

Technology as A Tool for Turnaround: A Case of Scooter India Limited

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It was October, 2000, the siren blew at 2.30 pm and the employees of morning shift were leaving the factory after their duty. Dr. Sahay, Chairman & Managing Director of Scooters India Ltd. Looked through the glass window of his corner room and was wondering if he could make the company profitable and secure their jobs through infusion of home grown incremental technology. Can this incremental technology sustain in the long run. He knew the only way Scooter India Ltd. (SIL) could survive was to take an aggressive position in the market through new products and technologies but where to get the required technology? With liberalisation, the global technology developers/owners were no more interested in technology transfer. In-house as well indigenous collaborative efforts had reached their limits. Questions like what should be his strategy, will the strategy be the panacea for the problems the company would be facing in future were moving in his mind's screen. He sought an answer, but only time will tell.

About the company

Incorporated in 1972, Scooters India Limited is an ISO 9001:2000 and ISO 14001 Company situated at 16 Km mile stone, South-west of Lucknow, the capital of Uttar Pradesh on NH No 25 and is well connected by road, rail and air. It is a totally integrated automobile plant, engaged in designing, developing, manufacturing and marketing a broad spectrum of conventional and non-conventional fuel driven 3-wheelers.

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Company's plant owes its origin to M/s. Innocenti of Italy from which it bought over the plant and machinery, design, documentation, copyright etc. The company also possesses the world right of the trade name LAMBRETTA / LAMBRO.

The Beginning

Way back in June 1971, the government of India received an application from Automobile Products of India Ltd. (API) for substantial expansion of its capacity for production of two wheelers and three wheelers. It was the time when the licensed production capacity of scooters in India was far below the demand. API proposed to buy an old plant of Innocenti that was lying unused in Italy for two years owing to labour problems. Machines in the plant were in condition that assured a varied life from four to eight for production of more than 100,000 scooters a year on two-shift working with investment in some additional machines, backup facilities, tools and equipment. API already had technical collaboration with Innocenti and was manufacturing Lambretta scooters, a well-established brand of Innocenti. While examining the proposal, the concerned secretary in the government proposed a joint venture between Innocenti, API and government. Finally, an agreement was signed on June 16, 1972 to set up SIL as a joint venture. Innocenti sold complete available technical documentation, world rights for the manufacture of two-wheeler Lambretta scooters, and the old plant at a FOB cost of US \$2.4 million on "as is where is" basis to SIL. Subsequently, Innocenti, Italy dissolved itself after the disposal of the plant and did not contribute to the joint venture.

Project Implementation Phase

Prime Minister, Mrs. Indira Gandhi laid the foundation for the plant on April 8, 1973 at Lucknow, capital of Uttar Pradesh, a northern state of India. Lucknow had little industrialization and inadequate infrastructure of roads, telecommunication and power.

Commissioning of the Plant:

On opening of the cases; received between January and September 1973 from Innocenti; SIL engineers discovered that some of the machines, components, accessories, and drawings were missing. Most of the documents were in the Italian language. Engineers who were recruited from Tata Engineering and Locomotive Company (TELCO), Hindustan Motors (HM); API and ordinance factories required continuous help of translators.

While commissioning the plant, engineers found that they could not install overhead cranes. Concrete columns in the plant obstructed the movement of material by overhead cranes. SIL had to resort to movement of material through forklifts, trucks, etc.

Project commissioning got delayed by nearly six months. The delay and undertaking of additional activities increased the initial estimated project cost from Rs. 119 Million to nearly Rs. 200 Million.

The human resource plan was not well developed. The recruitment of people was made for full capacity of 100,000 scooters. Selection of people was also not planned. Many persons with similar expertise were selected. Casual labour from neighbouring areas was initially called to open cases. Subsequently, they became regular employees. Most of them were illiterate.

The government appointed forty-five years old S. Soundararajan, managing director of Garden Reach Workshop in Calcutta, as the first executive director in November 1972. He belonged to the Indian Audit and Accounts Services (IAAS) cadre of Indian Civil Services (ICS).

People in SIL remembered him as an autocratic, quick decision-maker, optimistic, and extremely bright leader. He planned to manufacture 30,000 scooters in 1974, the first year after plant installation, 60,000 scooters in 1975 and 100,000 scooters from 1976

onwards. He wanted quick results but care too hoots for appropriate technology required.

Soundarajan pursued agreements with seven manufacturing units in different Indian states in 1973-74 to supply 100,000 power packs (a compact unit consisting of engine and gearbox) and transfer technology for scooter manufacturing. He worked on many different fronts to take company ahead. But he lacked the vision of using technology as a tool for new business/product development. He also initiated diversification into three wheelers. He negotiated with Innocenti for their idle plant to manufacture three wheelers at FOB price of \$ 500,000 in 1973. This diversification strained the relationships between SIL and API. The only source for technology between the partners was also gone.

