ltd.

Major Foreign Collaborators-

After liberalization of the Industrial Policy in July 1991, new 100% subsidiary of Foreign manufacturers and several new joint ventures agreements for manufacture of cars/multi-utility vehicles with Indian companies have been set up. M/s Maruti Udyog Ltd (MUL) is the market leader with more than 60 share of the passenger car and multi-utility vehicles. The market shares of other manufacturers are : Hyundai - 15%, Tata - 10%, Fiat - 3%, Ford - 3%, Honda - 2%, Hindustan Motors - 2%, Daewoo - 3%, General Motors - 1%, Diamler Chrysler - 0.75%, Skoda - 0.75%.

MUL has an installed capacity of 400,000. It has achieved more than 95% indigenisation in models: Maruti-800, Omni and Gypsy. The level of indigenisation for Zen and Gypsy (Wide Tread) is more than 81%. MUL has exported 256, 215 vehicles upto March 2003 to more than 100 countries.

Opportunities for Canadian firms are tremendous - in most of the components of the car in terms of exports, strategic alliances, technology transfers, financial collaborations and JV's. Specific areas of interest are:

- Auto components - Body Parts, Sun Roofs, Retractable Mirrors, Interior - digital instruments and panels, trims, controls etc., Engines & Components - piston and rings, valve train, catalytic converters, turbo and superchargers, Manual and Automatic Transmission Parts, Anti-Skid devices, Anti-Theft systems, Lighting systems controls, Cruise Control, Electronic Systems and Components, New Materials including Composites and Elastomers, Dies & fixtures.
- Machine Tools
- Inspection and Test Equipment.
- Global Positioning System

D. Two / Three Wheelers

India is the largest manufacturer of motorcycles and the second largest manufacturer of scooters in the world. This is the largest and most vibrant automotive sector in India and has shown remarkable resilience in growth. The range of 2/3 wheelers is extremely wide and it covers every variety of engine size, catering to the needs of the college & office goer, as well as a family vehicle. The range covers small mopeds of less than 50 cc, highly fuel efficient scooters, motorcycles of engine capacity ranging from 100 cc to 350 cc, and passenger carrying three wheeler taxis.

The performance of this sector during the last 4 years is illustrated in the table below:-

	1998 - 1999	1999 - 2000	2000 - 2001	2001 - 2002
Production (in nos.)	3583541	3983554	3961700	4536397
% age of Growth		11.2	-0.05	14.5
Sales (in nos.)	3611256	3980323	3943670	4534431
%age of Growth		10.2	-1.0	14.9
Exports (in nos.)	121140	101625	127401	98109
%age of Growth		-16.2	25.4	-23.0

Major manufacturers:

1. Bajaj Auto Ltd.
2. TVS Suzuki Ltd.

3. LML Limited
4. Hero-Honda Motor Ltd.
5. Yamaha Motor India Ltd..
6. Kinetic Engineering Ltd.
7. Maharashtra Scooters Ltd.
8. Majestic Auto Ltd.
9. Kinetic-Honda Motors Ltd.
10. Royal Enfield (India) Ltd.
11. Scooters (India) Ltd.
12. Greaves Ltd.
13. Honda Motorcycle & Scooter India Pvt. Ltd.

M/s Honda Motor Co., Japan, Yamaha Motor, Japan, is having a 100% subsidiaries operating in India.

E. Tractors

India is the second largest manufacturer of tractors in the world. Manufacture of tractors is de-licensed under the New Industrial Policy.

Most of the tractor manufacturers initially entered technical collaboration in the 1970's and 1980's with world renowned companies in the field in UK, USA, Czechoslovakia, Poland etc. The induction and absorption of foreign technology is now almost complete. Now, there is barely any import of tractors for meeting domestic requirements. Indigenous production is sufficient to meet the demand and in fact, the country has started exporting tractors in the recent past to even developed markets, like the USA.

