

Improvement in Automobile saleability/acceptability and feasibility through Value Engineering

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Abstract— Automobile industries are working hard to increase the performance of the vehicle and customers satisfaction level since decade particularly after 1950 but it always faced the problems to improve quality at least cost. In the present scenario industries are dealing with dynamically changing constraints to meet the challenges in the competitive environment worldwide. Over the last few years the Indian auto industries have created a robust infrastructure base and thereby all the other world's leading manufactures have setup their manufacturing units in India. Among all the techniques, Value engineering is one of the best tool to achieve the requirement of consumers and can be applied at any level of product process system or services. In this paper the application of such approach resulted in 21.97 % overall improvement in acceptability and saleability of vehicles in a particular segment. The factors like safety, cost fuel efficiency, braking traction, aesthetic etc. have been used as decision making parameters. This technique enhances the feasibility and acceptability of products worldwide.

Index Terms Value engineering; Financial Performance Analysis; SWOT analysis; Value evaluation technique; Feasibility study.

1 INTRODUCTION

Value Engineering is a process for achieving the optimal result in a way that quality, safety, reliability and convertibility of every monetary unit are improved [1] [2]. The Society of American value engineering defines value engineering as, "the systematic application of recognized technique which identify the function of product or service, establishes a monetary value for that function reliability at lowest overall cost" [3]. This paper outlines the basic frameworks of value engineering & feasibility study and presenting the mathematical approach of analyzing of true acceptability or saleability of

automobiles through case study on Tata motors.

In this study Value engineering technique is governed by a structured decision making process to access the value and services through Orientation, Information, Function, Creativity, Evaluation, development, Presentation and Implementation & follow up phases [4].

1.1. ACCEPTABILITY /FEASIBILITY OF PRODUCT

When complex problem and opportunities are to be defined it is generally desirable to conduct a preliminary investigation called a feasibility study. Feasibility studies aim to objectively and rationally uncover the strengths and weaknesses of an existing business or proposed venture, opportunities and threats present in the environment, the resources required to carry through, and ultimately the prospects for success.[5][6]

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2. LITERATURE SURVEY: -

2.1. COMPANY OVERVIEW

Established in 1945, Tata motors Limited is India's largest automobile company with revenues of Rs 92,519 crore (US \$ 20 billion) in FY 2009-10. It is largest producer of commercial vehicle and second largest in the passenger vehicle market in India. The company is the world fifth largest medium and heavy commercial vehicle largest medium and heavy bus manufacturer. [7]

Over 4 million Tata vehicles are traveling on Indian roads. It is the first company from India's engineering sector to be listed in the New York stock exchange. [7] Tata Motors acquired the Daewoo commercial vehicles, Korea's second largest truck maker. Two-thirds of heavy commercial vehicle exports of South Korea are from this subsidiary. It is also Jaguar Land Rover to gain a foothold in the luxury sports car and SUV market.

The company's manufacturing base is spread across India. In the east they are based on Jamshedpur (Jharkhand), Pune (Maharashtra) is their main centre for the west. In the north Lucknow (Uttar Pradesh) and Pantnagar (Uttarakhand) a new plant to manufacture in West Bengal has been moved to Kuch district in Gujrat. [8]

The company has R&D centers in Pune, Jamshedpur, Lucknow in India and in South Korea, Spain, and the UK. TTM also distributes and markets Fiat branded cars in India. [9]

Tata Motors operates in four main automobile segments which cover the range of products in the automobile

segments in India. TTM has a presence in the compact car and station wagon segment of the market in the form of Indica, Indigo and Indigo Marina and their variants [7] [8].