First prototype

The first prototype of the scooter was ready in November 1974. Testing of the scooter by Vehicle Research and Development Establishment (VRDE) reported small technical problems regarding inferior quality of components. SIL had to source these components from distantly located suppliers. Frequently, these supplies whose rejection would adversely affect the production targets did not meet specifications.

SIL started commercial production in February 1975. It simultaneously started the process to set up ancillaries and in-house production facilities. SIL moved a proposal to the government to establish a foundry in the factory premises for internal consumption. SIL did not purchased high precision foundry machines of Innocenti but procured old machines and equipment. Low cost got priority over technology and quality. The proposal was approved in April 1976 for a capacity of 2,000 tonnes a year, to meet internal requirement of SIL.

Product technology

Vijay (a Hindi word meaning “victory”) Deluxe, the first SIL product, carried an engine of 9.6 B.H.P. horsepower against 6-7 B.H.P of competitors’ scooters. It was priced lowest in the market and tested relatively more fuel-efficient. Vijay Deluxe, unlike gear (shaft) driven models of Bajaj Auto Limited (BAL), was a chain driven vehicle. It had more components and required frequent maintenance.

Strategies for product marketing

SIL hired retail outlets in different parts of the country. Management of these outlets was entrusted with unemployed engineering graduates below 27 years of age. A loan of Rs. 25000 was arranged for them to equip the outlet and initial stocking of spare parts. The managers received commission on sale of scooters and spare parts. They were trained for sales and service but they would raise hands if any quality problem came.

Failure of first product

While the company was investing in different schemes and production facilities to reach the production level of 100,000 scooters, Vijay Deluxe developed an inferior quality image in the market soon after its launch. Its engine was unable to work effectively in Indian conditions of high ambient temperature and dust. Users experienced frequent breakdowns because of inferior quality components and infrequent maintenance by them. These breakdowns created a general perception in the market that chain-driven technology was inferior to shaft-driven technology. The issue got multiplied with poor service because of no investment in service technology and training.

Launching of new products**a. *Launch of 50 cc Moped***

SIL entered into a lease agreement with Ganesh Flour Mills to use their facilities at Delhi to manufacture an indigenously developed moped, powered by a 49.8 cc engine in 1976. The moped provided a fuel efficiency of 160 miles per gallon. Moped manufacturing plans were later abandoned soon after. SIL started using the facility for production of fans in 1976.

b. *Launch of Vijay Super*

SIL modified Vijay Deluxe and launched Vijay Super in the second half of 1977. Vijay Super had improved start and pick up, an improved footrest, headlights and horn. The warranty was increased from six months and 6,400 km to one year and 10,000 km. However, quality remained inconsistent.

Hurdles in the path

SIL experienced first labour strike in August 1977 on the issue of payment of bonus. Workers of ancillary units also supported the strike. The events took ugly turn and some workers assaulted the supervisory staff. Two workers were dismissed. SIL declared a lockout from October 30, 1977. Government intervened and the lockout was lifted on November 5, 1977. The agreement between the management and trade union included new rate of Rs. 1.30 per point change in consumer price index (It was Re. 1.00 earlier). Dismissed employees were re-employed in a lower grade. Further, leave entitlement was also changed from 20 days of work to 16 days of work but there was no talk of quality and productivity improvement.

Product diversification

SIL developed petrol driven three wheeler minibus, with 600 Kg pay load and a petrol driven six passenger carrier named Vikram late 1977. SIL had unsuccessful plans to equip the minibus with diesel engine to reduce the fuel cost as low as 4 paise per km.

Further, SIL developed a 125cc scooter in December 1978. Company claimed it provide power equivalent to competitor's 150 cc scooter. However, it died in infancy and was never launched in the market.

The next product was a 100 cc scooter named Lambretta Cento that had limited success because of low price caused by lower excise duty. Later it was christened as "Sunny FR". To compete with this BAL brought a product known as "Bajaj Sunny". SIL and BAL had a long dispute on trademark as both the product contained "Sunny" word in it.

SIL took over Precision Instrument Limited (PIL), a state undertaking languishing because of poor quality, in 1979 through debt of Rs. 1 Million to manufacture speedometers and magnetos. The company performed poorly in its first year of production and continued to make losses.

SIL continued the policy of increased in-sourcing. SIL invested in the equity of UP Tyres and Tubes Limited (UPTTL) in 1980. The project was delayed and the project cost escalated to Rs. 24.2 Million from Rs. 18 Million.

