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A Comparison Study on the Top Two – Wheeler Companies in India

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STATEMENT OF PROJECT REPORT PREPARATION

1. Thesis title: **A COMPARISON STUDY ON THE TOP TWO– WHEELER COMPANIES IN INDIA**
2. Degree for which the report is submitted: Bachelors of Business Administration.

3. Project Supervisor was referred to for preparing the report.
4 Specifications regarding thesis format have been closely followed.
5 .The contents of the thesis have been organized based on the guidelines.
6. The report has been prepared without resorting to plagiarism.
7. All sources used have been cited appropriately.
8. The report has not been submitted elsewhere for a degree.

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ABSTRACT
This report on **'A COMPARISON STUDY ON THE TOP TWO– WHEELER COMPANIES IN INDIA'** gives insight of the industry encompassing its evolution in India, demand drivers, influence of supply side factors, commentary on industry players and competition and the trends in domestic sales and exports. The report also shows the oligopolistic nature of the Indian two wheeler industry and the propensity of the major players to increase their share.

Keywords: 2WI, HHI, Competition Concerns, Domestic Market, Exports, After Sale Market

I. INTRODUCTION

The **Automotive industry** in India is one of the largest in the world and one of the fastest growing globally. India manufactures over 18 million vehicles (including 2 wheeled and 4 wheeled) and exports more than 2.3 million every year[1]. It is the world's second largest manufacturer of motorcycles; there are eight key players in the Indian markets that produced
13.8 million units in 2010-11[2].

At present the dominant products of the automobile industry are **Two Wheelers** with a market share of over 75% and passenger cars with a market share of about 16%. Commercial vehicles and three wheelers share about 9% of the market between them. The industry has attained a turnover of more than USD 35 billion and provides direct and indirect employmentto over 13 million people.

The Indian two-wheeler industry has come a long way since its humble beginning in 1948 when Bajaj Auto started importing and selling Vespa Scooters in India. Since then, the customer preferences have changed in favour of motorcycles and gearless scooters that score higher on technology, fuel economy and aesthetic appeal, at the expense of metal-bodied geared scooters and mopeds. These changes in customer preferences have had an impact on the fortunes of the players. The erstwhile leaders have either perished or have significantly lost market share, whereas new leaders have emerged.

With an expanding market and entry of new players over the last few years, the Indian two wheeler industry is now approaching a stage of maturity. Previously, there were only a handful of two-wheeler models available in the country. Currently, India is the second largest producer of two-wheelers in the world. It stands next only to China and Japan in terms of the number of two wheelers produced and the sales of two-wheelers respectively. There are many two-wheeler manufacturers in India. The major players in the 2-wheeler industry are Hero Honda, Bajaj Auto Ltd (Bajaj Auto), TVS Motor Company Ltd (TVS) and Honda Motorcycle & Scooter India, Private Limited (HMSI) accounting for over 93% of the sale in the domestic two wheeler market. It is noteworthy that motorbikes segment's **share is just below 80%** of the total 2W market in India which is dominated by Hero Honda with a market share of 59%. Scooter segment's market share is about 18% which is led by Honda Motorcycle & Scooter India, Private Limited (HMSI) with a market share of 43%.Three- fourth of the total exports in the two wheeler automobile industry are made in the motorcycle segment. Exports are made mainly to South East Asian and SAARC nations.

Consumers are very important for the survival of the Motor Vehicle manufacturing industry. In 2008-09, customer sentiment dropped, which burned on the augmentation in demand of cars. The key to success in the industry is to improve labour productivity, labour flexibility, and capital efficiency. Having quality manpower, infrastructure improvements, and raw material availability also play a major role. Access to latest and most efficient technology and techniques will bring competitive advantage to the major players. Utilising manufacturing plants to optimum level and understanding implications from the government policies are the essentials in the Automotive Industry of India.

EVOLUTION OF THE INDIAN TWO WHEELER INDUSTRY BEFORE COMPETITION ACT, 2002

The two-wheeler industry (henceforth 2WI) consists of three segments viz., scooters, motorcycles, and mopeds. The 2WI in India began operations within the framework of the national industrial policy as espoused by the Industrial Policy Resolution of 1956. This resolution divided the entire industrial sector into three groups, of which one contained industries whose development was the exclusive responsibility of the State, another included those industries in which both the State and the private sector could participate and the last set of industries that could be developed exclusively under private initiative within the guidelines and objectives laid out by the Five Year Plans (CMIE, 1990). Private investment was channelized and regulated through the extensive use of licensing giving the State comprehensive control over the direction and pattern of investment. Entry of firms, capacity expansion, choice of product and capacity mix and technology, were all effectively controlled by the State in a bid to prevent the concentration of economic power. However due to lapses in the system, fresh policies were brought in at the end of the sixties. These consisted of MRTP of 1969 and FERA of 1973, which were aimed at regulating monopoly and foreign investment respectively. Firms that came under the purview of these Acts were allowed to invest only in a select set of industries.

This net of controls on the economy in the seventies caused several firms to a) operate below the minimum efficiency scale (henceforth MES), b) under-utilize capacity and, c) use outdated technology. While operation below MES resulted from the fact that several incentives were given to smaller firms, the capacity under-utilization was the result of i) the capacity mix being determined independent of the market demand, ii) the policy of distributing imports based on capacity, causing firms to expand beyond levels determined by demand so as to be eligible for more imports. Use of outdated technology resulted from the restrictions placed on import of technology through the provisions of FERA. Recognition of the deleterious effects of these policies led to the initiation of reforms in 1975 which took ona more pronounced shape and acquired wider scope under the New Economic Policy (NEP) in 1985. As part of these reforms, several groups of industries were delicensed and 'broadbanding'[3] was permitted in selected industries. Foreign investment was allowed in Delicensed industries meant that firms no longer required licenses from the State to enter the industry or expand their plants. Broadbanding meant that a firm could manufacture products related to the ones they were currently making without the need for a separate license.

Table 1: Details of firms within the two-wheeler industry

Period of entry	Name of the Indian firm	Name of foreign collaborator, if any	Segment	Brand name of product
1955 - 1969	Enfield India Ltd. (EIL)*	Enfield Ltd., U.K.	motorcycle	Royal Enfield 350 cc
	Automobile Products of India (API)*	Innocenti Ltd., Italy	scooter	Lambretta
	Bajaj Auto Ltd. (BAL)	Piaggio Ltd., Italy	scooter	Vespa
	Ideal Jawa Pvt. Ltd. (IJPL)*	Jawa Ltd., Czechoslovakia	motorcycle	Yezdi, 250 cc
	Escorts Ltd. (EL)*	CEKOP, Poland	motorcycle	Rajdoot, 175cc
1970 - 1980	Kinetic Engineering Ltd. (KEL)	-	moped	Luna
	Scooters India Ltd. (SIL)*	-	scooter	Vijai
	Maharashtra Scoters Ltd. (MSL)	-	scooter	Priya
	Majestic Auto Ltd. (MAL)	-	moped	Hero Majestic
	Sundaram Clayton Ltd. (SCL)	-	moped	TVS 50 cc
1981 - 1990	TVS	Suzuki, Japan	motorcycle	Ind-Suzuki 100 cc
	Bajaj Auto Ltd.	Kawasaki, Japan	motorcycle	Kawasaki Bajaj 100 cc
	Escorts Ltd.	Yamaha, Japan	motorcycle	Yamaha RX 100 cc
	Hero Majestic Ltd.	Honda, Japan	motorcycle	Hero Honda 100 cc
	Kinetic Engineering Ltd.	Honda, Japan	scooter	NH 100 cc
	Lohia Machinery Ltd.	Piaggio, Italy	scooter	Vespa XE
	Enfield India	Zundapp-Werke GmBH	moped motorcycle motorcycle motorcycle	50cc 50cc 80cc 100cc
1991-1999	Bajaj Auto Ltd.	-	moped - scooterette	Sunny
	TVS	-	scooter - scooterette	Scooty
	Kinetic	Honda	scooter - scooterette	Marvel
	TVS	-	scooter	Spectra
	Kinetic Motors**	-	scooterette	Style

* indicates firms/brands whose sales declined in the eighties

** In 1998, the joint venture between the Firodias Group of India (Kinetic) and Honda of Japan came to an end when the former bought out Honda's stake of 51%. However in return for royalty and technical fees, Honda continued to supply technical know-how to the new Kinetic Motors Company Ltd. (KMCL).

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COMPETITION ACT, 2002

The competition Act, 2002 (as amended), [the Act], follows the philosophy of modern competition laws and aims at fostering competition and at protecting Indian markets against anti-competitive practices by enterprises. Competition laws all over the world are primarily concerned with the acquisition and/or exercise of market power and its abuse. The term “market power” is variously known as “dominant position”, “monopoly power” and “substantial market power”.

The Act prohibits anti-competitive agreements, abuse of dominant position by enterprises, and regulates combinations (consisting of acquisition, acquiring of control and M&A) wherever such agreements, abuse or combinations cause, or is likely to cause, appreciable adverse effect on competition in markets in India.

With increasing integration of the Indian economy and markets with the international economy the Government acquired a wider perspective on regulation of markets from merely curbing monopolies to promoting competition. Consequently, the competition act, 2002 was enacted on 13th January 2003. This Act seeks to replace MRTP Act, 1969.

INDIAN TWO WHEELER INDUSTRY: AT PRESENT

(4.1) 2000-2010

The Indian two wheeler industry has shown rapid rate of growth in last one decade. Its share in automobile industry has increased from 15% in 2001 to 17% in 2010 (**Table 2**). Annual sales by industry have increased from Rs. 7486 crore in 2001 to Rs. 30096.82 crore in 2010 (**Table 2**). A snapshot of the 2W manufacturers operating in India across time shows that while the core that existed 10 years back continues to remain the same, there have been several casualties along the way but at the same time there have been several new entrants. This is also the period which witnessed the end of Hero Honda’s 27 years old JV with Honda in 2010. Rising income levels, reducing excise duties, higher loan tenure and loan-to-value offered by the financing companies have all fuelled the growth of two-wheeler demand. Besides, mounting traffic chaos and limited parking space has also increased the demand for two-wheelers from households that can afford or actually do own a car. Furthermore, with increasing women working population, changing social philosophy and broad-mindedness, the penetration of two-wheelers in target population has increased significantly during last one decade especially in urban areas. However rural areas and smaller towns still remains considerably underpenetrated market.

In recent years, the Indian two-wheeler (2W) industry has shown a strong volume growth over the last two-years, having grown by 25% in 2009-10 and 27% in 2010-11 to reach 13.3 million units. This strong double-digit growth has been driven by multiple factors. One reason, of course, is statistical as this period of high double-digit growth has showed up aftera rather sedate previous two years, when the 2W industry volumes had shrunk by 5% in 2007-08 and had grown by a mere 5% in 2008-09. In addition to the contribution of pent-up demand, the 2W industry growth over the last two years has been supported strongly by various underlying factors including India’s rising per capita GDP, increasing rural demand, growing urbanization, swelling replacement demand, increasing proportion of cash sales and the less measurable metric of improved consumer sentiment.

Table2: Sales Revenue

	Annual Rs. Crore Sales	**Annual Rs. Crore Sales**
Year	**Automobile**	**two wheelers(U)**
Mar-01	46827.84	7485.93
Mar-02	48896.27	9009.74

Mar-03	51607.3	10549.08
Mar-04	71463.02	13641.1
Mar-06	101174.48	17991.12
Mar-07	124860.7	21359.17
Mar-08	140541.96	24744.06
Mar-09	146825.07	26283.25
Mar-10	177529.92	30096.82

(4.2) Expectations Ahead

Going forward, Information & Credit Rating Agency of India Ltd. (ICRA) expects the 2W industry to report a volume CAGR of 10-12% over the next five years to reach a size of ~21- 23 million units by 2015-16 as it views the fundamental growth drivers - comprising of expected steady GDP growth, moderate two wheeler penetration levels, favourable demographic profile, under developed public transport system and utility quotient of a 2W - to be intact. Additionally, the entry of new players in the industry, multitude of new model/ variant launches, growing distribution reach, cheaper ownership costs on a relative basis are expected to be some of the other prime movers for industry growth over the medium term. In ICRA's view, while the trend in rising commodity prices, hardening interest rates and increasing fuel costs may lead to some moderation in industry growth over the short term, the growth over the medium to long term is expected to remain in double digits.