Tata motors has launched "NANO" most and affordable family car in March 2009. TTM entered the utility vehicle with the launch of Tata Sumo in 1994, Tata Safari in 1998 and light commercial vehicle like ACE (Mini truck). TTM also manufactures medium and heavy commercial vehicle which include trucks, buses, dumpers and multi-axle vehicle with GVW of 9 tons to 49 tons. TDCV (Tata Daewoo commercial vehicle) in South Korea and other subsidiary manufactures high horse power trucks, dump tractor- trailers, mixers and cargo vehicle. [9]

2.2. PROBLEM STATEMENT

Today Tata motors domestic car business is on a sticky wicket. Sales for FY 2013 dropped by almost 29.2% to 2,22,112 units from 3,13,710 units in FY 2012. Almost all of Tata's other vehicle (Indica Vista, Manza, Safari, Sumo, Grande, and Aria) have been beaten in their respective segments by local and global competitors.

3. FINANCIAL CASE STUDY OF TATA MOTORS

Tata Motors Limited recorded a gross turnover of Rs.49,320 crores, 16.7% lower from Rs.59,221 crores in the previous year. Weak macro economic factors leading to a continued slow-down in the Medium and Heavy Commercial Vehicles (M&HCV), stiff competition, mainly in Passenger Vehicles business, severely affected the standalone operations and profitability [10].

FY 2012-13 was a challenging year for the economy -

both globally and in India. The world economy grew by a mere 3.1% in 2012 as compared to 3.9% in the previous year. The domestic situation in India was influenced by these global trends and the ripple effect of a global slowdown was felt [9]. The cash flow analysis is presented in Table 1 and gross turnover with profit is in Fig. 1 which is audited for FY 2012-13.

Table 1
 Financial performance analysis [10]

(Rs. crores)				
	Company (Standalone)		Tata Motors Group (Consolidated)	
	FY 2012-13	FY 2011-12	FY 2012-13	FY 2011-12
FINANCIAL RESULTS				
Gross revenue	49,319.73	59,220.94	193,583.95	170,677.58
Net revenue (excluding excise duty)	44,765.72	54,306.56	188,817.63	165,654.49
Total expenditure	42,621.98	49,894.76	162,248.74	141,954.02
Operating profit	2,143.74	4,411.80	26,568.89	23,700.47
Other income	2,088.20	574.08	811.53	661.77
Profit before interest, depreciation, amortization, exceptional item and tax	4,231.94	4,985.88	27,380.42	24,362.24
Finance cost	1,387.76	1,218.62	3,553.34	2,982.22
Cash profit	2,844.18	3,767.26	23,827.08	21,380.02
Depreciation, amortization and product development/engineering expenses	2,243.38	1,840.99	9,590.89	7,014.61
Profit for the year before exceptional items and tax	600.80	1,926.27	14,236.19	14,365.41
Exceptional items - loss (net)	425.87	585.24	602.71	831.54
Profit before tax	174.93	1,341.03	13,633.48	13,533.87
Tax expense/(credit)	(126.88)	98.80	3,770.99	(40.04)
Profit after tax	301.81	1,242.23	9,862.49	13,573.91
Share of minority interest and share of profit of associates (net)	-	-	30.12	(57.41)
Profit for the year	301.81	1,242.23	9,892.61	13,516.50
APPROPRIATIONS				
Profit for the year	301.81	1,242.23	9,892.61	13,516.50
Balance brought forward from previous year	1,663.91	2,078.92	18,195.96	6,461.49
Amount available for appropriations	1,965.72	3,321.15	28,088.57	19,977.99
Less: appropriations/(transfer from)				
Debenture Redemption Reserve	(130.00)	70.00	(130.00)	70.00
General Reserve	30.18	125.00	59.48	158.03
Other Reserves	-	-	63.14	65.38
Dividend (including dividend distribution tax)	722.75	1,462.24	756.14	1,488.62
Balance carried to Balance Sheet	1,342.79	1,663.91	27,339.81	18,195.96