Leadership Change:

Soundararajan, the first CEO, relinquished charge on January 17, 1979, at a time when SIL was experiencing difficulties on all fronts. Mr. V. Krishnan, the then head of production who had come from ordnance factory took charge from him. Earlier, he was also looking after quality. Since he became CEO, his focus shifted to quantity, His tenure was short. After a few ad-hoc arrangements, L K Joshi, who hailed from Indian Defence

Accounts Service, took over as the managing director on May 6, 1981. Joshi had a good network of relations in government but had no clue about technology and quality. PS Kapoor, Chief Engineer, Chitaranjan Locomotive Works, Indian Railways, took over as the executive director of the company in July 1984.

Payment Crises

The financial situation of the company started worsening fast since 1980-81. SIL had to depend on loans even for non-plan expenses leading to fast increase of interest liabilities. Payment to suppliers could not be made on time. Though the company achieved a record production of 35,502 scooters in 1980-81, the suppliers continued to respond adversely towards SIL. The instances of inferior quality supplies increased. One of the managers who looked after purchase and production during this time observed, "It was extremely difficult to act tough on quality due to our frequent defaults on payments to our suppliers. While it was difficult to get supplies once, it was extremely difficult to get supplies on time after rejection. Hence, we frequently accepted supplies of sub-standard quality."

Quality improvement plans, which came in bits and pieces, could not be implemented as suppliers frequently refused to invest in dies for redesigned components for scooters. These investments were unprofitable for them in the absence of reasonable volumes.

Increased Competition

During this period, Government granted new licenses to LML and Kinetic Honda, and allowed increased production capacity to BAL. This resulted in sharp decline in demand for SIL's scooters from 1982 onwards. SIL worked on product rationalization in 1981-82 owing to constrained financial position, increasing competitive intensity and reduced demand. It was bleeding and all the stakeholders were wondering when the shutters will be down.

Search for Remedies

The employees developed low “self esteem” and lacked confidence by 1982. One of the executives commented, “Lambretta Cento, the first 100cc scooter in India failed because it was launched without fanfare. Further, we had poor name in the market and fanfare will not be appropriate.”

A study by a task force, nominated by the government in 1983 to examine the reasons of poor performance of SIL, stated, “Morale of the employees is low owing to poor performance and image of the company. Supervision and control on the shop floor is lax as the officers and supervisors are apprehensive about the aggressive adverse reaction of certain people and lack of management’s full support in case they took action against workmen.”

Lost Opportunity

The task force in its report suggested, among other things, to enter into technical collaboration and concentrate on 100cc scooters. Honda Motors was willing to offer technical services but declined to lend its brand “Honda” because of its collaborative agreement for Hero-Honda. Friendship between some influential political leaders and owners of competing firms also created difficulty in arriving at concrete collaborative arrangements.

It was around the same time when the scooter market started opening up. Piaggio had a conflict with Bajaj and was looking for a partner in India. SIL could not capture this opportunity as well. Piaggio later entered into an agreement with LML to manufacture its range of scooters.

Dwindling Spiral

SIL found it difficult to recruit skilled or properly qualified managers after its project implementation. The task force study of 1983 stated that SIL at that time had 176 officers in technical departments. Out of which 50% were qualified engineers, 30% were diploma holders, and the rest were unqualified. Further the estimated annual turnover of 10% among officers in 1983. Not much work was done on new projects or technology front because of lack of management experts.

Suppliers were hesitant to supply good quality components on normal business terms and conditions. There were frequent stock outs. They would frequently ask for advance payment for supplies. Further, company had to make provisions for bad recovery accounts. Frequently suppliers, whose supplies were returned for quality reasons, did not refund the advance to the company.

Local media too was very hostile. Customers too were reluctant to buy any of the products of SIL since they were not sure about regular supply of spares.

Attempt to Sell the Company

Perturbed by fast deteriorating performance, the government made an effort to sell the company in 1987. Bajaj Auto emerged as a strong contender. But it wanted to reduce the manpower to nearly half of the then strength of 3200 persons. Kapoor was in favor of selling the plant. However, the employees would have none of it.

Slowly the message of possible closure of the company started filtering. The period from 1987 was one of industrial unrest. There was very little concern for production as sales of the product were extremely difficult. SIL reported a loss of Rs. 404 million on sale of Rs. 103 million in 1989-90. The accumulated loss stood at Rs. 2125 million. A manager described this period as; "The capacity utilization of the plant was very low. Unions were very aggressive. Union members usually sat outside the gate of the factory and did not

allow the senior managers to enter the plant. Kapoor was forced to operate from his residence/city office, which was nearly 25 km from the plant. Mistrust, conflicts, vitriol and secret information seeking characterized the environment of SIL. Senior managers were unable to work as a team."