There has been a steady growth in the production/sales of tractors during the last four as may be seen from the table below: -

	1998 - 1999	1999 - 2000	2000 - 2001	2001 - 2002
Production (in nos.)	253850	257112	248079	208618
% age of Growth		1.2	-3.5	-1.6
Sales (in nos.)	253188	251601	249572	215609
%age of Growth		-0.7	- 0.8	-13.6

The manufacturers are required to get their tractors tested at the Central Farm Machinery Testing and Training Institute (CFMTTI), Budni and make necessary improvements as suggested by the Institute, wherever necessary, before the commencement of commercial production. NABARD (National Board for Agricultural and Rural Development) provides refinance facility for purchase of tractors.

A subsidy of 30% or a maximum of Rs. 30,000/- is being given on tractors below 18HP to farmers who are holding between six to eight acres of land. This has helped increase the sales of tractors of smaller HP.

The major manufacturers are:

1. Eicher Tractors Limited
2. Escorts Limited
3. Escorts Farm Tractors Limited
4. HMT Limited
5. Mahindra & Mahindra Limited
6. Punjab Tractors Limited
7. Tractors & Farm Equipments Ltd. (TAFE)
8. Bajaj Tempo
9. Sonalika Tractors
10. Larsen & Toubro Ltd., Bombay (collaboration with S+LH SPA of Italy)
11. M/s. Greaves Limited, Bombay (collaboration with M/s. SAME of Italy)
12. New Holland Tractors (India) Pvt. Ltd (100% subsidiary of by the New Holland Mauritius Pvt. Limited)

Opportunity for Canadian firms lies in export and technology transfer of tractor mounted kits such as scrapers, air seeders, rock removal, rod weeders.& culti-weeders, Skid Steer loaders - rotary angle brooms, snow blowers, post hole augers etc.

F. Agriculture machinery and earth moving equipment

Agricultural machinery items like power tillers and combine harvesters play an important part in the development of the economy in general and the agricultural sector in particular. Power tiller is a hand-operated tractor specially designed for use by small and medium size farmers. A beginning of production of power tillers was made in the 1960's with technology imported mainly from Japan. These are used in cultivation of rice, horticulture, low crop cultivation, sugarcane and orchards. Production of power tillers has been increasing consistently during the last five years. The present level of production is above 10000. A demand projection of 22,000 has been made by the end of the 10th Five Year Plan i.e. 2002-2007.

Self-propelled combine harvesters are important in the context of farm mechanization. Now there are two units in active production. One unit has a collaboration tie-up with a German firm for manufacture of a light weight combine harvester suitable for harvesting paddy crops. The present level of production is about 850 units per year.

Earth Moving and Construction Machinery plays a vital role in developmental and infra structural schemes such as coal and mineral mining, irrigation and power projects, ports, steel, fertilizers etc. Production of this item commenced in 1960's. Today there are thirty-two units engaged in manufacture of Earthmoving and Construction Machinery of various types and sizes. The industry has made tremendous strides during the last decade and has grown in size and diversity. The present level of manufacture is more than 5500 units.

Opportunities for Canadian firms are in export and technology transfer of construction machinery such as:

- Surface Dressing Equipment: Kerb Laying Machine, Mobile Concrete Placer of 90/120 cu.m/hr cap, Electronic Paver Finisher
- Asphalt Recycling Train
- Global Positioning Equipment
- Mobile Bridge inspection
- Toll Collection & Traffic Control Equipment
- Fully Automatic, hydraulically operated, pre cast segment moulds,
- Hydraulically operated Self-propelled soil boring equipment with casing pipes for deep earth anchor and
- Hydraulically operated rough terrain self propelled 100 tons crane with telescopic boom.

Market Dimensions

EXPORTS

The introduction of new generation vehicles with improved quality and performance, the Indian vehicles have been finding ready acceptance in world markets. Globalization and foreign collaboration tie-ups have also helped this growth process immensely. The export in terms of value has gone up from C\$ 144 million in 1992-93 to C\$ 810 million in 2001-02.