ICRA believes the landscape of the Indian 2W industry is set to evolve as several new players are keen to enter into the Indian market which would further intensify competition; most existing players plan to extend/ strengthen their reach into the rural and semi-urban markets to harness incremental growth opportunities; and manufacturers are showing increased thrust on new product development and repositioning to tap new customer segments. These dynamics would ensure that business does not remain as usual for the large incumbents as market share may change hands to some extent. Nevertheless, the existence of strong product capability, wide distribution network and established supply chain will continue to be the necessary conditions to sustain competitive advantage and achieve economies of scale.

In view of the higher than expected demand last year, several Original Equipment Manufacturers (OEMs) had faced capacity constraints in their supply chain for select components which resulted in persistent demand-supply gap for few models, reflected in longwaiting periods at dealers' end. To overcome supply constraints and also to gear up for meeting the continued buoyancy in demand, most players currently have plans to expand production capacity which would entail large capital expenditure (capex) both by Original Equipment Manufacturers as well as suppliers. While this may pull down the profitability metrics of industry participants over the short term, the anticipated strong volume growth should enable them to tide over the short term pressures and emerge with a bigger scale and arelatively stronger credit profile over the medium term.

Also, in expert's views the current asset-light business model of OEMs as a key positive as most of the players source a majority of components from suppliers and in-house facilities are generally limited to component assembly (or manufacture of select parts). Thus, capacity expansion in existing facilities by OEMs is likely to involve only moderate incremental capex; although the quantum is expected to be much higher for OEMs who plan to establish Greenfield facilities to augment existing capacity which may impact Return on Capital Employed (RoCE) to some extent. Further, for suppliers engaged in capital intensive product segments like castings, forgings and machining, the payback is expected to be accomplished over a relatively longer time horizon as compared to that likely to be achieved

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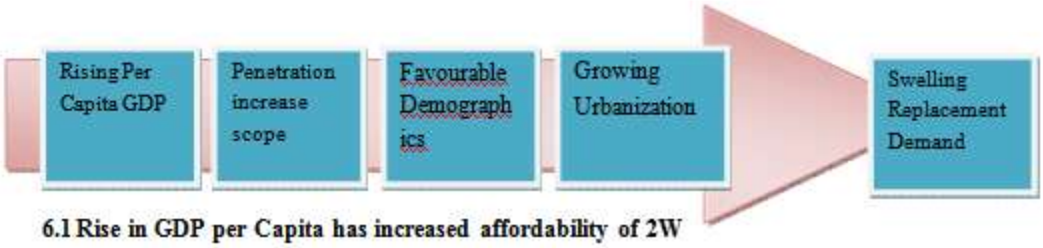
by OEMs or other auto component manufacturers.

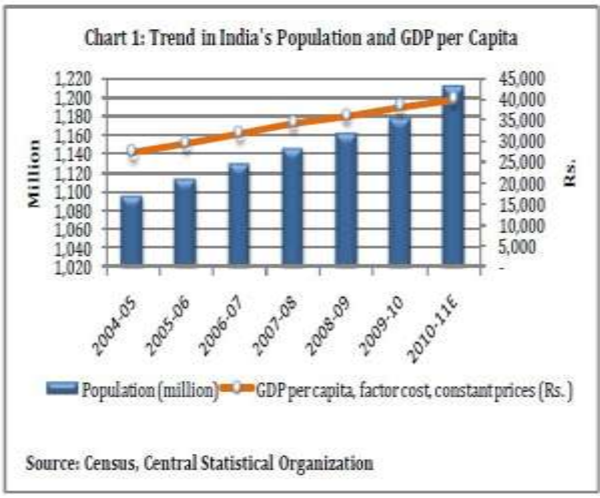
DEMAND DRIVERS FOR THE TWO WHEELER INDUSTRY

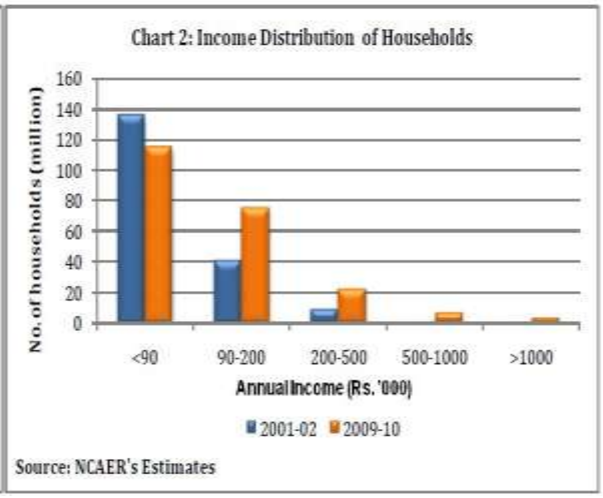
On one hand, growing economic well-being reflected in rising per capital GDP is likely to make 2Ws more affordable; on the other, various fundamental drivers such as low 2W penetration (in relation to several other emerging markets), favourable demographics, growing urbanization and swelling replacement demand are expected to enable the growthmomentum to sustain over the medium term.



6.1 Rise in GDP per Capita has increased affordability of 2W

India's per capita real GDP growth of 7% (CAGR) over the last six years (refer **Chart 1**) has contributed substantially towards raising the standard of living of households, which in turn has been one of the key drivers of growth for the country's automobile industry. However, income growth is likely to have been uneven across the different income deciles. Income at the lower end of the distribution scale, which comprises the 2W target segment[11], is likely to have grown at a rate below the overall per capita income growth rate. Yet economic well- being has led to a significant increase in the number of households coming within the 2W target segment over the past few years. As per NCAER's estimates, the number of households having annual income between Rs. 200,000- 500,000 is estimated to have increased to 22 million in 2009-10, a scale-up by a factor of 2.5x over 2001-02 .

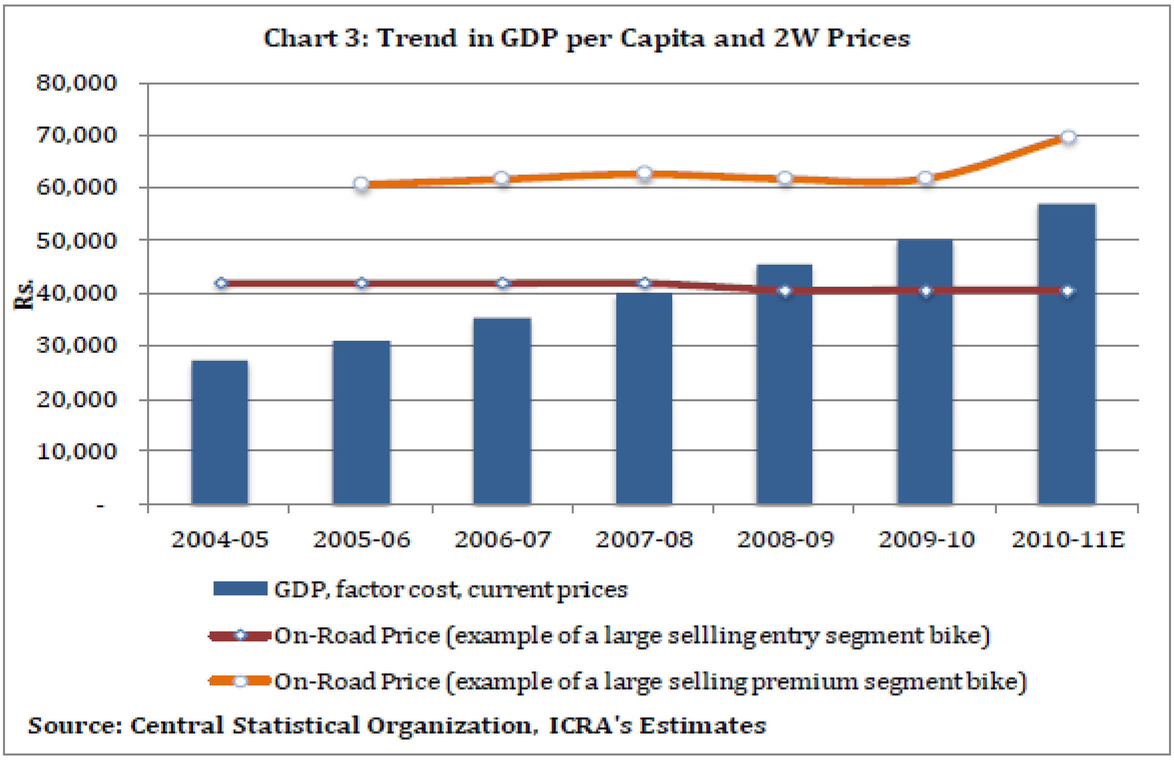




Incidentally, this scale-up is almost similar to the expansion in the domestic 2W industry size (by volumes) during this period. Given that economic and population growth would further expand the universe of low to middle income earners who have the threshold purchasing

[11] The low to medium per capita income strata remains the primary target market for 2W OEMs since the high income category is more likely to bypass the 2W mobility alternative altogether and graduate directly to cars.

Future as well. Also, significantly, 2W purchase prices and operating expenses (inflation power to buy a 2W, the pattern of healthy industry growth is likely to hold in the foreseeable adjusted) are now around 36% lower than they were a decade back, considering that vehicle prices have not escalated much over the years, indicating increasing in affordability of 2Ws (refer **Chrt3**).



Under-penetrated market as compared to other emerging markets to provide adequate headroom for future growth

Although India is the second largest 2W market in the world in terms of sales volumes (after China), the 2W household penetration level in the country is much lower at around 36% than in some of the other emerging markets such as Brazil, Indonesia, Thailand and Taiwan. Also, the penetration rates differ between India's rural and urban areas, with the rural areas being under-penetrated by a factor of 3x as compared to larger cities. That said, assuming that households having annual income less than Rs. 90,000 do not have the ability to own a 2W, the existing household 2W penetration in India in the addressable income segment of households (i.e. income greater than Rs. 90,000) is estimated to be around 74%[12] (refer **Table4**). Prima facie, this appears to be a large figure and suggests that penetration-driven growth may be difficult for the 2W industry to accomplish over an extended time horizon. However,

The fact that in absolute terms there are still 28 million households at present in the primary target income segment that do not own a 2W, the scope for penetration-led future growth continues to be reasonably large. Additionally, the social trend in favour of nuclear families coupled with expected expansion of the target income segment pie going forward is expected to further increase the number of households which could be potential targets for the 2W industry.

Table 4: 2W Penetration in India

(Figures in million)	2009-10
Total number of households	222
-Households (with annual income <90,000)	114
-Households (with annual income between 90,000-1,000,000)	104
-Households (with annual income >1,000,000)	4
2W population in India	80
2W Penetration	
Based on total number of households	36%
Based on addressable income levels	74%

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Source: Census, NCAER, ICRA's Estimates

Favourable demographic profile to continue to feed the consumption cycle

A large youth population potentially offers a sizeable market for consumer products. India currently has a very favourable demographic profile with average age of 25 years, which is 9 years younger than China, and more than 12 years and 19 years younger than the US and Japan, respectively. As per estimates (based on Census 2001 and Census 2011 data), around 33% of India's population of 1.2 billion (in 2011) belongs to the age bracket of 20-40 years. Within this, the population of males, which is the key target segment for motorcycles, is estimated to be 206 million (**Table 5**); and the population of females, which is the key target segment for scooters[13], is estimated to be 189 million, suggesting existence of large size of the addressable market. On conversion of even 20% of this youth population into 2W owners, a demand for ~80 million 2W (6.8x domestic 2W sales in 2010-11) is estimated to get generated over the medium term. Further, with the youth population estimated to increase to 229 million by 2015E, a cumulative increase of 11% over 2011, the 2W consumption cycle appears strongly sustainable. This age group is also characterised by a combination of earning power and high spending propensity, which would increase the likelihood of conversion of potential ownership into actual ownership.