Arrival of the charismatic CEO:

Mr. Kapoor, after trying for almost six years, reverted back to his parent cadre of Indian railways. His tenure, too, remained lack lustre. The company was on the verge of closure when he left in early 1990. A Sahay, the then general manager (marketing), was called back from his long leave and was asked to take the charge of the company. He had worked in the company at different positions before seeking voluntary retirement from SIL in 1988. However, his request was turned down. He had been advocating for product up gradation and acquisition of new product and process technology infusion but his plea fell on deaf ears. He was a firm believer that the revival of the company can be achieved only through technology upgradation.

Sahay carried a conviction that the company could be revived. He had very strong conviction that technology can be used as a tool for revival. He had resisted all the plans for closing the plant in past. But, he was being pressurized to take over as CEO of the company precisely for what he had resisted strongly. When he asked the authorities the rationale, he was told "We need an MD even to close the company." He had then quipped "I am not ready to take the charge if I have to preside over the funeral of the company". He, however, accepted the assignment only with the condition that he would work for the rejuvenation of SIL.

However, Sahay had to overcome the hostile environment both within and outside the organization in those days. The government was against providing further financial help owing to difficult financial condition of the central government and lack of hope of reviving the company. People in the ministry presumed it to be a company beyond

potential for its revival. They would not believe Sahay's plans for revival. The task of revival was made more difficult by the government who passed on this view to banks, financial institutions, and other stakeholders.

Revival of the Company (1992-96)

Sahay had many challenges before him, in his plans to revive the company:

- Develop confidence in employees that the company could be revived
- Improve the self-perceived esteem of employees
- Improve industrial relations
- Get support of ministry officials, union leaders, and people within
- Improve the finances of the company for immediate liquidity as well as longer term cash flow
- Improve quality and cost efficiency of products
- Workout a product-market choice
- Redesign the organization for the chosen product-market and new business strategies

Industrial Relations

The new executive director took some extremely bold decisions. He was of the opinion that before looking at technology front, it is imperative to sort out all issues of labour. Sahay announced immediately after taking over as ED that he would operate from his regular office in the factory premises. All, including the local police authorities, apprehending the danger could not dissuade him from taking this bold step. He skilfully negotiated this with unions and associations with the assistance of the then minister of industry. For many it was a matter of surprise that the union leaders and employees who had been picketing the factory and threatening management agreed to Sahay's

entering the factory. It is another matter that on the day of entering the factory premises, another group of workmen sat on dharna in his office premises. The entry was finally negotiated with the intervention of the district authorities.

Sahay discussed with trade union leaders his plans to revive the company and sought their cooperation. However, two warring unions made the matter extremely complex. Sahay stated, 'Union rivalry created many conflicting issues relating to day-to-day operation of the company. In such conflicting matters, I preferred to decide the matters on merit. I preferred to take the bull by horn on such volatile matters and where it could not be settled bilaterally, the issues were decided in the court of law. In one such matter, we were successful in negotiating a wage revision agreement with employees, as unions could not agree on a settlement. Each of the 3200 employees accepted the revised wage individually.'

While efforts were being made to reduce costs, the unions issued a notice in 1992 for payments of arrears because of pay revision, LTC encashment, and waiver of ceiling of one month pay for medical treatment in a year. Union leaders were asked to restrain themselves as it could hamper the revival process. Management stood firm on its decision for deferment of perks and not conceding any further demand.

There was a Joint Action Committee (JAC) consisting of representatives of workmen, supervisors, and managers. The members of JAC too were frequently behaving like trade union officials. They resisted Sahay's appointment as the executive director. Sahay recalled the culture of the organization as characterized by political activities, lack of trust and high conflicts. Disciplinary matters were handled firmly.

Local political leaders with trade union leaders had been intervening jointly in the management of the company. Sahay was of the view that company moves ahead like a family. Therefore, solving this issue is of paramount importance before thinking about products and technologies. Sahay took a firm view of not allowing intervention of local

political leaders. He recalled the incidence of aggression by the local political leader over the issue of revocation of suspension of an employee in 1992. He further stated that local political leaders had stopped requesting him for any favour since then on having realised its futility.

New Product Strategy

Mr Sahay added third dimension to the technology. Just like in trigonometry, adding third dimension to the existing two dimensions brought a revolution, similar revolution was brought by adding another wheel to existing two-wheelers. Keeping in mind the growth of two-wheelers and its future perspectives, Sahay decided that it is time to add an extra wheel to two-wheelers. He started focussing on manufacturing three-wheelers.

Bridging the Gap

Sahay preferred to manage by “walking and talking” to bridge the communication gap between management and workmen. He frequently charged the employees with emotions. He said that the best way to get best out of the employees, is by moving together with them.