Vehicles are exported to:

- a. Cars :Egypt, Kenya, Nigeria, Somalia, Tanzania, Afghanistan, Nepal, Turkey, Hungary, Greece, Italy, Netherlands, Spain, Australia, Malta etc.
- b. Commercial : Egypt, African Countries, Nepal, Srilanka, Jordan, Iraq, Kuwait, Hungary, Russia, France, Afghanistan and Brazil
- c. 2-Wheelers: African countries, Bangladesh, Srilanka, Turkey, UAE, Paraguay, UK, Germany, Argentina, Mexico, Australia and Hong Kong .

Location of units:

While automobile manufacturing units are located in all regions of the country, there have been certain concentrations in some pockets like Chennai in Tamil Nadu, Pune in Maharashtra, outskirts of Delhi like Surajpur, Noida, Gurgaon and Faridabad, Jamshedpur in Bihar, Pithampur in Madhya Pradesh and Bangalore in Karnataka.

6. AUTOMOTIVE COMPONENT SECTOR

ACMA is the nodal agency for the Indian Auto Component Industry. It plays a vital role trade promotion, technology up gradation, quality enhancement and collection and distribution of information. The principal feature of the Indian auto component industry is that it is a high investment sector of the economy with state -of-the-art technology, and serving most vehicle models. There are than 415 major players in the auto component sector. The Automotive Component Industry's output amounted for the financial year 2001-02 was C\$ 6.5 billion with a growth rate of 9% against financial year 2000-2001.

The industry has been making rapid strides towards achievement of world-class Quality Systems by imbibing ISO 9000/ISO 14001/QS 9000/TS 16949 Quality Systems. Till now 329 companies in ACMA membership have been certified to ISO 9000, 80 companies have been certified to QS 9000, 36 companies awarded to ISO 14001, 19 companies have been certified with TS 16949, 2 companies won the Deming prize and 1 company won Japan Quality Medal.

The Indian auto component industry produces a comprehensive range of components which include engine parts, drive transmission and steering parts, suspension and braking parts, electrical parts, equipment and other parts. The component-wise share of production during 2001-2002 are as follows: -

Engine parts	24%
Drive Transmission & Steering Parts	16%
Suspension & Brake Parts	12%
Electrical Parts	8%
Equipment	7%
Other Parts	33%

The industry which has been working toward localisation has successfully developed its own cars from an indigenous component base.

PRODUCTION: Production of auto components has been growing steadily during the last five years. The actual production data for the last three years is given below:-

All Value in C\$ million	1999-00	2001-01	2001-02
Engine Parts	1219	1236	1238
Electrical Parts	391	397	411
Drive Transmission & Steering Parts	696	706	823
Suspension & Braking Parts	608	618	618
Equipments	304	309	360

Others	1130	1148	1699
Total for Organised Sector	4348	4417	5149
Estimated for SSI Sector	1298	1332	1332
Total	5646	5749	6481

The industry has been exporting to OEM's and Tier 1 more than 10% of its output for the last few years. In the year 2001-02, industry has exported C\$ 92 8 million. Principal export items include replacement parts, tractor parts, motorcycle parts, piston rings, gaskets, engine valves, fuel pump nozzles, fuel injection parts, filter & filter elements, radiators, gears, leaf springs, brake assemblies & bearings, clutch facings, head lamps, auto bulbs & halogen bulbs, spark plugs and body parts.

Export Destinations:

- Europe Germany, France, Italy, Netherlands, Spain, UK.
- America USA, Canada, Brazil, Mexico, Colombia.
- Asia Singapore, Sri LANKA, Malaysia, Indonesia, Bangladesh, Nepal, Japan.
- Africa Egypt, Kenya, Ghana, Nigeria, South Africa, Sweden.
- Others Australia.

The rapid inflow of investments in the auto component sector is resulting in the establishment of new Greenfield sites near the vehicle manufacturing units to ensure just-in-time deliveries to the OEMs. But till such time that these units are fully established, the manufacturing capacities are being stretched to their optimum levels in the existing units in order to meet the surge for components. The productivity of the component manufacturing units has also considerably improved.

The Indian firms take advantage of:

- Low costs primarily on account of vast availability of low cost-high skilled labor.
- Cost competitive even at lower volumes due to appropriate cost and level of automation.
- High level of productivity embracing Japanese concepts - Toyota Productions Systems, TPM and TQM.