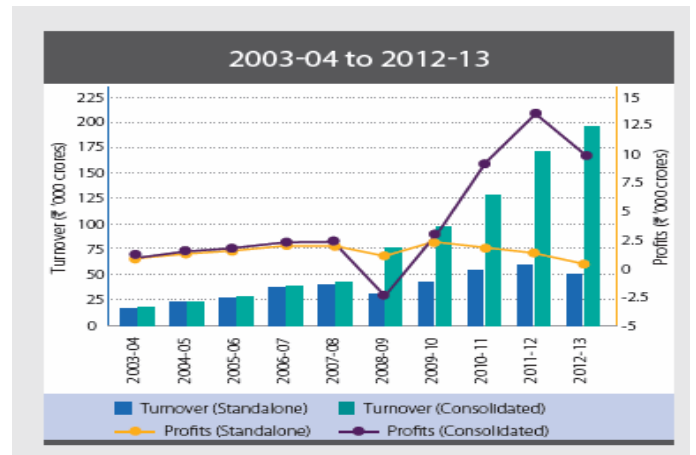


Fig 1. Gross Turnover (standalone & Consolidated) with Profit

The domestic passenger car industry was affected mainly by weak sentiments, high cost of ownership, high interest rates, fuel prices and reduction in discretionary spends.

During the year, the Company's Passenger Vehicles sales were lower by 31.1% at 2,29,325 vehicles, registering an 8.9% market share. The Company sold 1,80,520 cars and 48,805 utility vehicles and vans, lower by 34.6% and 14.4% respectively, over the previous year. [10]

The industry performance in the domestic market during FY 2012-13 is shown in Table 2 and the Company's market share are given below:-

Table 2
 Industry performances in the domestic market [10]

Category	Industry Sales		Growth13	Company Sales		Growth13	Market Share	
	FY 2012-13	FY 2011-12		FY 2012-13	FY 2011-12		FY 2012-13	FY 2011-12
Commercial Vehicles	901,120	886,362	1.7%	536,232	530,204	1.1%	59.5%	59.8%
Passenger Vehicles	2,578,538	2,556,035	0.9%	229,325	333,044	-31.1%	8.9%	13.0%
Total	3,479,658	3,442,397	1.1%	765,557	863,248	-11.3%	22.0%	25.1%

Source: Society of Indian Automobile Manufacturers report and Company Analysis
 Commercial vehicles Include V2 Van sales;
 Passenger vehicles include Fiat and Jaguar Land Rover branded cars.

The domestic industry performance and the Company's performance in the passenger vehicle segment are given in Table 3.

Table 3

Company's performance in the passenger vehicle segment [10]

Category	Industry Sales		Company Sales		Market Share			
	Y 2012-13	Y 2011-12	rowth	Y 2012-13	Y 2011-12	rowth	Y 2012-13	Y 2011-12
Micro	3,847	4,521	27.7%	3,847	4,521	27.7%	00.0%	00.0%
Compact	94,627	56,381	7.2%	17,377	76,104	33.3%	4.8%	0.6%
Mid-size	00,007	04,733	2.3%	410	9,645	62.3%	.7%	.6%
Executive Premium	3,256	7,275	37.6%	061	796	77.9%	.6%	2.9%
and Luxury	183	414	30.1%	25	85	16.2%	5.9%	3.3%
Utility Vehicles	60,992	70,286	1.5%	5,841	9,035	6.5%	.2%	3.2%
Vans	23,152	52,019	19.0%	964	958	62.8%	.4%	.2%
(Note a)								
(Note b)	5,78,538	5,56,035	9%	29,325	33,044	31.1%	.9%	3.0%

Source: Society of Indian Automobile Manufacturers report and Company Analysis

Note (a) Excludes V2 Van sales

Note (b) Total Industry nos. include sales in other segments

4. VALUE EVALUATION TECHNIQUE

Value evaluation technique includes three phases like factor comparison matrix as in Table 4, Value Evaluation matrix as in Table 5, Table 6, Table 7 & Table 8 and Value Decision matrix.