Influencing the government:

Influencing the government was not easy either. His perseverance made an impact on the erstwhile Minister of State for Industry at that time. He recalled one such meeting in which he asked the minister, “Why do your secretaries want to close my company when I am not asking any money from the government? Moreover SIL is providing employment to so many people in an industrially backward state.” Minister called the secretary and repeated the same question to him, “Why do you want to close the company that is providing employment to so many people. What is the harm to let it continue if ED does not want any financial help from us” The incidence was shared with

other managers of the company who appreciated the courage displayed by the CEO. Since then, Sahay sought the support of government through his slogan.

"We manufacture three wheelers in the factory but sell employment in the market." This slogan proved very effective in India where rate of unemployment was around 15 percent in 1992.

The real turn in event took place when the new secretary, MC Gupta, pleaded before the Group of Ministers in 1992, "We had recommended for the dissolution of SIL. But I happened to meet the new CEO. He has plans to rejuvenate the company; he should be given a chance."

Solving Financial Difficulties:

Sahay shared with other managers about his commitment not to borrow from the government. None could believe that SIL could even pay salary to employees without such support. It was a big challenge at this juncture to arrange working capital for the company. Arranging money for timely payment of salary and suppliers' bills was proving difficult. Most of the machinery, land and building had already been mortgaged to banks against borrowings. It was not possible to sell any of these components. Only surplus stores and scrap could be sold which brought little cash to meet the actual requirement. Banks were not willing to provide further advances in view of high debt, negative net worth of the company and mounting irregularity in the account. They refused to help SIL in the absence of guarantee by the government.

Help came from the dealers of the company. The demand for Vikram was rising. The product was promoted as an employment generator. Inadequate public transport systems, narrow roads in old cities and high unemployment all combined to generate substantial demand for the vehicle. It was estimated that a three-wheeler carried a premium of Rs. 10,000 to 20,000 on delivery in 1992. It was possible to get advances from the dealers. The advances not only eased the problem of working capital of the

company; it also developed some confidence for its possible revival among different agencies. Sahay could negotiate with banks for a fresh loan, though, at higher interest rate. Suppliers could be paid through post-dated cheques.

Reorienting the product niche:

The sale of two wheeler scooters was negligible by 1993. In the prevailing highly competitive environment, SIL decided not to focus on this product anymore. However, increasing the volume of production of three wheeler vehicles became essential to survive. The prevailing production volume of 150-200 three wheeler vehicles per month in 1992-93 was not enough even to pay wages to employees. Production went up to 500 vehicles per month in 1995 by tooling up two-wheeler facilities for the production of three-wheeler vehicles and continued thrust of management to increase three-wheeler's production. Slowly production in the company started moving northwards. SIL reported operating profit in 1995-96 for the first time since 1981.

Possible Revival Routes:

IDBI, the operating agency, initially was of the opinion that SIL could not be revived. Sahay made a number of trips to IDBI in 1993 to get their opinion changed. Slowly, RJ Bedekar, the nominee (Director of IDBI), and KK Narula (the nominee Director of SBI) in the board developed admiration on the commitment of Sahay. They played a vital role in subsequent stages. IDBI asked the company to submit a revival plan. Sahay and his team considered following options in their analysis to revive the company.

- Merge with another healthy PSE.
- Merge/take over by another private company.
- Run in its present form with enhanced managerial, technical and financial inputs.
- Run in a joint sector through equity participation.

- Set up of sunrise industries within SIL's boundaries and gradual deployment of manpower in such units.
- Close down the company. Not acceptable to employees, more so to executive director himself.
- Form a cooperative of workers to run the company. Employees rejected the option.

SIL took the help of AF Ferguson, a leading management consulting firm. The consultant recommended more than 50 percent manpower reduction. This was not feasible owing to the prevailing industrial relations. Among other suggestions, the consultant recommended the closure of two wheeler scooter and fan plants and concentrate on three wheeler production. This clearly proved Mr. Sahay's vision of concentrating on three-wheeler segment. It also recommended diversification into a related activity of diesel generating sets. This suggestion, in fact, was similar to what management had thought but it brought credibility, as Ferguson was an outside agency. This also paved the way for manpower reduction.

Tatkal Scheme:

Though SIL was able to sell to reap the benefits of concentrating on three-wheelers, there was demand-supply gap. SIL started a "Tatkal" (a Hindi word-meaning "immediate") Scheme in 1995 to reap the benefit of demand-supply gap. Under the scheme it was envisaged that a three-wheeler would be delivered within 15 days unlike the waiting period of nearly three months at that time. SIL charged a premium under the scheme. However, implementation of the scheme led to the following:

- a) Waiting period under the "Tatkal" Scheme increased to 90 days from initial 15 days.

b) Waiting period under the normal delivery scheme increased to nearly six months from existing 90 days.

c) In some instances dealers sold a normal delivery vehicle as a “Tatkal Scheme” vehicle.