Table 5: Estimated Population of India's Male 'Youth'

	2001	2001	2011E	2011E	2015E	2015E
	Sex Ratio	India's Population	India's Population^	Estimated Population (Males)	India's Population^	Estimated Population (Males)
0 to 4	934	110				
5 to 9	923	128				
10 to 14	902	125	110	57		
15 to 19	858	100	127	66	109	56
20 to 24	938	90	124	65	126	66
25 to 29	1,007	83	99	54	123	65
30 to 34	988	74	89	46	99	53
35 to 39	958	71	83	41	88	46
40 to 44	865	56	74	37	82	41
45 to 49	906	47	70	36	73	37
50 to 54	843	37	55	30	70	36
55 to 59	1,036	28	47	25	55	29
60 to 64	1,025	28	36	20	47	25
65 to 69	1,091	20	27	13	36	20
70+	992	29				

206 million
229 million

^Assuming 0.74% mortality rate (applied uniformly across all age brackets)

Source: Census 2001, ICRA's Estimates

Interplay of growing urbanization and rising rural incomes augurs well for domestic2W demand

As per Census definition, an area is classified as urban if it has a population of more than 5,000; has a population density exceeding 400 persons per square kilometer; and 75% of its male workers are engaged in a non-agricultural profession. Nevertheless, state

Urbanization has drawn people living in India's rural and semi-rural hinterland to cities and towns at a steady pace (refer **Table 6**). The need for mobility in most Indian cities and towns therefore has increased substantially, yet the proliferation of public transport system has not kept pace. This is where the utility of a 2W as the most affordable mode of private transport comes to the fore. Empirical data suggests that there is a strong positive correlation between urbanization and 2W

demand, particularly in the initial stages of economic growth. For instance, 2W penetration in stateslike Delhi, Tamil Nadu and Maharashtra is much higherthan the pan-India penetration due to the relatively higher degree of urbanization in these states. With urbanization expected to rise progressively, around 89 million people are estimated to be added to India's urban spaces over the next decade (78 million people are estimated to have got added over the last decade), which could potentially be one of the most defining changes likely to transpire. Especially so, since this would add fuel to allied drivers,
including increase in proportion of working women and rise in wage and salaried people that is expected to have a strong positive impact on the demand for consumer durables.

Table 6: Trend in Urbanization in India

Figures in million	Rural Population	Urban Population	% Urban Population
1991	629	217	25.7%
2001	742	286	27.8%
2010E	819	358	30.4%
2015E	853	401	32.0%
2020E	879	447	33.7%

Source: Census 2001, Statistical Outline of India 2009-10

Further, to the extent the rise in urbanization is contributed by migration of people from rural and semi-rural regions, it would in turn support increase in remittances to the rural markets enhancing rural incomes. Industry estimates suggest that around 60% of the rural economy now depends on non-agricultural sources of income, such as remittances from cities, trading, and employment in the manufacturing sector. While the increase in crop prices during the last three years has left larger disposable incomes with rural customers, non-agrarian sources of income have also played an important role in supporting consumption by rural masses. The interactions between rural and urban centres could be part of a virtuous cycle, as cities have benefits beyond their boundaries. This is validated by studies which show that rural populations adjoining large urban centres have around 20% higher income than the rural average. Thus, the legacy of lower penetration levels in the rural market, scarcity of public transport infrastructure and the rising income levels would be positive triggers for rural 2W demand, going forward. At the same time, rising salary levels in urban areas, shortening replacement cycles, increasing traffic congestion in cities would be factors augmenting 2W demand in urban areas.

Replacement demand to be a key contributor to 2W industry volumes going forward According to estimates, around 50% of the total domestic sales of 2W are now made to first- time buyers, 30% to customers looking to upgrade from their existing vehicle, and 20% to buyers seeking a second vehicle for the household. The break-up suggests that currently around 50% of the sales in the domestic 2W market are made to replacement buyers. Industryestimates also suggest that the 2W ownership cycle has now shrunk to less than five years. Considering that the industry has sold around 79 million 2W in the domestic market since the turn of the century, the total replacement demand works out to a fairly large number (**Table7**). Add to this the healthy growth in sales to first-time buyers in recent years, driven in particular by sales to the rural market, the replacement opportunity could only increase in the future.

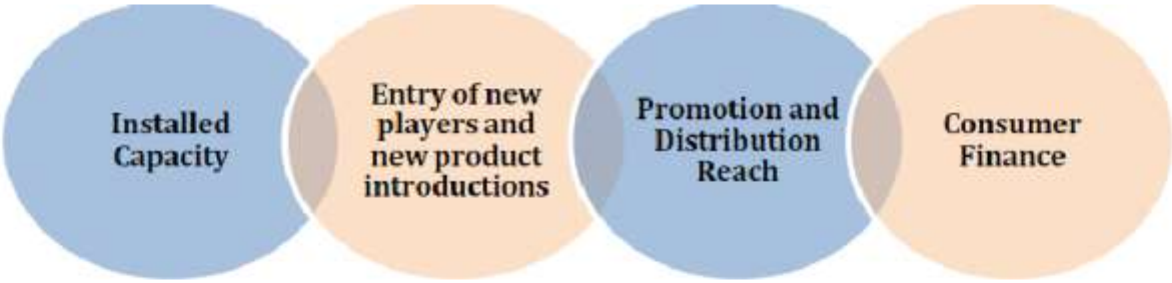
Table 7: Age Profile of 2W in India

	Motorcycles	Scooters	Mopeds	Total
> 10 years^	11%	42%	55%	22%
6-10 years	34%	23%	19%	30%
0-5 years	55%	35%	27%	48%
Total	**100%**	**100%**	**100%**	**100%**

^Refers to the period from 1983 to 2000-01
Source: SIAM, ICRA's Estimates

From the consumer perspective, although replacement involves fresh capital spending, the inducement of upgrading to an improved technology 2W, having better performance, features and more attractive styling; complemented with increased spending propensity are expected to be the prime ingredients feeding replacement demand.

1. **INFLUENCE OF SUPPLY SIDE FACTORS AND STATE OF COMPETITION** With demand drivers appearing in place to support the domestic 2W industry growth, the supply side enablers too will have a key role to play in catalysing the growth process. Amongst various factors, adequacy of manufacturing capacity; availability of assorted products across 2W categories suited to diverse customer segments; accessibility of customer touch points and effective customer communication strategies hold prime importance in complementing the underlying demand. At the same time it also creates some competition concerns which we need to analyse.



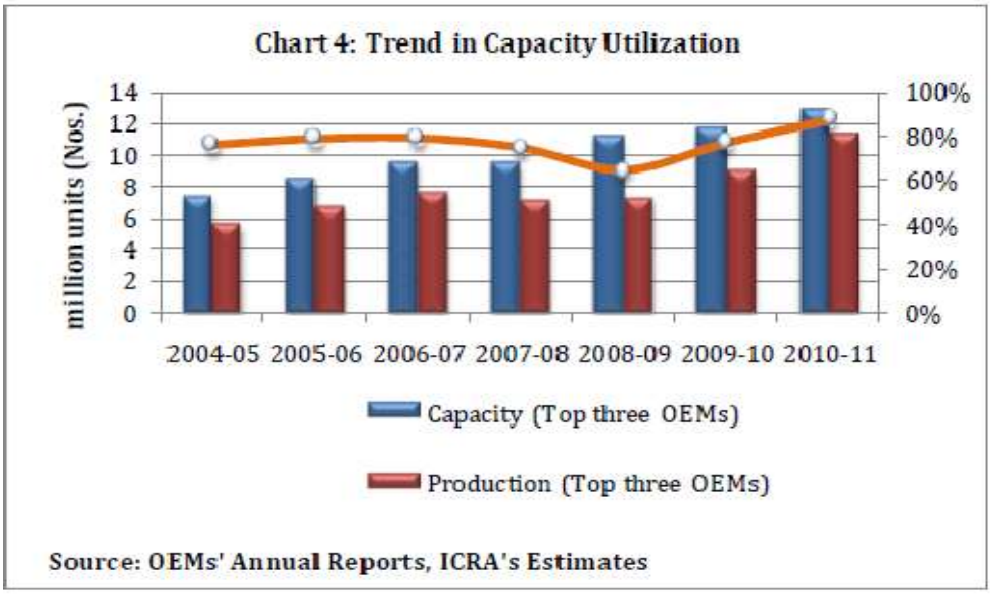
Large additional capacity creation necessary to meet the expected strong 2Wdemand
The 2W Original Equipment Manufacturers (OEMs) have made regular investments over the years to meet the consistent rise in demand. The installed capacity of the top three players viz., Hero Honda Motors Limited (HHML), Bajaj Auto Limited (BAL) and TVS Motor Company Limited (TVS), which together command a market share of over 80% in the domestic 2W market, rose from 8.4 million units in 2005-06 to 12.9 million units in 2010-11 incurring a cumulative capex of around Rs. 3,700 Crore over this period.

Table 8: Installed Capacity of 2W OEMs in India

	Actual		Expected*
million units (Nos.)	2009-10	2010-11	2011-12
Hero Honda	5.4	5.6	5.7
Bajaj Auto	3.9	4.5	5.0
TVS	2.4	2.8	3.0
HMSI	1.6	2.0	2.2
Suzuki	0.3	NA	0.5
Yamaha	0.6	NA	1.1
Royal Enfield	0.7	0.7	NA
Mahindra 2W	-	0.5	0.5

**As per announcements made by respective OEMs*
Source: Annual Reports, Media Reports, ICRA's Estimates

However, barring the 2007-08 and 2008-09 periods, the overall capacity utilization in the industry has remained healthy. Generally, the variance in production volumes between the highest and the lowest production month during a year is around 25-30%, which implies that capacity utilization in the region of 75-80% is the typical industry norm. However, in 2010- 11, the capacity utilization of the top three players at around 87% (Refer **Chart 4**) was the highest in the last several years, reducing the capacity buffer available. Notwithstanding the above, the primary reason for the OEMs' inability to fully meet the prevailing demand in 2010-11 was the shortage of components from select suppliers, rather than in-house capacity constraints. Further, in 2010-11, the industry had to grapple with labour shortage issues due to insufficiency of skilled manpower which impacted production in labour intensive units particularly. To cater to the expected rise in future 2W demand, many OEMs have announced capacity expansion plans comprising of both Greenfield as well as Brownfield investments, which is expected to make capacity utilization revert to its historical levels. As per estimates, to achieve industry volumes of 21-23 million units by 2015-16 (domestic and export), the OEMs will need to invest around Rs. 4,500 Crore over the next five years for expanding their in-house capacity. Additionally, an amount of Rs. 10,500 Crore is estimated to be spent by the auto component manufacturers considering that the 2W OEMs have shifted a major part



Of the ircapital burden[14] to their vendors. For the bigger players like HHML and BAL, the 2W business has been highly profitable allowing them to strengthen their balance sheets over the years through strong cash accruals. Thus, availability of surplus funds is expected to allow them to incur the required capex without stretching their balance sheet and credit profile. For many of the other players, while profitability metrics may come under pressure over the short term, the anticipated strong volume growth should enable these companies to tide over the short term pressures and emerge with a bigger scale and a relatively stronger credit profile over the medium term.