Factors affecting the vehicle's sell -

- a. Safety -----(A)
- b. Cost -----(B)
- c. Fuel efficiency -----(E)
- d. Braking & traction -----(C)
- e. Lock & security -----(F)
- f. Comfort & convenience -----(D)
- g. Interior -----(H)
- h. Exterior -----(M)
- i. Lighting & Instrument -----(I)
- j. Entertainment -----(L)
- k. Reliability(Warranty) -----(K)
- l. Aesthetic -----(J)
- m. Seat & upholstery -----(G)

Table 4

Factor comparison matrix

A	B	C	D	E	F	G	H	I	J	K	L	M	T O T A L	T O T A L +
A	A1	A1	A1	A2	A1	A2	A2	A3	A1	A3	A3	A3	23	24
	B	C1	D1	B1	F1	B1	B2	B2	B3	B3	B2	B3	17	18
		C	C1	C1	C1	C1	C2	C2	C1	C3	C2	C3	18	19
			D	D2	D1	D1	D1	D1	D1	D2	D1	D3	14	15
				E	F1	E1	H1	E1	E2	E1	E2	E3	10	11
					F	F1	H2	I1	J2	K1	F3	F3	9	10
						G	H1	I1	K2	L1	G2	G2	2	3
							H	H2	J1	H1	L1	H2	9	10
								I	I1	I1	I1	I3	8	9
									J	J1	J1	J1	7	8
										K	K1	K2	6	7
											L	L2	4	5
												M	0	1

Table 5

Factor evaluation matrix for hatchback car segment

Option	A 24	B 18	C 19	D 15	E 11	F 10	G 3	H 10	I 9	J 8	K 7	L 5	M 1	TOTAL
Indica Vista BVIV	1	7	1	3	6	9	4	6	3	5	5	7	6	585
Nano LX	24	126	19	45	66	90	12	60	27	40	35	35	6	549
Eon Magma+	1	8	1	3	7	9	4	4	6	7	5	6	6	632
i-10 VTVT	3	7	1	4	7	8	3	5	7	8	5	1	6	666
Beat LT	1	7	1	5	9	5	3	8	6	5	8	5	6	663
Spark BSIV	1	7	1	3	6	5	3	7	5	6	7	6	6	587
Figgo DXII.2 Petrol	1	7	1	5	7	9	4	7	5	8	6	7	6	711
Brio VXMT	4	7	4	4	6	9	4	8	7	6	5	5	6	783
Alto VXi	3	9	1	3	9	8	2	6	4	5	5	5	3	682
Swift	4	6	6	6	8	9	4	8	7	9	5	6	6	884

Table 6

Factor evaluation matrix for sedan car segment

Option	A 24	B 18	C 19	D 15	E 11	F 10	G 3	H 10	I 9	J 8	K 7	L 5	M 1	TOTAL
Indigo	1	8	2	3	8	6	6	7	6	4	7	7	3	660
Manza	4	7	1	3	6	9	4	6	6	6	7	6	6	685
Swift Desire	4	8	6	6	8	8	5	7	8	7	5	5	6	901
SX 4	4	6	6	6	6	9	6	7	7	8	5	6	6	850
Verna	2	6	4	6	8	9	6	7	4	6	9	1	3	824
Accent	1	8	1	4	6	6	5	6	4	6	9	1	3	603
Sail	4	7	4	5	7	7	5	6	7	6	9	7	3	827
Etios Liva	1	7	1	4	7	9	4	5	5	8	9	6	6	666
City	4	7	5	6	8	9	6	7	7	10	7	5	6	911
Amaze	6	5	4	4	9	8	4	6	7	7	6	5	6	813

operation in India. The competition is likely to further intensify in the future. [10]

II. PERCEPTION

A Tata motor has established his identity as a manufacturer of public transport and commercial vehicles. So the concentration on passenger cars is not very sophisticated. Market brand quality as perception is not as good as they would like it to be.