The company was not able to exercise close price check on dealers. Company supplies only the chassis to the dealers. Dealers sell the vehicle after fabricating the body on the chassis as per the choice of customers. They, frequently, quote the price of the complete vehicle (chassis and body) to customers. It makes it difficult for SIL managers to find out the price, charged by the dealer from the customer.

BIFR Proceedings:

During the hearings on the revival scheme between 1993 and 1996, production and sales performance had been consistently improving due to market opportunity in three-wheeler segment and partial conversion of two-wheeler facilities into three wheeler facilities. SIL was able to earn operating profit in 1995-96. This proved extremely helpful to change the conviction of BIFR members about the feasibility to revive SIL.

After many deliberations, BIFR sanctioned the revival scheme in September 1996. The revival package granted many financial benefits to the company as listed in Exhibit 1. By now the local management team in SBI had changed. They went in appeal against the orders of BIFR for revival of SIL. This created a big roadblock for Sahay in getting the scheme implemented. He overcame it through very persuasive public relation activity.

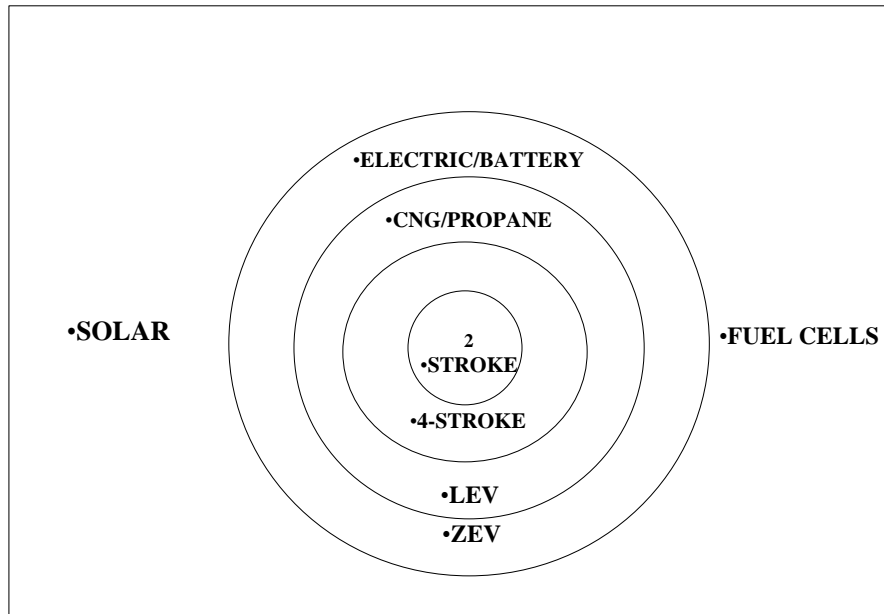
AUTOMOBILE ENGINE - RADAR MAPPING
STRATEGIC VISION

Figure 1

2 and 3 Wheeler segment of Auto Industry in India

The Indian economy was closely regulated and controlled till late 1980s. One of the key success factors for an organization in the regulated economy of pre -1990 was to get license from different ministries and obstruct the issuance of license to any of the present or potential competitors. Government tightly controlled capacity expansion and firms truly enjoyed a sellers' market. Domestic production capacity in the country was unable to match the demand and imports were extremely difficult. Indian Automobile Industry is divided into Heavy, Medium and Light Commercial Vehicle, multi-utility Vehicle, Car, 2-Wheeler & 3-Wheeler. Soon after independence, Automobile Products of India was granted a license to produce scooters in the country. The company had technical collaboration with the then Innocenti of Italy. It was the only manufacturer of two wheelers in India till 1960. Baja Auto Ltd.(BAL) was given a license to produce 6000 two wheelers and three wheelers a year in 1959. BAL has been the market leader in the

scooter market since then. However, the market leadership position in the two wheeler segment (which also includes motor cycles) went to Hero Honda in 2001.

Scooters India Ltd. (SIL) was granted a license in 1973 to manufacture 100,000 scooters per annum. It started production in 1975. Maharashtra Scooters Limited and Andhra Pradesh Scooters Limited, who were using SIL manufactured engine, started production in 1976. The competitive environment changed significantly in the mid 80s. Lohia Machines Limited (LML) started production of scooters in 1984 in collaboration with Piaggio of Italy. Kinetic Honda started scooter production in 1986 in technical collaboration with Honda Motors Limited, Japan. Gujarat Narmada Auto Limited, a subsidiary of Gujarat Narmada Fertilizer Corporation, started scooters production in 1987 but could not sustain the activities and was finally liquidated in 1997. From the second half of the 1980s, the market started becoming a buyers' market. The market structure changed significantly in the 1990s. The launch of fuel efficient and trendy motorcycles in foreign collaboration by BAL, Hero-Honda, TVS and Escorts changed the demand pattern for two wheelers in India. While the growth rate of the motor cycle market has remained in double digits during the last decade, it has shown a declining trend for scooters (SIL, 1992).