With regard to addressing human capacity, a greater emphasis is now being laid by most companies on skill development of labour by way of imparting in-house training. This shows the competition in the Indian motorcycle industry is getting fierce. Analysing the recent actions of Hero Group makes it amply clear.

Munjal family owned Hero Group, in order to boost their R&D, has hired 150 engineers from competitors like Yamaha, Bajaj and Mahindra. After their split from Honda Motors. Hero Group is taking strong actions to keep their numero uno tag in the Indian motorcycle industry. Hiring the brightest minds in the industry will prove to be quite effective for Hero Group in their quest to

[14] For HHML and BAL, annual depreciation charges are in the region of 1-1.5% of operating income. Due to an outsourcing-based production strategy, BAL's depreciation costs in fact have come down from Rs. 185.4 Crore in 2004-05 (3.1% of OI) to Rs. 136.5 Crore in 2009-10 (1.1% of OI).

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remain No1.

Also, as a long term measure, the industry is already working in close coordination with the government towards building a roadmap for providing vocational education pertinent to the industry. ICRA's interaction with various industry players suggests that in case labour shortage/ high costs persist, the industry will have no choice but to invest in making production processes more automated, which will call for additional capital investments.

Due to stiff competition from the major players there have been some casualties along the way BUT at the same time entry of new players into the Indian market has enriched product offerings and brought-in new technologies

A snapshot of the 2W manufacturers operating in India across time shows that while the core that existed 10 years back continues to remain the same, there have been several casualties along the way but at the same time there have been several new entrants (Refer **Table 9**).

Many of the erstwhile strong players like **Kinetic Motor** (Brands - Moped: Luna; Scooter: Pride, Marvel, Nova, Zing, Blaze; Motorcycles: Challenger, Boss, Velocity, Aquila), **Majestic Auto** (Brands - Mopeds: Hero Panther, Hero Effy), **Maharashtra Scooters** (Brands - Scooter: Priya) and **LML** (Brands - Scooters: NV, Select, Supremo and Motorcycles: Freedom, Adreno) lost their ground over the years due to, amongst other reasons, their inability to maintain a contemporaneous product portfolio. The competitors, on the other hand, executed a combination of right marketing strategies and right product mix to expand their market share. For instance, Kinetic that enjoyed a strong market share of over 40% in the scooters segment in the mid-1990s, later faced tough competition from its erstwhile partner - Honda - in the scooters segment after breaking-off from its JV in 1998. Likewise, Kinetic's once iconic moped brand Luna and Majestic Auto's mopeds, are now extinct giving way to TVS' mopeds which currently command a market share of closing to 100%. Not so long ago, even BAL and TVS experienced flagging motorcycle sales due to lack of appropriate products in their portfolio in key segments, a deficiency that has been

Table 9: 2W OEMs Operating in India

Year 2000	Year 2011	Remarks
Bajaj Auto	Bajaj Auto	*Bajaj Auto exited the scooters segment in 2010*
Hero Honda	Hero Honda	*Hero Honda entered the domestic scooters segment in 2006; ended its JV with Honda in 2010*
TVS - Suzuki	TVS Motor	*TVS and Suzuki parted ways in 2001; both have a presence in the domestic 2W industry now as separate companies*
Royal Enfield	Royal Enfield	*Remains a niche player manufacturing cruiser bikes*
Escorts Yamaha	India Yamaha Motor	*Partnership between Escorts and Yamaha ended in 2001 with the latter buying out the former's entire stake in the erstwhile JV*
LML	LML	*LML was referred to the BIFR in 2006 and is still under its purview; the company currently produces scooters although volumes remain small*
-	Honda Motorcycles & Scooters	*Honda, through its wholly-owned subsidiary in India, entered the scooters segment in 2001 and the motorcycles segment in 2004*
-	Suzuki Motorcycle	*After having exited the Indian market in 2001 on cessation of the JV with TVS, Suzuki entered the domestic motorcycles segment in 2006 and the scooters segment in 2007*
Kinetic Motor	Mahindra Two Wheelers	*Mahindra entered the domestic 2W market in 2009 after buying out the assets of Kinetic Motor (80% stake)*
Kinetic Engineering	-	
Majestic Auto	-	
Maharashtra Scooters		
	Harley Davidson, Hyosung, Ducati	

Companies no longer manufactu-ring 2Ws

Recent global entrants into the Indian 2W market

Source: ICRA

partly made up over the last few years with the introduction of new products and new technologies. The revival of the scooters segment is another case in point, the credit forwhich could be given to the technically evolved versions of gearless scooters introduced by Honda Motorcycles & Scooters in the year 2001. The strong success of the Honda Activa in the Indian market eventually prompted both the existing players (Hero Honda) as well as new players (Suzuki, Mahindra) to take notice of the opportunity offered by the domestic scooters segment[15].

Thus, over the last decade, the entry and gain in strength of new players (Honda, Suzuki, Yamaha and Mahindra) in the Indian market has expanded the number of product offerings; and has also ensured that large incumbents maintain a contemporary product portfolio to protect their market share. This trend is likely to hold in the future.

[15] The contribution of the scooters segment to the domestic 2W industry has increased from 12% in 2006-07 to18% in 2010-11. Honda Motorcycles & Scooters and TVS are the largest two players in the domestic scooters segment and had a market share of 43% and 22%, respectively in 2010-11.

Table 10: Chronology of Product Launches (New Models and Variants) by Key Players

	2006-07	2007-08	2008-09	2009-10
Hero Honda	CD Dawn, CD Deluxe, Achiever, Karizma, CBZ Xtreme, Glamour FI, Passion Plus	Splendor NXG, Hunk, Super Splendor, Passion Plus, Splendor Plus, Pleasure	Passion Pro, CBZ Xtreme, Pleasure, Splendor NXG, CD Deluxe, Glamour, Hunk	Karizma ZMR-FI, Hunk, Splendor Plus, Splendor NXG, Passion Pro, Glamour, CD Deluxe/Dawn, Pleasure
Bajaj Auto	Pulsar 200 DTS-I, Kristal	Pulsar 220 DTS-Fi, Discover 125 DTS-I, Discover 135 DTS-I, XCD 125 DTS-Si	XCD 135 DTS-Si, Platina 125 DTS-Si	Pulsar 220F, Pulsar 180 UG, Pulsar 150, Pulsar 135 LS, Discover 100 DTS-Si
TVS	Scooty Teenz, Scooty Pep+, Star City, Star City Sport	StaR City 110 cc, Star Sport, Flame, Apache RTR 160, Scooty Teenz Electric	Scooty Streak, Apache RTR RD	Flame, Jive, Wego

Source: ICRA

Table 11: New model launch plans of 2W OEMs

Bajaj Auto	Next generation Discover and Pulsar range	H2, 2011-12
	Boxer	July 2011
	KTM Duke 125 cc/ 200cc	H2, 2011-12
TVS	Two new 2W	2011-12
Honda Motorcycles & Scooters	Mass market 100cc bike	2012-13
	CBR 250R	Q1, 2011-12
Suzuki	New Scooter, Two new motorcycles	December 2011
Yamaha	Scooter	H2, 2011-12

Source: Media Releases

The Indian 2W industry today is almost half the size of the **Chinese** market in terms of production volumes but also has far lesser number of manufacturers. While there are eight key players in the Indian market that produced 13.8 million units in 2010-11; the Chinese market has around 10 large companies that capture around 70% of the 24.2 million units' large market (out of a total of around 50 2W companies). This, in conjunction with the fact that the largest two listed players i.e.

Hero Honda and Bajaj Auto continue to enjoy strong profitability, indicates that the Indian market may also see the influx of new players such that excess returns currently being earned by select players may diminish over the longer term.

At the present, Chinese companies do not seem to pose any sizeable threat to Indian two-wheeler makers, at least on the home turf. According to analysts, Indian customers' demanding attitude and an overall competitive environment has put up virtual barriers for Chinese two-wheeler makers to make their India foray successful.

Pramod Kumar and Mitakshi Ashar, analysts with JM Financial, in a recent note said incumbent players (i.e. Indian companies) offer superior products at competitive prices, which these (Chinese) players have been unable to do so far. "Companies such as Hyosung Group of Korea and SYM of Taiwan have attempted in vain to make a mark in the Indian market. Even the much hyped Mahabharata Motors, a joint venture between Universal Group of India and Indonesia's Salim Group, has not been able to attract buyers," they said.

But when it comes to global sales, Indians still have a long way to go - 7 out of 10 two-wheelers sold in the world are still made in China. Though Indian companies have already begun taking the fight with Chinese manufacturers to the global arena, a lot remains to be done to succeed here. Take the case of Bajaj Auto, which has already launched a low-cost motorcycle in Nigeria. This bike has been manufactured in China, using Chinese supplier base and aims to dent Chinese companies' share in the "bottom of the pyramid" segment, where price is less than $1000 and Chinese bikes dominate. Industry estimates say Chinese brands account for almost two-thirds of the 21 million unit low priced bike segment spread across China and African countries (primarily Nigeria) at present. Will Bajaj be able to wrest market share from these companies remains to be seen.

Even TVS Motor Co is expanding its export footprint in places such as Latin America in a bid to strengthen its grip on global two-wheeler industry. Kumar and Ashar said India compares poorly among emerging markets in terms of two-wheeler penetration, but with rising incomes this is set to improve.

Talking about the upper-end of the motorcycles segment of Indian market, three global players namely, Harley Davidson, Hyosung and Ducati have already entered; and Mahindra has also made an entry into the scooters segment, the executive motorcycles segment and the premium motorcycles segment. From the OEMs' perspective, sustenance of market position in the future would require greater investments in new product development and brand building as Indian customers mature and become even more demanding. Eventually, this is expected to bring-in multiple benefits from the consumers' standpoint including (a) more product options to choose from while making a purchase decision (b) increase in segmentation and creation of new sub-product categories (c) greater competition amongst OEMs giving rise to innovations and better value-for-money offerings; all being supporting conditions for supply to tango with demand.

Distribution network: Unfair trade practices on the part of firms?

To get the best returns from the distribution network, an OEM strategy that balances the necessity to expand customer touch points while ensuring adequate dealer profitability and minimal channel conflict is crucial. Ideally, the distribution network of an OEM in a city should be large enough to provide both sales as well as service convenience to customers; yet it should be small enough such that every outlet could have optimum capacity utilization. Considering that the overall 2W market continues to be under penetrated, most OEMs have maintained their focus on expanding their sales-cum-service outlets especially in the semi- urban and the rural areas. Current established dealers have helped OEMs scale up their networks quickly by setting up satellite dealerships along with service facilities in the neighbouring smaller towns. As per estimates, the rural market now accounts for around 45% of total domestic 2W sales volumes elevating their significance in the OEMs' business strategies. The instances cited in **Table 12** highlight the growing prominence of rural markets in the OEMs' priorities.