EMPLOYMENT: With new plants coming up in the auto component sector, local employment is expected to get a boost in the coming years. The employment level stood at 250,000 employees (direct) in 2001-02.

7. EMISSION NORMS AND ALTERNATE FUELS

The significant implications of vehicle emissions has led to a control regulations in conjunction with environment-friendly technologies to reduce vehicle pollution. There is a gap in emission control technologies available as compared to Canada or Europe. The emission norms are being aligned with Euro standards and vehicular technology is being accordingly upgraded. Vehicle manufactures are also working towards bridging the gap between Euro standards and Indian emission norms.

Emission Standards

	Car	2 & 3 Wheelers	CV's
Euro	Already introduced in the country	From April 1, 2005	Already introduced in the country
Euro II	From April 1, 2005	From April 1, 2008	From April 1, 2005
Euro IV	From April 1, 2010		From April 1, 2010

On directions from Supreme Court of India, New Delhi was the first city in India to introduce CNG as a fuel for all public transports - buses, taxis and three wheelers. The directive is now going to be implemented in Mumbai followed by Chennai, Baroda, Surat and Kolkata(which may go in for Auto LPG and not CNG). The demand for the natural gas engine is tremendous and taking the example of Mumbai market alone, each bus manufactures can sell on the average 700-800 buses per annum for the next 10 years there.

India's leading commercial vehicle manufacturers and gas distribution agency are working with Canadian firms in acquiring conversion technology including developing natural gas engines and the latest dispensing infrastructure to suit the Indian conditions.

ALTERNATE FUELS

The alternate fuels normally considered for automotive use are:

Natural Gas	CH_4
Propane	C_3H_8
Methanol	CH_3OH
Ethanol	$\text{C}_2\text{H}_5\text{OH}$

Hydrogen Electricity H₂

Alternate fuels provide three distinct advantages over gasoline and diesel fuel.

Energy independence

Alternate fuels are more likely to be produced from domestic resources

Emission - SMOG

Alternate fuels generally reduce vehicular emissions

Fleet operating costs

Some alternate fuels such as CNG offer lower overall operating costs.

8. MACHINE TOOLS, DIES & FIXTURES

The machine tools and dies and fixtures imported to India

Year 2001-02 - C\$ 1.6 billion

Year 2000-01 - C\$ 1.4 billion

There are no separate import figures for the automotive sector though it represents a major segment of the Indian engineering industry.

Indian companies are sourcing the machine tools from Japan, Germany, Italy, Taiwan, South Korea, UK and USA. Dies and Fixtures mainly come from Australia, Germany, Taiwan and South Korea. There are excellent opportunities in India for Canadian companies in supply of industrial automation, dies and fixtures and special purpose machines.

9. JOINT VENTURES IN AUTO INDUSTRY

Name of the Indian Partner	Name of Foreign Partner	Name of the Indian Company	Vehicle Type
Tata Engineering	DaimlerChrysler, Germany Cummins Inc., USA Holset Engineering, UK	DaimlerChrysler India Tata Cummins Ltd. TELCO	Car Engines Turbo Charger
Premier Auto	Peugeot, France Fiat, Italy	PAL-Peugeot Ltd. Premier Automobiles	Car Car
Birla Group	General Motors, USA	General Motors India	Car
Shriram (SIEL)	Honda, Japan	Honda Siel Cars	Car
Mahindra & Mahindra	Mitsubishi, Japan	Mahindra & Mahindra	Mini Van
Greaves Ltd.	SAME, Italy	Greaves Ltd.	Tractors
Hero Motors Ltd.	BMW, Germany	Hero Motors Ltd.	Motorcycles
Hero Group	Briggs & Stratton, USA	Hero Briggs & Stratton	Engines
Kirloskar Group	Toyota Motor, Japan	Toyota Kirloskar Motor	MUVs
Govt. of India	Suzuki Motors, Japan	Maruti Udyog Ltd.	Car
Punjab Tractors	Sumitomo Corp., Japan	Swaraj Mazda Ltd.	LCVs
100%	Daewoo, S. Korea	Daewoo Motors Ltd.	Car