The concept of a three wheeler vehicle came from Europe. Mediterranean Europe had its maximum use but today Asia is the leader in 3-Wheelers. India is the second largest producer of three wheeler vehicles in the world, behind China (Nathalie Ladler, 1996; Bajaj Auto Limited, HBR case No. 9-593-97). These were mostly three seaters. Three wheeler vehicles can be used for multiple purposes. In India, it is commonly used as passenger carriers for short distances. These carriers could be point-to-point taxis with larger space inside to accommodate 6-8 persons comfortably or it could be smaller rickshaws with 3-4 passengers' carrying capacity to meet specific travel needs of passengers. While the smaller versions are generally fitted with petrol engines, larger passenger carriers are fitted with either diesel engines or petrol engines. Of late, they

come with engines capable of running on CNG which causes lesser pollution. Three-wheeler operations in India are characterized by the following:

1. Operation of a 3-wheeler taxi within the municipal limits of cities is decided by state government agencies. Traffic movement, public convenience, environmental factors, and political factors influence the local administration.
2. The taxi operators are generally from lower income groups who often invest all their savings to buy these taxis.
3. Passengers are predominantly from middle income or lower middle income groups. They use the three-wheeler taxis for their convenience, availability and low cost. Hence, low operational cost of the vehicle is important to compete effectively with other modes of public transport such as buses. Subsidized pricing policy of diesel by the government has made the diesel model of three wheeler taxis more popular.
4. Since the late 1990s, there is growing concern for environmental degradation in India. In some of the cities including Lucknow, the home of SIL, restrictions have been imposed on the movement of diesel taxis.

These characteristics put twin pressure on three wheeler manufacturers. First, they have to keep price and operating cost of vehicle low. Second, they have to be equipped for growing environmental concerns. Companies are responding to environmental concerns by upgrading the technology and using alternate fuels. Subsidized price of diesel in India provides low operating cost for such vehicles.

Subsidized price of diesel in India provides low operating cost of such vehicles. However, there are only a few diesel engine manufacturers. Greaves Limited, Piaggio, and Lombradini of Italy are the leaders in diesel engine technology. SIL has been dependent on Greaves for the supply of diesel engines which accounts for nearly 25 percent of the manufacturing cost of the vehicle.

Product technology

SIL's R&D team played a significant role in the development of diesel three-wheelers in India. Greaves produces diesel engines for stationary use such as for pumps, generators, etc. Joglekar, the then general manager (marketing) of Greaves, happened to meet Sahay, the then general manager (marketing) of SIL in early 80s. He narrated his problem of declining sales. Sahay asked whether Greaves would be prepared to make some changes in the engine. "Why not if we get business?" replied Joglekar. "Let us then work together to make the engine adaptable to our Vikram three wheeler," suggested Sahay and thus a new product was born.

The major players in the three wheeler industry are Bajaj Auto, Piaggio-Greaves (a joint venture between Piaggio and Greaves) and SIL. Bajaj is the market leader with 85 percent of the market share. SIL and Piaggio-Greaves share the rest of the market almost equally. Piaggio-Greaves, which manufactures Greaves Garuda diesel autos, is set to introduce the Euro-II version of diesel autos in the domestic market. Greaves Ltd. is gearing up technically to upgrade its smaller engines up to 12 hp with technical collaborator Lombardini of Italy to meet the Euro-II norms, which will be used in Garuda autos.

Fuel technology

The competition in 3-Wheeler sector is becoming intense with the entry of Mahindra and Mahindra (M&M) and Bajaj Tempo Ltd (BTL). Besides these 2 major new entrants, some small sector units are also playing in the field. In response to intense competition and new exhaust emissions regulations, SIL developed low-emission CNG version as well as zero-emission battery driven Vikram EV in late 90s. SIL gained from experience in Kathmandu where the company's diesel three wheelers were being converted into battery driven vehicles by some American Consultants. SIL manufactured and marketed world's first zero emission battery driven vehicle. The then President of USA, Mr. Bill

Clinton appreciated the zero-emission vehicle when he visited Taj-Mahal in Agra on the Earth Day, 22nd March, 2000 from where he had addressed the world. Following on the heels, M&M also developed a battery operated three wheeler and put on trials. BAL, too, has demonstrated an electrically operated 3 seater 3-Wheeler but has been playing on low key. Due to court's intervention, only CNG powered and battery driven electric 3-Wheelers are registered in Delhi. With so many constraints and easy product substitution, the growth of three-wheeler market is uncertain, more so because of environmental issues. This has adversely affected the demand, which was earlier increasing continuously at a rate of 30 to 40 percent but the vehicles running on alternate fuels are expected to be in demand. ARAI has worked on a draft notification for alternative automobile fuels such as LPG and CNG. The draft also focuses on regulation and safety aspects. LPG conversion is likely to gain momentum in the coming years.