Table 12: Growing Focus of 2W OEMs on Rural Markets

Hero Honda: *Hero Honda has been adding 500-600 customer touch points every year and has doubled the count from 2,000 in March 2006 to 4,200 (includes around 800 dealers) in March 2010. To strengthen its presence in the rural markets, HHML had launched a dedicated rural vertical in 2007-08, which took several new marketing initiatives including launch of a national-level programme to direct sales efforts in territories with a population of 5,000 and above.*
Bajaj Auto: *Bajaj Auto, which currently has around 500 dealers, has embarked on an aggressive network expansion programme whereby it plans to add 130 new dealers by November 2011. At present, Bajaj Auto's distribution network is well placed as far as the Pulsar, a premium brand with an urban focus, is concerned. This proposed network expansion programme is directed mainly towards the smaller towns and villages where its mass commuter bike Discover may see a further boost.*
TVS: *In 2010-11, TVS' mopeds, which as a product category have a rural and a small city focus, accounted for 39% of its total domestic 2W sales (23% in 2006-07). This represented a volume CAGR of 28% over the last three years, against 8% CAGR for its total 2W sales.*
Honda Motorcycles & Scooters: *Currently, the rural market accounts for around a third of Honda's domestic 2W sales. The company has recently announced its plan to introduce new products suited for the mass market and targeted at rural consumers.*
Yamaha: *Currently, the rural market accounts for only 15% of Yamaha's domestic 2Wsales. Recently, the company has announced its plans of increasing its network strength in tier-2 and tier-3 cities and increasing the number of sub-dealers in rural areas. However, the company will have to complement this with an appropriate product and pricing strategy since its existing portfolio essentially has a premium positioning*

Source: Company, Media Reports, ICRA

For the smaller players and the relatively new entrants, one of the key challenges confronting them in terms of strengthening their market position is to scale up their distribution network. However, the inevitability of lower volumes in the initial periods may repulse new dealer inclusions. To incentivise, such OEMs are generally required to compensate their dealers by offering higher margins effectively leading to higher channel investments. Given in **Table 13** is the comparison of volumes, revenues and costs for a typical dealer of Bajaj Auto (high volume player) and Yamaha (low volume player) in a tier-II city.

Table 13: Estimated Dealer Margins Comparison – Bajaj Auto Vs Yamaha

	Bajaj Auto	Yamaha
Annual Dealer Sales Volumes (units Nos.)	480	600
Service Load Per Year (units Nos.)	18,000	2,520
Revenues (Sales + Service + Spares) (Rs. Crore)	**27.3**	**4.1**
Lease Rentals (Rs. Crore)	0.2	0.2
Employee Costs (Rs. Crore)	1.3	0.2
Fixed Operating Costs (% of Revenues)	**5.5%**	**10.3%**
Vehicle Purchase Costs (Rs. Crore)^	23.0	3.3
Spares Purchase Costs (Rs. Crore)	1.8	0.2
Other Costs (Rs. Crore)	0.1	0.01
Operating Margins (%)	**3.6%**	**3.3%**
Inventory Carrying Costs (Rs. Crore)	0.3	0.03
PBDT (Rs. Crore)	0.7	0.1
PBDT Margins (%)	**2.5%**	**2.5%**
PAT (Rs. Crore)	0.4	0.1
Payback (years)*	**4.0**	**8.4**

^Based on gross margins of 4.3% in case of Bajaj Auto and 9.3% in case of Yamaha
**Based on present value of lease rentals and assuming a flat profit growth*
Source: ICRA Estimates

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The above analysis suggests that for a low volume OEM to ensure that its dealer chain earns similar PBDT[16] margins as that of bigger players, it is required to offer around 500 basis points higher gross margins on vehicle purchases. Still, in absolute terms the profits earned by such dealers would likely remain much smaller vis-a-vis their bigger counterparts due to lower volumes. Accordingly, the payback for a smaller volume dealer, despite higher margins, is estimated to be twice as long as that of a higher volume dealer (Refer **Table 13**). This is a quintessential vicious circle for the new players as having a large distribution network is vital for achieving adequate sales volumes and sufficient volumes are in turn necessary to keep the dealer ecosystem interested. The implications of this are twofold; one, the new OEMs/ smaller players will need to make much higher investments till such time as their volumes achieve a critical mass; two, the customers may have to partially bear higher 2W service costs, effectively creating an entry barrier against new entrants. This underscores the key competitive advantage currently being enjoyed by Hero Honda, Bajaj Auto and TVS

[16] Profit Before Deducting Tax due to their vast distribution network in the domestic market by virtue of their longer operating history, an advantage they are likely to maintain over the medium term. Also most manufacturers operate through dealers and, the dealer margins have been on the rise in order to provide protection for respective market shares. This needs to be examined further if it poses serious competition concerns, or is just the outcome of being the first movers and old timers in the industry. But it **makes it difficult for new firms** to establish in the industry without any doubt.

Price based competition and Vicious circle

The Indian two wheeler market is increasingly becoming a price warfield[17]. Everyone and their competitor wants to win the title of the 'World's cheapest bike' and the customer has become the King.

But the question remains if this price based competition is good for the health of the industry?Isn't everyone eating their own margins in the quest for greater market share and farther market expansion? And where does this leave smaller players like LML (going through some very tough times as of now), Kinetic (good scooters, questionable field network, trying hardin motorcycles) and even Yamaha and TVS?

A dominant firm like Hero Honda or Bajaj Auto can arm twist suppliers to deliver parts cheaper, which the suppliers won't mind doing considering the volumes that these two dominant player offer. Both the Munjal and Bajaj families are also typical in the way they promote companies run by their brothers, cousins, in-laws etc. etc. So Bajaj Auto can always ask for cheaper rates from a Varroc or Auragabad Electricals while Hero Honda can do the same with MAC or Munjal Showa or Omax Auto. But what happens to LML (still makes a lot of its components, very archaic), Kinetic (mostly independent suppliers), TVS (Sundram Group suppliers, who anyways act independent, very professional but is it the best way forward?), Yamaha (independent suppliers) or a new entrant like Suzuki (they will buy components from anyone except a Munjal family or a Sundram company)? Without volumes, one is not in a position to get the best prices.

Without the best component prices, the price of the final product goes up. But then these small players have to fight Bajaj Auto. So they reduce the selling price of the bike which implies the decline in the margins for these firms.

This seems to be creating a vicious circle: Low volumes

17 High component prices > High final price > Still lower volumes > Low profitability or another way forward may be Low volumes > High component prices > Low final prices > Compromise on margins > Low profitability.

Still another way forward may be like this

Low volumes > Low component prices (compromise on component quality) > Low final product price > High volumes > Low dependability > Low customer satisfaction > Low volumes > Low profitability. Thus the fat gets fatter while the small gets smaller and may eventually get wiped out.

The only way out seems to be technical innovation which can give a low volumes company an advantage over a high volume one. Unfortunately low volumes low profitability also means that you don't have major money to invest in R&D. Or in some cases, like TVS, where R&D does get a priority, it is mostly copied very quickly by rivals as most of the R&D is supplier driven. So a Centra loses its technical advantage to a CT 100

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very quickly. After all the battle field is of 100cc bikes, not battle tanks.

The other way out of this vicious circle is by concentrating on **niches**. Indian bike manufacturers till now have focussed on street commuters only. A high percentage of the market is shifting to a low margin, high volume game and smaller manufacturers need to get out of this root to survive. So Kinetic should not be doing a Boss and TVS should not be putting its energies into a Star or even a Centra. Small companies should be focusing on 150cc + niches and experiment with new body styles. Performance and quality should be the marketing weapons rather than price.

A 2W remains amongst the most economical modes of commuting

In June 2010, the Central Government had announced its decision to deregulate petrol prices such that they could reflect international rates. An increase in petrol price by Rs. 2 per litre is estimated to result in an increase in monthly fuel bill by around Rs. 80 for a heavy 2W user having monthly usage of 2,500 km (**Table 14**). Recently in June 2011, fuel prices hiked again. The impact would accordingly be lesser for a consumer having moderate monthly usage. In any case, since a 2W is the most economical mobility option, it puts it at a comparative advantage vis-à-vis other vehicle alternatives. But the negative impact of an increase in petrol prices on buyer sentiments remains a relevant risk, as that may persuade consumers to postpone their purchase.

Introduction of Nano also doesn't seem to have much difference. The country's largest bike maker, Hero Honda, said on the launch of the Rs one lakh car 'Nano' will not have any impacton the two-wheeler industry.

Table 14: Comparison of Operating Costs across Modes of Transport

	Ordinary Bus Service - Delhi	Low Floor AC Bus - Delhi	Delhi Metro	2W-Executive Segment	4W-Entry Segment
Fuel Efficiency (km/ litre)				70	15
Fuel Costs (Rs./ litre)				60	60
Average Running Charges per km (Rs.)	0.88	1.50	1.04	0.86	4.00
Monthly Service Charges (Rs.)	0.0	0.0	0.0	67	250
Monthly Insurance Charges (Rs.)	0.0	0.0	0.0	63	500
No. of km travelled per month	1,000	1,000	1,000	1,000	1,000
Total Operating Costs per month (Rs.)	**875**	**1,500**	**1,039**	**986**	**4,750**

Source: ICRA's Estimates

He said going by the price there is a fair difference between the cost of ownership and maintenance of Nano and two-wheelers. "The price of Nano is closer to a high-end bike, the buyer for which is not a car customer," he said, however, adding that there may be some two-wheeler buyers who are attracted to Nano.

DOMESTIC TWO WHEELER MARKET

Entry segment of motorcycles shrinking in size as OEMs pursue profitable growth through other 2W segments

Motorcycle models with a sticker price of up to Rs. 40,000 constitute the Entry segment. This segment largely consists of 100cc bikes and is currently composed of the CD Dawn and CD Deluxe models of HHML, Platina of BAL, Star Sport of TVS and Crux and Alba of Yamaha. The Entry segment has faced continual volume pressures in the domestic market over the last several years and was also the worst hit during the credit squeeze in H2, 2007-08 and the economic slowdown of 2008-09. Although sales volumes in this segment have remained flat over 2009-10 and 2010-11, the segment's share in the domestic 2W market has steadily declined from 43% in 2005-06 to 16% in 2010-11 (Refer **Chart 6**). Several factors have contributed to the waning importance of the entry segment in the Indian 2W market. These include the gradual shift in preference of consumers in favour of the more feature-rich Executive segment, reluctance of organized financiers to increase credit exposure on this segment[18] and the OEMs' own strategy of reducing focus on this relatively less profitable segment.

[18] Being a relatively smaller ticket segment, the Entry segment's customers usually belong to the most vulnerable economic section within the universe of motorcycle buyers which is not the preferred segment for organized financiers. The Entry segment constitutes only around 15% of all

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financed 2W sales.

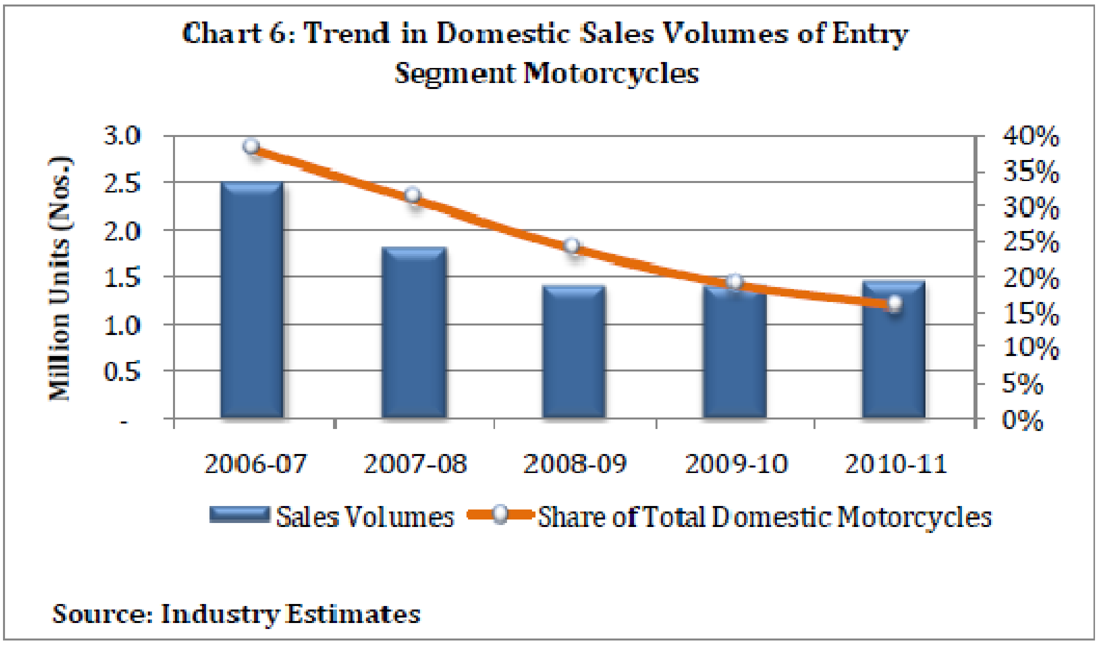

Table 15: Brand Churn in the Entry Segment

	Brands Discontinued	Existing Brands
Hero Honda	*CD 100, Street, Joy*	*CD Dawn*
Bajaj Auto	*CT100, Boxer, Byk*	*Platina*
TVS	*Centra, Spectra, Max100*	*StaR*

Source: ICRA

The shrinking volumes in this segment have led to discontinuation of several leading brands of the past (Refer **Table 15**). For instance, Bajaj Auto's CT100 was clocking monthly volumes of 80-85,000 in 2005-06, but was eventually discontinued and replaced with the Platina whose current production volumes hover around 30-35,000 per month. Being a segment which offers limited scope for margin expansion and remains a highly interest-rate sensitive segment, almost none of the 2W OEMs have any plans for new model introductions into this segment. Nevertheless, the Entry segment bikes have a strong exports potential especially to other developing markets. Even now, a large majority of motorcycle exports from India are in the entry segment. For instance, Bajaj Auto mainly sells its entry segment bike Boxer in Africa, a continent

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which accounts for around 50% of the company's exports. Yamaha too is considering export of its mass market bike Crux to Africa and South America. Unless any disruptive innovations materialize (like the Tata Nano in the passenger vehicle segment) resulting in significantly lower price points, it is expected that the Entry segment volumes to grow at a much slower pace than the overall 2W industry and volume growth to be driven mainly by exports.