III. ASPIRATION

A car is an aspiration purchase. A Tata vehicle is far from that. The connotations associated with it are 'value for money' and 'taxi'. Almost all of Tata's vehicles – Indica, Indigo, Sumo – are predominantly bought by fleet taxi owners because fleet buyers buy stuff that is good value for money and endurance but an overemphasis on fleet turns away the personal buyer. There are serious image confrontations at the point of sale. Everybody is on the same floor – the fleet taxi owner, the driver of a Sumo and this executive with his wife looking at the Indica. It is a bit of a let-down of the executive's image. [11]

IV. NEW PRODUCT PORTFOLIO

Tata's development machinery has failed to regularly churn out new products. Tata motor launched completely new vehicle i.e. The Aria two years before that's not in line with keeping your name in line with the minds of people.

V. LOSING MAIN AGENDA

Tata's brand positioning has been confusing – "more car per car", "club class", "reclaim your life", "The real SUV"

and "a class apart".

Traditionally, there were three planks on which Tata motors sold its vehicles:

- a. Operating economics, aka diesel.
- b. Cheap acquisition price.
- c. Space.

Today they have lost all three. Their dominance as only diesel player is long gone across all segments, both multinationals and India. Companies have vehicles which are competitively priced. And the market has moved from driving around large families to self drive vehicles. There as a brand, has been lost [11].

VI. NAMESAKE

While competition has added products one after the other, Tata motors must have used all the alphabets in the English language to launch one version after of their old cars. That's how we can sell trucks not cars.

VII. NANO EXPECTATION MISSED BEING

Tata motors has great expectation of Nano but it missed being. It was not only a car but it was a brand as well. They have a huge opportunity to build a successful brand but they missed it.

6. FEASIBILITY FOR OPERATING AREAS

Feasibility studies are preliminary investigation into the potentials benefits associated with undertaking a specific activity or project. Main purpose of such a study is to consider all factors associated with the project and determine if the investment of time and other resources will yield a desirable study. [12]

These following Feasibility strategies which are given in Table 9 possess to success of an organization [13] and enhance the saleability or acceptability of vehicle.

Table 9
Feasibility strategies in different operating areas

Distribution	Deliveries on time Adequate stock levels Efficient channels of distribution
Finance	Tight debtor control Strong cash management Good relations with creditors Access to adequate financial resources
Human resources	<ul style="list-style-type: none"> Strong recruitment skills and ability to attract key staff Viable and relevant training program Continual staff development Strong and developing company culture Effective rewards and motivation for workers Existing staff support and complement the project
Information system	<ul style="list-style-type: none"> Providing appropriate, timely and up to date financial and customer information User friendly Able to interact and integrate with other systems Continual development
Marketing	<ul style="list-style-type: none"> High or low product consistency and quality A wide or narrow product range Branding, Image, and Reputation Packaging to meet consumer and environmental expectations Skilled, committed sales force
Production	<ul style="list-style-type: none"> Up to date, state of the art facilities Facilities located close to labour skilled supply Facilities located close to markets Flexibility in production and lead times Highly productive labour force
Purchasing	<ul style="list-style-type: none"> Strong negotiating skills Strong supplier relationships
Research & Development	<ul style="list-style-type: none"> Continuous product design and improvement Differentiation between 'me too' products Continual process of innovation and protection of patents and trade marks Sustainable competitive advantage
Leadership & Management	<ul style="list-style-type: none"> Enhance the feasibility of the project with strong Management and leadership skills - Planning, Leading, Organizing and Controlling? Bring flair and creativity to the project Bring a generous measure of promotional skills to the project.