100%	Ford Motors, USA	Ford India Ltd.	Car
100%	Hyundai, Korea	Hyundia Motor India	Cars
100%	Volvo Trucks, France	Volvo India Pvt. Ltd.	Trucks
100%	Honda Motors, Japan	Honda Motorcycle & Scooter India Ltd.	Scooter
100%	Piaggio & C., Italy	Piaggio Vehicles Ltd.	3-Wheelers
100%	Yamaha Motor, Japan Yamaha Motor, India		2-Wheelers

AUTO COMPONENT INDUSTRY FOREIGN COLLABORATIONS

Japan	145
Germany	86
USA	60
Korea	47
Italy	39
UK	37
France	21
Taiwan	5
Spain	5
Netherlands	4
Singapore	4
Sweden	3
Mauritius	3
Switzerland	3
Denmark	3
Belgium	1
Others	16
Total	482

10. DEMAND FORECASTS

The projected figures from 2003-04 to 2009-10 in 000's are given in the table below:

	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Cars	724	796	876	960	1060	1166	1283
MUVs	125	131	136	142	147	154	160
LCVs	65	68	71	74	77	81	84
M & HCV's	88	92	97	102	107	119	123
Scooters	994	1025	1090	1124	1159	1174	1194
Motorcycle	3914	4076	4810	5675	6697	7597	8521
Mopeds	540	582	626	673	724	780	839
3 wheelers	247	275	305	339	377	419	485
Tractors	195	212	230	249	271	294	319

INVESTMENT:

India is able to attract investment in this sector due to the following reasons:

- For upto 100% of Foreign Direct Investment , no need for Govt. of India's Foreign Investment Promotion Board Approval. Only need to inform Reserve Bank of India of the plans and seek a formal clearance.
- Complete exemption from Customs Duty on industrial inputs and Corporate Tax Holiday for five years for 100 per cent Export Oriented units and units in Export Processing Zones.
- Ability to manage global automotive standards.
- Low cost, Highly productive, Quality oriented workforce which is capable of managing the latest in automotive technology
- A strong influence of Japanese Best practices
- Partnering linkages with global supply chain with efficient Tier 2/3 suppliers.
- A Strategic location - access to the vast domestic and South Asian market
- A potential synergy in IT/Software/ Embedded software and auto components.
- Sophisticated legal and financial system.
- Availability of a package of fiscal incentives including benefits of double taxation treaty.
- English is the medium of communication.

The auto industry growing steadily in terms of installed capacity, production, technology and

product diversification. With the high level of foreign direct as well as domestic investment in manufacturing ventures in the automotive industry, the component sector specially will benefit.

A large number of FDI proposals to establish auto component units have been approved by Government. The latest technology is needed as is quality improvement in products to meet international requirements. With the globalization of the industry, exports of auto components have been growing steadily and will continue. The reforms adopted by Government recently such as delicensing and rationalization of duty structure will open up tremendous investment opportunities for investment and transfer of technology.

FUTURE OUTLOOK :

Because of the strong linkages of the automobile industry with other industries e.g; agriculture, investment in this industry acts as a driver of economic development and employment generation. An expanding manufacturing base of vehicles also leads to development of components and ancillaries with a multiplier effect. With constrained railway infrastructure, road transport is expected to grow further with private sector investment in long term growth and transformation of the rural economy which ultimately leads to greater demand for automobiles. As income levels increase, so will the number of potential buyers in the growing class especially with credit to finance vehicle purchase so that the projected turnover of C\$ 1 billion for 2005 could be attained.

Other major changes happening in the Indian market are:

- Anticipation of a quantum jump in global business - Direct After-Market Exports, Global sourcing for OEM's, Off-shore Manufacturing Bases.
- Global OEM's Sourcing from India e.g. Toyota making India as their Hub for Transmissions, Ford sourcing engines, and plans for sourcing C\$ 220 million worth of auto components from India, Renault for truck parts, 2 Chinese Truck sourcing Transmissions, Fiat plans to source C\$ 390 million, Volvo is exploring Indian sources.
- Global Tier 1s sourcing from India - Cummins for engine parts, Delphi global sourcing operations in India for castings, forgings, plastics, rubber and electrical parts, Visteon Sourcing components and supplying worldwide. Bosch, Denso are buying components for their Global operations from Indian suppliers.