Executive segment remains the largest volume generator for the 2W industry Motorcycle models with a price between Rs. 40,000-50,000 comprise the Executive segment, which is largely concentrated around the 100-125 cc models. The segment has benefited the most due to up-trading from the Entry segment consequent to the growing sophistication of customers, besides the steady and secure replacement demand. Accordingly, the segment's share in the domestic motorcycles segment has risen from 48% in 2005-06 to 65% in 2010-11 (Refer **Chart 7**). Being the largest volume generator, the Executive segment has also seen the largest number of new model launches and portfolio refurbishments by all players and involves the highest product and brand clutter (**Table 16**).

Table 16: Existing Brands in the Executive Segment

	Brands (100cc)	Brands (125cc)
Hero Honda	*Splendor Plus, Splendor NXG, Passion Plus, Passion Pro*	*Super Splendor*
Bajaj Auto	*Discover 100*	*Platina 125, Discover 125*
TVS	*Jive*	*Flame*
Honda Motorcycles & Scooters	*CB Twister*	*CB Shine*
Suzuki	-	*Slingshot*
Yamaha	*YBR, G5*	*YBR 125, SS 125*
Mahindra	*Stallio*	-

Table 17: Brand Strategy Comparison of the Two Leading Players

Hero Honda	Bajaj Auto
•Has developed product lines rather than single products by introducing price steps. •Example: *Splendor Plus* and *Splendor NXG* are both 100cc bikes but are priced differently. Similar is the case with *Passion Plus* and *Passion Pro*	•Has relied on line stretching instead of offering products with price steps •Example: Offers the *Pulsar 180cc* and *Pulsar 220 cc* at the higher-end of the premium segment and the *Pulsar 135cc* at the lower end of the premium segment leveraging an established existing brand (i.e. *Pulsar 150cc*); offers the *Discover 150cc* at the lower end of the commuter-premium segment stretching the *Discover 100cc* brand; offers the *Platina 100cc* in the entry segment and the *Platina 125cc* in the Executive sement

Source: ICRA

Although the Executive segment has high competitive intensity reflected in the presence of a large number of brands, Hero Honda remains the clear market leader on the strength of its Splendor and Passion series of bikes that have maintained a dominant position over the years. In fact, in 2008-09, Hero Honda's market share in this segment had touched the highs of 80%, due to subdued competition in that period following lowering of Bajaj Auto's focus on the 100cc segment and the absence of contemporary products in TVS' portfolio. Since then, both Bajaj Auto and TVS have introduced new products - Bajaj Auto launched the Discover 100 in July 2009; and TVS launched the Jive (110cc bike) in December 2009. Bajaj Auto's Discover 100 has been a runaway success since its launch and has captured a market share of around 22% in less than two years of its launch (currently clocking monthly volumes of ~1 lakh units), causing Hero Honda's market share in this segment to revert to historical levelsof around ~65%. TVS Jive's monthly run-rate, on the other hand, has remained low so far at

~4,000 units, even as it is uniquely positioned as the only auto-clutch bike in the country. While there are brands from several other players too that have a presence in this segment, none have been able to pose any serious competition to Hero Honda so far. Yet, the strong growth opportunity provided by this segment due to its large size has drawn regular new product introductions from all players including Honda Motorcycles & Scooters (third largest player in the Executive segment after Hero Honda and Bajaj Auto), Yamaha, Suzuki and Mahindra, significantly expanding the segment's pie.

Going forward, ICRA expects competition in the Executive segment to intensify further as Honda Motorcycles & Scooters and Suzuki have announced plans to introduce new products in this segment. Concurrently, the refurbishment rate of existing brands is also likely to gain further pace. However, considering the healthy growth prospects of the segment, it is less likely for competition to be based on price and below-the-line promotions. But the segment is expected to derive a greater share of marketing spends as investment in building brands could have positive long term benefits for gaining/ protecting market share in this large volume segment.

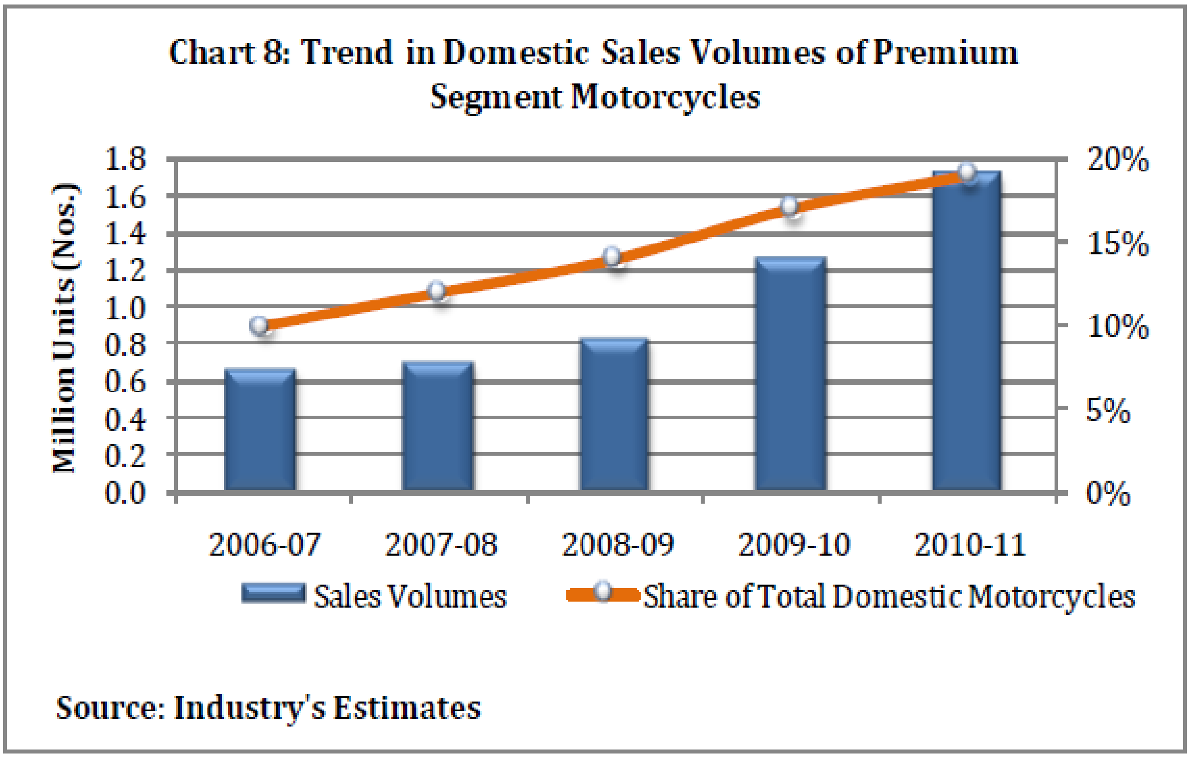
Premium segment expected to continue being the fastest growing in the motorcycles market

Motorcycle models with a price of over Rs. 50,000 comprise the Premium segment, which consists largely of greater than 150 cc engine capacity bikes. This category is the most segmented and includes:

(a) performance bikes, ranging from 150cc to 220 cc and consisting of Hero Honda's Glamour, Achiever, CBZ Extreme, Hunk and Karizma; Bajaj Auto's Pulsar family, Honda Motorcycles & Scooters' Unicorn Dazzler, and TVS' Apache RTR, besides models from the stables of Suzuki and Yamaha

(b) cruiser bikes such as Royal Enfield's Bullet and Bajaj Auto's Avenger

(c) ultra biking range consisting of Bajaj Auto's Kawasaki Ninja, Honda Motorcycles & Scooters' CB 1000R, Suzuki's Hayabusa and Yamaha's YZF-R1.



The Premium segment has been the fastest growing one over the last five years having recorded a volume CAGR of 27%, a period in which its segment share increased to 17% in 2010-11 from 9% in 2005-06. Bajaj Auto's Pulsar family comprising of 135cc, 150cc, 180cc and 220cc bikes occupy the frontal position in this segment with a market share of ~50% (monthly volumes of 70,000-75,000 units), followed by Hero Honda with a market share of ~20%. The balance 30% is almost evenly distributed between Honda Motorcycles & Scooters, Suzuki and Yamaha.

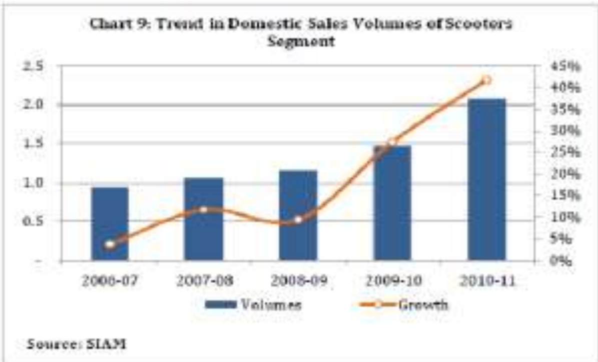
Unlike Executive segment motorcycles, which are positioned as commuter products and family bikes providing basic transportation, the positioning of the Premium segment bikes is anchored on performance attributes. While Executive segment bikes typify higher fuel economy and lower operating costs, the features of Premium segment bikes are characterized by visual appeal, higher speeds, heady acceleration and superior ride, handling and braking. At the edge, however, such clear distinction in terms of target customers has now blurred. This is evident from Bajaj Auto's introduction of the Pulsar 135cc, targeted at the conventional commuter segment aspiring to experience sports biking. Likewise, the Discover 150cc is positioned as a family bike for the commuter segment wishing to ride a higher displacement bike.