Opportunity	<ol style="list-style-type: none"> Expanding automobile market and available space for competitors. Increasing per capita income and purchasing capability of potential customer base. Leveraging customer engagement experience to acquire new customers. Leveraging mergers and acquisitions to acquire newer technology. Augmenting the distribution and service network in various countries. Tata Motors can take advantage of their low cost vehicle by entering into third world countries where people have low purchasing power which gives them a big export opportunity. Jaguar and Land Rover provide Tata Motors with an opportunity to establish itself in the luxury segment. Tata Motors can incorporate safety features in their vehicles to gain more customer satisfaction. Joint ventures in other countries allow Tata Motors to easily enter into new market internationally.
Threats	<ol style="list-style-type: none"> Increasing fuel costs Competition from other big automobile giants Competitive products offering same level features at a lesser price Product innovations and frugal engineering by competitors.

7. RESULT:

The company has designed its product to suit the requirement of the Indian market based but couple of decades some specific customers also need luxurious and more comfort vehicles. Company should be focused on their specific needs such as safety, driving comfort, fuel efficiency, cost and aesthetic. From focusing on these points company can develop its product portfolio in order to meet customer expectations of aspiring for world class products. These changes can be seen in Table 11 & Table 12 as Factor Decision matrix and value improvement in Figure 2 for all types of Tata's vehicles.

Table 11
Factor decision making matrix for all type of Tata's vehicles

Option	A 24	B 18	C 19	D 15	E 11	F 10	G 3	H 10	I 9	J 8	K 7	L 5	M 1	TO-TAL
Indica Vista BVIV	4	6	6	6	6	9	4	6	7	5	5	7	6	815
Nano 201, LX	3	8	4	3	8	2	3	5	4	4	8	7	3	666
Indigo	4	7	5	6	8	6	6	7	6	4	7	7	3	816
Manza	6	6	5	6	6	9	4	6	6	6	7	6	6	852
Sumo Grande MK II	4	8	4	6	6	3	6	6	5	2	9	5	3	732
Safari Storm 2.2 VX4X4	8	7	6	7	6	9	8	8	7	8	9	7	6	1028
Aria LX 4X2	6	7	6	5	4	9	6	7	7	6	9	5	3	883
Venture LX	2	9	2	4	7	3	3	7	4	3	7	5	1	629
Xenon	2	7	4	5	6	9	6	8	7	8	7	8	3	710

6.1. SWOT ANALYSIS

A Strength Weakness Opportunity Threats (SWOT) framework of Tata Motors is mention in Table 10.

Table 10
SWOT analysis

Strength	<ol style="list-style-type: none"> One of the most established company in automobile sector Wide & extensive distribution and service network Good market penetration in the taxi & rental segment Expert service professionals available Many associations like Jaguar Land Rover, Hispano, Macropolo etc which increases international presence Dedicated engineering and R&D department More than 60,000 employees Highly diversified product portfolio
Weakness	<ol style="list-style-type: none"> Limited international presence Sometimes faces alleged quality and durability issues Not much customer engagement programs and activities Tata Motors shareholders are not getting much from their investments due to low return on investments on shares. Tata Motors are not able to meet safety standards in their vehicles in comparison to its competitors.

XT EX 4X4	48	126	76	75	66	90	15	60	45	32	49	25	3
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Table 12

Integral marks comparison for all types of Tata's Vehicle

S. No.	Product	Old Marks	New Marks	Differences	% Improvement
1	Indica	585	815	230	39.32
2	Nano	549	666	117	21.31
3	Indigo	660	816	156	23.64
4	Manza	685	852	167	24.38
5	Sumo Gold Grande	586	732	146	24.91
6	Safari Storm	968	1028	60	6.198
7	Aria	627	883	256	40.83
8	Venture	569	629	60	10.54
9	Xenon XT	666	710	44	6.61
Overall Improvement					21.97 % (Avg.)