11. MARKET ACCESS STRATEGIES FOR CANADIAN COMPANIES

With private and public investments in infrastructure, further reduction in customs and excise duties, cuts in interest rates and new credit policies, the demand for automobiles is expected to increase exponentially.

The thrust today is on “Go Green, Go Forward.” The major corporate groups have decided on cleaner and greener vehicles with better pollution control devices and use of alternative fuels such as CNG, LPG, CFC - charging of the a/c system and fuel cells. There is long term potential to develop the Indian market for fuel-efficient, clean energy products in line with the regulatory environment and emission norms being put in place.

The customer today is extremely discerning both in terms of quality and performance. The rankings given by J.D. Power Asia Pacific in terms of India Initial Quality Study (IIQS) and Automotive Performance, Execution and Layout (APEAL) are very important in making purchase decisions.

The market strategy for the Canadian firms is to take advantage of a MOU signed four years back between APMA and ACMA, and identify areas of cooperation. They can enter the Indian market following any of the following routes:

1. Joint ventures: Canada has developed world-class leading edge technologies which can be successfully marketed and introduced in India. Examples of successful JVs in India are Visteon, Ford ancillary supplier of bumpers, instrument clusters, plastic parts & Delphi, GM component suppliers of radiators, condensers, etc.
2. Technology Transfers, Strategic Alliances and Financial Collaborations.
3. Export of industrial automation, special purpose machines, tools and dies and after market equipment.
4. Work with Society of Indian Automotive Manufacturers to set up an Inspection and Certification Facilities centre for industry under an Indian Federal Govt. aided proposal.
5. Export of High Performance Passenger Car Radial Tyre, Run Flat (Puncture Proof) Tyre and Green (Environment Friendly) Tyres.
6. Participation in Trade Shows/Promotions such as Auto Expo to be held in New Delhi, India in January 2004 to meet and interact with Indian automotive companies and associations.
7. Participate in exchange of missions between APMA and ACMA: To develop linkages and target specific partnerships.
8. Investment presentations to Indian firms to set up manufacturing bases in Canada.

12. APPENDICES

Full Contact Details of Relevant Organizations

Society of Indian Automotive Manufacturers (SIAM)

Core 3, 5th Floor
India Habitat Center, Lodhi Road
New Delhi, India
Tel: (11) 4647810 , 4648555
E-mail: aiam@nda.vsnl.net.in

Automotive Component Manufacturers Association (ACMA)

6th Floor, The Capital Court
Olof Palme Marg, Munirka
New Delhi 110067
India
Tel: +91 (11) 5501669
Fax: +91 (11) 6160317
E-mail: acma@vsnl.com

Tyres

Automotive Tyre Manufacturers Association
PHD House (4th Floor), Opp. Asian Games Village,
Siri Fort Institutional Area, New Delhi -110016
Tel: 91-11-685 1187 / 656 4291
Telefax: 91-11-686 4799
E-mail: atma@vsnl.in
Website: <http://www.atmaindia.com>

Machine Tools

Indian Machine Tool Manufacturers' Association (IMTMA)
Plot No. 249 F, Phase IV, Udyog Vihar
Sector 18, Gurgaon - 122 015
Haryana, India
Tel: 91 124 8914101
Fax: 91 124 8914108
E-mail: imtma@del2.vsnl.net.in

Websites and Publications

1. Automotive Component Manufacturers Association www.acmainfo.com
2. Society of Indian Automotive Manufacturers www.siamindia.com
3. Automotive Tyre Manufacturers Association www.atmaindia.com
4. Indian Machine Tool Manufacturers Association www.imtma.com
5. India's Economic Policy and Investment Climate www.iic.nic.in

Major Automotive Trade Show

Auto Expo 2004, New Delhi - January 15-20, 2004.

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