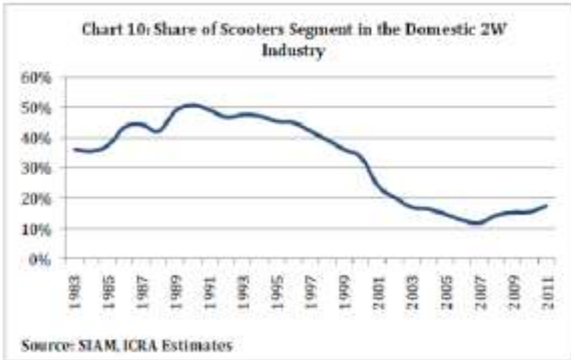
In ICRA's view, the market for this segment offers further scope for segmentation in terms of price points and performance characteristics. Also, the segment is expected to get crowded as new players like Harley Davidson, Ducati and Hyosung gear up to expand their presence in the super-premium segment. At the same time, Bajaj Auto, Suzuki, Honda Motorcycles & Scooters and Mahindra also have multiple products in the pipeline slated for launch in the near term. Some of the new products planned to be launched are either likely to be imported as completely built units (CBUs) or would carry a high imported content resulting in higher prices which could restrict volumes. Although these products are not meant for the mass market, considering the increase in customer awareness levels, the OEMs cannot afford to ignore the price-value equation. Overall, this segment is expected to remain the fastest growing over the medium term, given the disproportionate growth in purchasing power in the hands of middle-class urbanites, especially in the age group of 20-30 years. This should also translate into superior profit margins for players that are stronger in the Premium segment.

Segment repositioning driving growth in the Scooters segment

As a product category, scooters have undergone an image makeover over the last decade. From being a laggard in technology and characterised by two-stroke engines, high emissions and old styling, scooters have metamorphosed into vehicles with more refined engines and contemporary styling. Product positioning has also undergone a change with all OEMs relinquishing geared scooter designs and introducing gearless scooters with low kerb weight and self-start features that are suited to certain consumer categories like women.

Revitalized by these changes, the Scooters segment has grown at a fairly rapid pace over the last five years, albeit on a small base, having recorded a volume CAGR of 18% to reach 2.1 million units in 2010-11. During this period, its share in the total domestic 2W market has also increased from 13% in 2005-06 to 18% in 2010-11. The Scooters segment has also experienced a trend in growing segmentation with the category now having three differentiated sub-segments consisting of sub- 100cc models, 100cc models and 125cc models, each having its own value proposition and target segment. While the sub-100cc segment scooters are light weight having fibre-bodies, the 125cc scooters are positioned as power scooters with metal bodies. Amongst these three sub-segments, the 100cc scooters sub-segment remains the largest, accounting for 67% of the total domestic scooters market in 2010-11, and is currently dominated by Honda Motorcycles and Scooters.





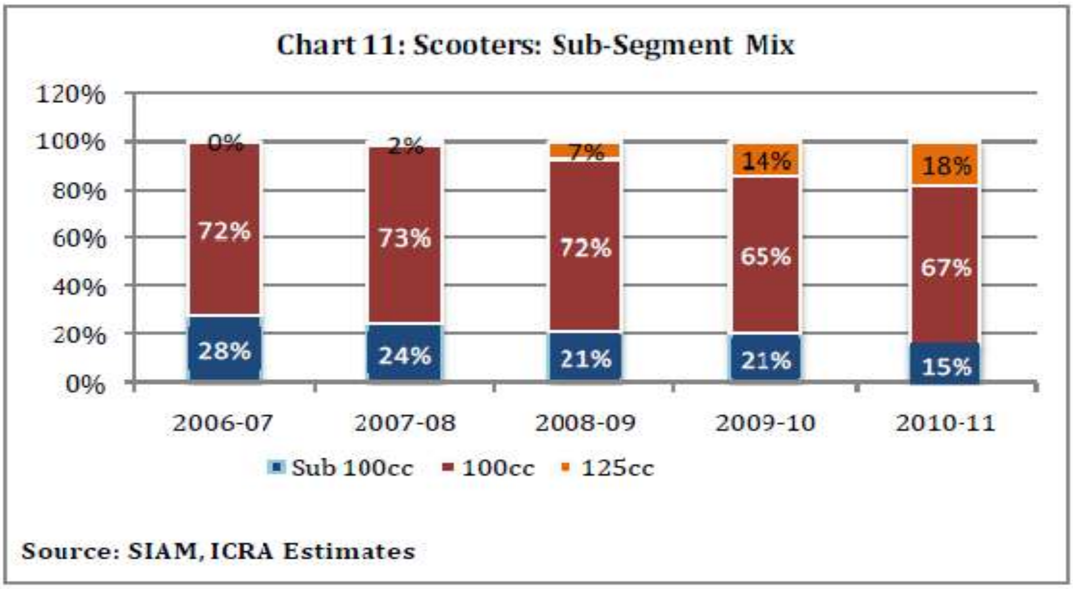


Table 18: Brands across Scooter Sub-Segments

	Sub-100c	100cc	125cc
Honda Motorcycles & Scooters	-	Dio, Activa, Aviator	-
Hero Honda	-	Pleasure	-
TVS	Scooty Teenz, Scooty Pep+, Scooty Streak	Wego	-
Mahindra	Kine	-	Duro, Flyte, Rodeo
Suzuki	-	-	Access

Overall, Honda Motorcycles & Scooters continues to maintain its leadership position in the Scooters segment, through its flagship brand Activa (besides Aviator and Dio) enjoying a market share of 43% in 2010-11, followed by TVS at 22%. In the past, several players such as Scooters India, Kinetic Motor and LML exited from the segment, unable to run the business profitably in an industry-wide declining volume scenario. In May 2010, Bajaj Auto too completely exited the Scooters segment where it once enjoyed a strong market position. That said, the segment has seen several relatively new entrants in the form of Hero Honda which launched the Pleasure in January 2006; Suzuki which launched the Access 125 in September 2007; and Mahindra which has been the latest entrant in the fast growing Scooters segment through its acquisition of the business assets of Kinetic Motor in July 2008. Yamaha too recently announced its plans to introduce an India-specific Scooter model in the domestic market in 2012, looking to repeat its success in this product segment in Indonesia.

ICRA expects the Scooters segment to maintain its growth momentum over the medium term and gradually increase its share in the domestic 2W market from 18% in 2010-11 to 24% by 2014-15. With this, the Scooters market is estimated to get doubled in size by 2014-15. Thus, even as a multitude of brands already dot the segment's landscape and more are expected to follow, the likely expansion in the pie should offer sufficient volumes for the industry togrow profitably. For the new entrants, a steady gain in market share could hasten the process of profitability improvement.

EXPORTS

Overseas markets capturing the interest of most two wheeler OEMs in India

Exports offer strong growth opportunity to Indian companies, given India's low-cost manufacturing capabilities and reliable quality[19]. 2W exports from India reported a CAGR of 25% over the period 2005-06 to 2010-11 to reach 1.5 million units in 2010-11. BAL is the largest 2W exporter from India, followed by TVS, with both companies exporting to a large number of countries. Together, BAL and TVS accounted for 79% of all 2W exports from India in 2010-11 and the managements of both companies consider exports a key component of their overall growth plans[20]. However, export volumes of the largest 2W manufacturer in the world Hero Honda, have remained rather flat, being around 0.1 million units and accounting for just 2% of its total 2W sales volumes in 2010-11 (**Table 19**). Nevertheless, following the cessation of its JV agreement with Honda Motor Company (Japan) recently, Hero Honda is expected to get aggressive on the exports front, something it could not do earlier due to the JV's constraints which restricted the markets to which it could export. Currently, HHML's export markets are limited to Bangladesh, Sri Lanka, Nepal and Columbia but the company is likely to expand its geographical footprint over the medium term. Yamaha too has announced plans to intensify its focus on exports and is even looking

[19] In the global 2W market, which is around 43 million units (excluding India), aggregate exports from India currently stand at a mere 1.5 million units.

[20] Bajaj Auto expects to derive around 50% of its revenues from exports in five years' time.

Table 19: Trend in 2W Export Volumes (from India)

Units (Nos.)	2006-07	2007-08	2008-09	2009-10	2010-11
Bajaj Auto	298,769	482,026	633,463	726,189	972,437
TVS	103,013	137,012	193,320	165,414	229,132
Hero Honda	97,645	90,571	81,193	97,699	133,063
Honda Motorcycles & Scooters	24,065	35,442	53,807	79,504	104,237
Yamaha	61,395	61,352	38,537	65,123	95,529
Others	34,251	13,444	3,854	6,255	5,192
Total 2W	**619,138**	**819,847**	**1,004,174**	**1,140,184**	**1,539,590**

Source: SIAM

to set-up a third plant (in addition to the Surajpur and Faridabad plants) where it would manufacture mass market bikes (like Crux and YBR) with Africa and South America as the key target markets.

Table 20: Export Markets of domestic 2W OEMs

	Destination Markets	Key Brands Exported
Hero Honda	Bangladesh, Sri Lanka, Nepal and Columbia	CD Dawn, Splendor, Passion, Glamour, CBZ Xtreme, Hunk, Pleasure
Bajaj Auto	Present in over 36 countries; Africa & Middle East: 51%; South Asia: 25%; Latin America: 15%; South East Asia: 9%	Boxer, Discover, Pulsar
TVS	Present in around 55 countries; Africa, Latin America, South-East Asia	Apache, RockZ, Neo
HMSI	Exports to over 50 countries including developing countries and Europe	NA
Yamaha	Direct exports: Nepal; Indirect exports: through Yamaha (Japan)	NA

Source: Annual Reports, Company Releases

Since the developed markets like the United States and Europe have altogether different product and technology requirements as compared to emerging markets, they get naturally excluded as target markets for the Indian players. Accordingly, a large majority of 2W exports from India are to developing markets like South Asia, Africa and Latin America. While the developing markets are quite large in terms of volume potential, their appeal from a profitability perspective is somewhat mixed. Bajaj Auto's margins in certain markets like Africa[21] are either similar or lower than that in the domestic market; although in various other overseas markets, it does earn 3-4% higher margins. At the same time, competition from global players in other developing markets is also quite formidable. For instance:

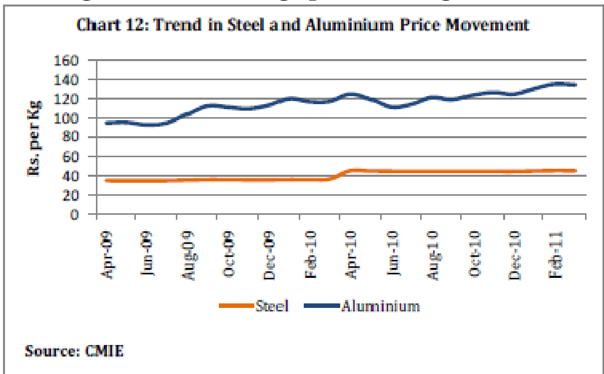
- The African market is replete with Chinese bikes which provide strong price-based competition to other players
- The South-East Asian market also has high competitive intensity where the Japanese majors like Honda, Yamaha, Suzuki and Kawasaki command the bulk of the volume share
- The Chinese market, the largest 2W market, has its own set of challenges including lack of respect for intellectual property and low price points

Over the years, Bajaj Auto and TVS have expanded their overseas presence in a large number of countries and have even established assembly units in China (Bajaj Auto) and Indonesia (Bajaj Auto and TVS) to have direct local presence. However, for sustaining exports growth going forward, the domestic players will need to continuously identify new potential markets, develop products suited to local needs, invest in building brands for increasing market share and appropriately cope up with the challenge of establishing a distribution network.

The Hero Group, for its part, also hopes to explore new products and export opportunities now it has been released from a ban on exporting to markets where Honda has a presence. The Group has set aside Rs. 100 crore for a new brand identity, which includes a new, logo and positioning.

FINANCIAL OUTLOOK

Rising raw material costs remains the biggest challenge for sustaining profit margins Raw materials remain the biggest component in the cost structure of OEMs accounting for around 85% of total costs. Thus, the Operating Profit Margins (OPM) of OEMs is quite sensitive to movement in prices of major raw materials like steel, aluminium and rubber. After a period of benign raw material prices in 2009-10, prices of most commodities showed an upward trend in 2010-11. Despite the strong demand, OEMs were able to pass on theincrease in input costs to customers only partially; but could mitigate the adverse impact to some extent through internal cost reduction and focus on changing product mix towardssuperior margin products.