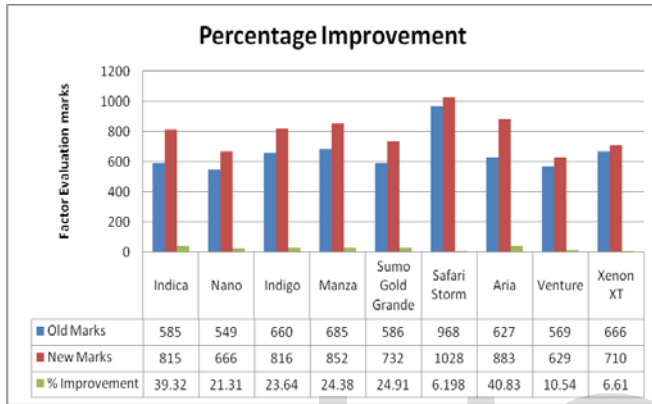


Fig. 2 Percentage Improvement in all types of Tata's vehicles

The Company recorded sales of 765,557 vehicles, a decline of 11% over last year. Industry growth during the year was also muted at 1.1%, resulting in the Company's market share decreasing to 22% in the Indian automotive industry from 25.1% in the previous year. The Company exported 50,938 vehicles during the year, lower by 19%, as compared to the previous year.

From the above improvement we can see that Safari storm became a best choice for customer in its segment. Even there are very much improvement gotten in every vehicle by this approach on low cost investment.

7.1 Weak segments and makeover activities

The domestic passenger car industry was affected mainly by weak sentiments, high cost of ownership, high interest rates, fuel prices and reduction in discretionary spends.

Overall growth in Domestic Passenger vehicle industry was flat in FY 2012-13, within which Utility Vehicles recorded a robust growth of 51.5% on the back of new launches catering not only to the traditional rugged SUV customers but also to the customer preferring the more car-like soft roader utility vehicles and cars segment de-grew by 6.9%. During the year, the Company's Passenger Vehicles sales were lower by 31.1% at 2,29,325 vehicles, registering an 8.9% market share. The Company sold 1,80,520 cars and 48,805 utility vehicles and vans, lower by 34.6% and 14.4% respectively, over the previous year.

1. **Competitive pricing:** Aria got the "Viewer choices car of year" in 2010 but has been pitted right is at Rs. 9.95 lakhs and Aria is at 14.5 lakhs in the market so why does customer pay 5 lakhs more than Innova. Company should focus on competitive pricing of vehicle.
2. **Quality Improvement:** Poor quality has been a perennial issue with Tata passenger's vehicle. To overcome this problem manufacturing team should emphasis on good quality and provide the good functional vehicle to the customers.
3. **Perception for SUVs/MPVs:** Some critical point for enhance the SUVs marketing-
 - a. Category growth: Growing demand for SUV's and MPV's company should make new launches which can easily be competitive against Duster, XUV 500 like etc.
 - b. Safety: Given the bad traffic in most cities and horrendous accidents we see every day,

the safety features of SUVs score higher versus sedans, as the perception is that they are safer, especially for families with children.

c. **Increased road travel:** The poor quality of roads and highways, and increased road travel by families for holidays and leisure makes SUVs very desirable.

d. **Image:** The macho image of SUVs and the perception they can be used on rugged terrains, although most people may never do any off-roading, makes them a hit.

4. **Fuel economy and high price of petrol:** This created a strong demand for fuel-efficient diesel cars. Company should great emphasis on Diesel vehicles.

5. **Focus on Brand Value:** The Company should continue to focus on building brand strengths, refreshing the products and enhancing sales and service experience. The Company also introduced a new look, stylish, tech savvy best in class flagship Passenger Vehicle showrooms, for superior customer experience at pilot dealership in Mumbai and Delhi and this initiative will now be replicated to other setups across the country.

6. **Customer-centric strategy:** Company should work on a customer-centric strategy for providing the best customer experience with focus on products, world class manufacturing practices, purchase experience and consistent quality of services. As a precursor to future launches, the Company would be shortly

unveiling improved and enhanced vehicles across its key brands.