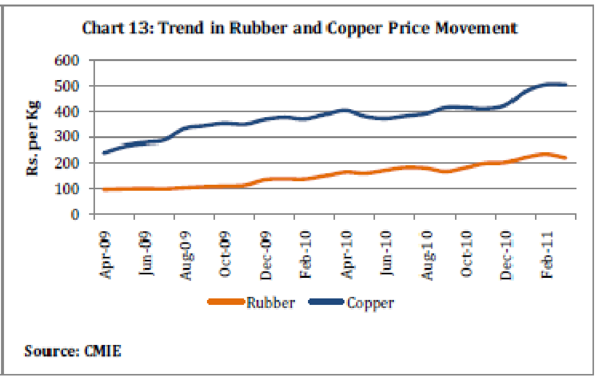


Table 21: Price Hikes by Leading 2W OEMs since Q1, 2010-11

Hero Honda	Bajaj Auto	TVS
– June 2010: 1.0%-1.7% (Except Splendor & Karizma)	– July 2010: 1-2%	– July 2010: 1.0-1.5%
– December 2010: 1.0-2.5%	– October 2011: 2%	– September 2010: 1.2-2.2%
– March 2011: 2%	– January 2011: 1%	– April 2011: 1.5-2.0%
	– April 2011: 1%	

Source: Company

In case commodity-based headwinds continue, OEMs may be left with no choice but to further increase 2W prices whose impact on demand is expected to be different across segments - demand elasticity is higher in the Entry and Executive segment of motorcycles as compared to the Premium segment. However, the largest two OEMs have other leversavailable in the form of scale of operations, superior bargaining power with their vendors and dealers and scope to enhance capacity at their plants located in Uttarakhand where they benefit from fiscal incentives; which should enable them to partly offset the margin pressures imminent. Additionally, the strategy of select players to diversify into other related product categories like diversification into three-wheelers (3W) by Bajaj Auto and TVS; and proposed diversification into the Scooters segment by Yamaha is also expected to provide them scale benefits and support EBITDA (earnings before interest, taxes, depreciation, and amortization) growth.

Both Bajaj Auto and Hero Honda currently have manufacturing plants in Uttarakhand which provides them various fiscal incentives such as 100% excise exemption for the first 10 years, 100% income tax exemption for the first five years and 30% income tax exemption for the subsequent five years. Bajaj Auto had commenced commercial production at its Pantnagar plant in April 2007; and Hero Honda had commenced commercial production at its Haridwar plant in April 2008. Currently, both OEMs produce over a third of their total 2W production from these plants which offers them excise duty exemption on effective value add and provides benefits in the form of lower effective income tax rates. Overall, operations from these plants are estimated to result in savings of around Rs. 500 per vehicle for these OEMs. As these fiscal incentives lapse, the comparative advantage enjoyed by these players on this aspect would accordingly reduce to that extent over a period of time.

In view of the strong demand, most OEMs have lined up capacity expansion plans over the short term. This is likely to increase the proportion of fixed costs in their cost structure in the initial phases till such time as production ramps up. In this period, the RoCE (Return on capital employed) of such OEMs is likely to dip to a certain extent; however, the expected strong volume growth over the medium term should allow them to overcome such profitability challenges eventually.

AFTER SALE SERVICES

In simple words, after market refers to any market where customers who buy one product or service are likely to buy a related, follow-on product. In many industries, the initial purchase decision of consumers can have long run effects on their future choices. This occurs where consumers purchase durable products that also require the purchase of some complementary products at least some of which are purchased at a later date than the purchase of the durable product. The existence of an after-market is often a persuasive argument for manufacturers to stay in direct contact with end-users. Aftermarket service includes product support for warranties, contracts, and parts sales. There are numerous industries in which this is the case. **An ‘aftermarket transaction’, according to Shapiro and Teece (1994) has two characteristics:**

- The aftermarket product or service is used together with a primary product.
- The aftermarket product or service is purchased after the primary product.

The peculiar competitive feature of these types of industry lies in the competitive interaction between the primary durable product and the secondary or ‘aftermarket’ for associated complementary products or services. Often due to technical differences between the durable primary products, the choice of complementary products compatible with a particular make is limited. This implies that once the primary product has been purchased, consumer choice is confined to those aftermarket products or services compatible with that industry product. For example, the owner of a Ford motor car needs to purchase spare parts which are compatible with that type of automobile. In the case of video games, once a consumer has purchased a particular games platform, this can only be used to play games compatible with that platform. In other words, consumers are to a greater or lesser extent locked into certain aftermarket suppliers. Where consumers are locked in this manner, this raises the possibility that the firms supplying aftermarket products or services can profitably engage in anti-competitive behaviour with regard to the supply of the complementary product.

Like other durable consumer goods, two wheelers also have an after-sales market in addition to the sales markets. It has been observed that a firm holding a market power in the after-salesspare part market can exclude its competitors by tying its maintenance and repair services with the spare parts sales, whereby it can affect consumers’ welfare. This ability gained bythe firm is resulted from switching costs, information asymmetries, insufficient reputationand other market failures.

In Indian car industry, automakers (Honda, Hyundai and Volkswagen) have recently been accused of using their dominant position to abuse the consumers. The complaint states how these companies make their spare parts available only through their authorised dealers at exorbitant rates.

“This practice by the international car

makers does not give the consumer a fair price advantage as he has no choice but to buy the spare parts from authorised dealers. Prima facie it makes a case and the DG has been ordered to probe the matter further," an official of the CCI said. Interaction and some discreet inquiry with some two wheeler companies shows that two wheeler industry also carries similar feature. A detailed analysis is required in this regard to come to any conclusion. In this respect, the analysis shall comprise the stages of market definition, analysis of a dominant position, and definition of abuse. In addition, the analysis of a dominant position is the most critical step.

II. CONCLUSION

The Automotive industry in India is one of the largest in the world and one of the fastest growing globally. We see that dominant product of the industry is Two Wheelers (2W) with a market share of over 75% in sales volume. Noteworthy that motorbikes segment's share is just below 80% of the total 2W market in India which is dominated by Hero Honda with a market share of 59%. The top 4 in motorcycle segment control 93% market share which is also reflected by HHI of motorbikes segment which is .35 (much > .18 present norm for highly concentrated industry)- the question remains do they enjoy a cosy existence or is there fierce competition?. This should be noted by the CCI.

This report divides two wheeler industry in segments on the basis of price and scooters have been treated as a separate segment. We see that there is a different dominant player in every segment. Interestingly, while Hero controls the executive segment, Bajaj has the premium segment in its grip and Honda has a dominant position in scooter segment. If each of the segments in the 2WI be treated as a separate relevant market (eg executive, premium, scooter) then each such segment has a dominant player with extremely high share (approx 65% in cases), which could be a matter to be noted by the competition authorities.

Also operation of dominant firms with dealers and input suppliers highlights certain aspectsof the 2WI that merit a serious notice by the CCI- not necessarily anti-competitive or abusing dominance currently, but such an eventuality could not be ruled out in future when sales do not grow at double digit and margins squeeze, given the very high market shares of the players.

Going further, like other durable consumer goods, two wheelers also have an after-sales market in addition to the sales markets. It has been observed that a firm holding a market power in the after-sales spare part market can exclude its competitors by tying its maintenance and repair services with the spare parts sales, whereby it can affect consumers' welfare. A detailed analysis is required in this regard to come to any conclusion.

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ANNEXURE-I
TW Price Comparison (Delhi – On-Road)

MOTORCYCLES						SCOOTERS	
Upto Rs. 40,000	Price	Rs. 40-50,000	Price	> Rs. 55,000	Price		Price
BAJAJ AUTO							
Platina	35.6	Discover DTS-Si	42.6	Discover 150 DTS-i	51.6		
		Platina 125	41.6	Pulsar 135LS	59.1		
				Pulsar 150 DTS-i	69.6		
				Pulsar 180 DTS-i	73.0		
				Pulsar 220 DTS-i	80.6		
				Pulsar 220F	83.6		
				Avenger 220 DTS-i	77.5		
				Kawasaki Ninja 250R	303.1		
HERO HONDA							
CD Dawn	34.8	Splendor Plus (Spoke)	40.5	Glamour (Drum, Alloy, Self)	48.3	Pleasure	38.1
CD Deluxe (Spoke, Kick)	36.5	Splendor Plus (Alloy)	41.6	Glamour (Disc, Alloy, Self)	50.3		
CD Deluxe (Spoke, Self)	38.7	Splendor NXG (Spoke, Kick)	39.7	Glamour PGM-FI (Drum, Alloy, Kick)	54.2		
CD Deluxe (Alloy, Kick)	37.8	Splendor NXG (Spoke, Self)	40.5	Glamour PGM-FI (Disc, Alloy, Self)	58.4		
CD Deluxe (Alloy, Self)	39.8	Splendor NXG (Alloy, Kick)	41.2	Achiever (Disc, Alloy, Self)	56.2		
		Splendor NXG (Alloy, Self)	43.5	CBZ Extreme	60.4		
		Super Splendor	46.9	Hunk	59.1		
		Passion Plus (Spoke)	42.3	Karizma	76.4		
		Passion Plus (Alloy)	44.1	Karizma ZMR	95.9		
		Passion Pro (Spoke)	45.4				
		Passion Pro (Alloy)	46.5				
TVS							
Star Sport	37.0	Jive	48.9	Flame DS 125 (Disc, Alloy, Self)	57.3	Scooty Pep+	37.5
Star City 110 (Kick)	39.3	Flame SR 125 (Drum)	49.1	Apache RTR 160	63.4	Scooty Streak	39.6
Star City 110 (Self)	42.4	Flame SR 125 (Disc)	51.8	Apache RTR 160 (Rear Disc)	65.5	Scooty Teenz	27.5
				Apache RTR 160 EFI	69.8	Wego	45.4
				Apache RTR 180	67.1		

MOTORCYCLES						SCOOTERS	
Upto Rs. 40,000	Price	Rs. 40-50,000	Price	> Rs. 55,000	Price		Price
HONDA							
		CB Twister (Drum, Alloy, Kick)	44.7	CBF Stunner (Drum, Alloy, Self)	53.8	Dio	39.8
		CB Twister (Drum, Alloy, Self)	47.9	CBF Stunner (Disc, Alloy, Self)	56.9	Activa	42.8
		CB Twister (Disc, Alloy, Self)	51.0	CBF Stunner PGM-FI	68.6	Activa DLX	44.0
		CB Shine (Drum, Spoke, Kick)	45.8	CB Unicorn	61.9	Aviator 110 (Drum)	45.0
		CB Shine (Drum, Alloy, Self)	50.3	CB Unicorn Dazzler	65.7	Aviator 110 (Disc)	50.3
		CB Shine (Disc, Alloy, Self)	53.1	CB1000R	1007.8		
				CBR1000RR	1325.7		
				VFR1200F	1925.6		
SUZUKI							
		Slingshot (Spoke)	48.0	GS 150R	64.8	Access 125	47.0
		Slingshot (Alloy)	50.1	GSX-R1000	1403.8		
				Bandit 1250S	936.2		
				Hayabusa	1376.3		
				Intruder	1376.3		
MAHINDRA							
						Kine	33.4
						Duro	43.5
						Flyte	45.0
						Rodeo	48.1
YAMAHA							
Crux	35.4	YBR 110	45.3	SZ	51.2		
Alba (Drum, Spoke, Kick)	37.1	G5	43.0	SZ-X	53.5		
		YBR 125	48.2	FZ-16	68.6		
		SS125	49.5	FZ-S	70.8		
				Fazer	76.0		
				YZF-R15	102.7		
				YZF-R1	1400.1		
				MT-01	1116.3		

ANNEXURE-II: **Quarterly Trend in Revenues and Profit Margins for the three ListedTW Companies**