7. **Miscellaneous activity:** The Company should be various initiatives to improve its product refreshes/launch programs, operational efficiency, dealer effectiveness, working capital management and restructuring customer facing functions.

8. CONCLUSIONS

This case is focusing on the business strategies and globalization plans. The basic mantras of competitive existence in dynamically changing environment are Value engineering technique, customer satisfaction quality and assurance. The value evaluation, SWOT analysis, product management and finance & projected cash flow analysis will play the vital role in automotive industries. Dealing with the human satisfaction factor like good branding, image building and cost management are the basic Moto of this study.

The identification of feasibility and acceptability is largely qualitative and can result in differing opinion. Based on the evaluation technique it is found that customers are not so well to buy these kinds of Tata's vehicle. There are two ways either differentiation strategy or a low cost strategy. Tata motors is considering low cost strategy over differentiation strategy but to satisfy higher end and brand conscious customers the differentiation strategy is also mandatory.

There are some suggestions to improve the brand positioning and customer satisfaction.

1. Increase the variety of product in different segments so that customers will notice the esteem value of product of Tata motors in varied ways.
2. Improve Research and Development department as customer expectations are changing rapidly by feedback mechanism for higher end customers.
3. Joint ventures and brand endorsement internationally.
4. Improve quality and performances of vehicle.

This study will give good growth of automotive industries with the more consideration on safety, comfort, aesthetic and maneuverability and will lift the position internationally.

9. REFERENCES

- [1] K. Yegenegi, M. Arasti and M. Mousakhani, "The Integration of QFD Technique and Value Engineering and its Applying in a Healthcare Center", International Conference on Industrial Engineering and Operations Management, Kuala Lumpur, Malaysia, January 22 - 24 2011.
- [2] Y. Son and J. Venkateswaran, "Hierarchical Supply Chain Planning Architecture for Integrated analysis of stability and performance", International journal of simulation and process modeling (in Press), 2006.
- [3] F. Jariri and S. H. Zegordi, "Quality Function Deployment, Value Engineering and Target Costing, and Integrated Framework in Design Cost Management: A Mathematical programming approach", Scientia Iranica, Sharif university of technology, Vol. 15, No.3, pp-405-411, June 2008.
- [4] A. Sharma, "Achieving of success through Value Engineering : A case study:", Proceedings of the world congress on Engineering and Computer science, Vol. II, WCECS, San Francisco, USA, ISSN: 2078-0966, October 2012.
- [5] R. T. Justis and B. Kreigsmann, "The Feasibility study as a tool for Venture Analysis", Business Journal of Small Business Management 17 (1) 35-42, 1979.
- [6] D. A. Georgakellos and A. M. Marcis, "Application of the semantic learning approach in the Feasibility studies preparation training process", Information Systems Management 26 (3) 231-240, 2009.
- [7] S. Mani, "The Indian automotive Industry: Enhancing Innovation capability with External and Internal resources", How to enhances innovation capability with internal and external sources, ERIA Research project report 2010, No. 9, June 2011.
- [8] K. N. Filter, "General training report at Shree Tata Ambika", Maniba Institute of business management, Veer Narmad South Gujarat University, 2008-2009.
- [9] P. Mishra, "Repositioning strategy of Tata motors and its acceptance level in customer: a study in Rourkela market", Management thesis (MBA), INC Rourkela, Odisha, India, 2010.
- [10] http://tatamotors.com/investors/financials/68-ar.html/dir_rep.html.

- [11] A. Mishra, "Karl slym has a fix for the ailing Tata Motors", Forbes India Magazine, May 15 2013.
- [12] Business advisory services catalog, specialized industrial & management system co. (W.L.L.), RV.00/01.01.2010.
- [13] R. Overton, "Feasibility studies made simple", Martin books Pty. Ltd., Boat Harbour NSW 2484, Australia, ISBN 978-1-921360-32-9, July 2007.

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