Leveraging environmental technology

Mr. Sahay always used to support initiatives taken to protect the environment. He decided that all the technologies are of no use until environmental technology becomes a part of those.

Though on record, the Group of Ministers in 1992 gave a lease of life to the company, the real cause of turnaround (Fig.2) was on account of the change in mindset of employees that came through rigorous training that was imparted to them in the journey towards ISO 9000 and ISO 14000. During the period under reference to BIFR, the Board of Directors kept a close watch on the performance of SIL. They were more vigilant and inquisitive, especially about quality and environmental aspects of the operations of the factory as well as environmental performance of the products. SIL's R&D team had played a significant role in changing product line from scooter to 3-Wheeler and imbibing environmental aspects in the products right at the design stage. The company pushed the production and sale of three-wheelers and its revenue started moving northwards. The strategic group, however, remained busy working out the future scenario and strategic plan. It was obvious that SIL had to develop its environmental policy and

take seriously to Environmental Management, which had become a key factor in its Turnaround. Though getting ISO 14000 certification took some time, its Environmental Policy (Annexure-1) was already in place and all the employees were working to achieve environmental targets along with productivity, quality and sales targets. The Company was rated highly by Center of Science and Environment (2001) for its environmental performance in automobile sector. Later the CEO was declared the Environmental Chief Executive of the year by Wisitex.

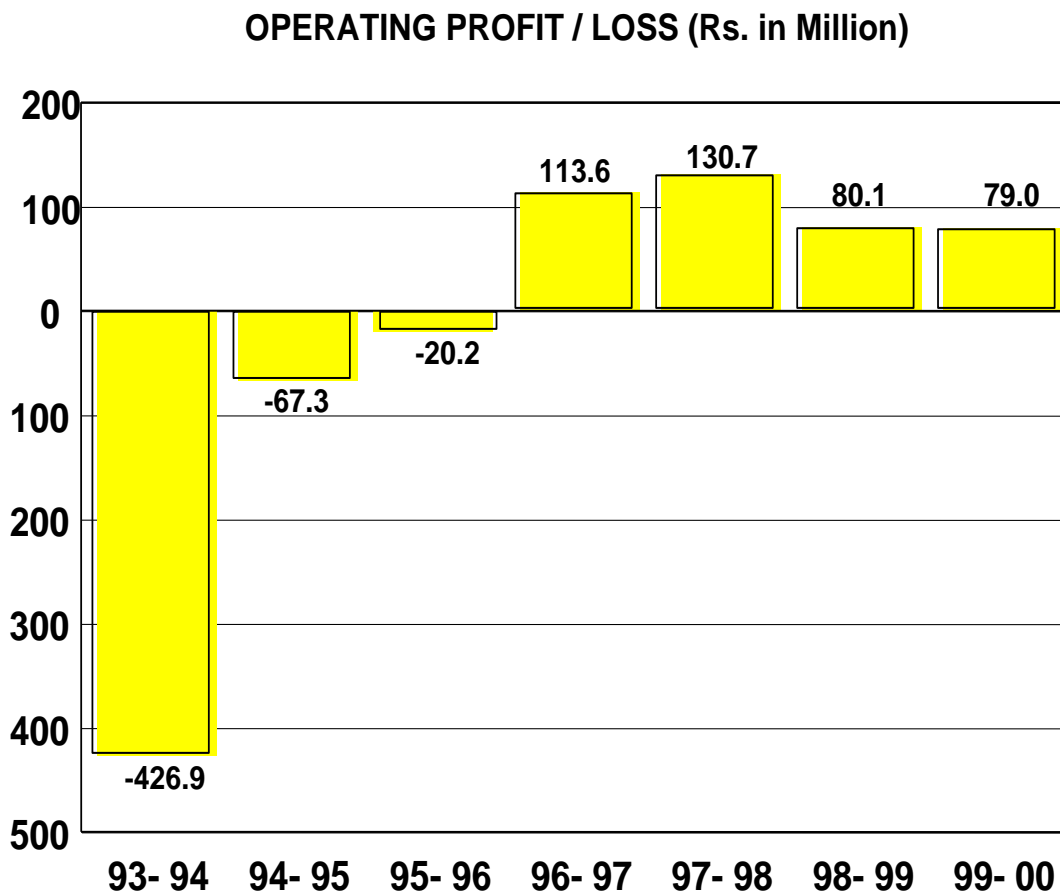


Figure 2

Environmental Actions taken by SIL

The strategic group had identified environmental actions on three fronts:-

1. People
2. Product and
3. Process

It was observed that not only the employees but all stakeholders were unmindful of the environmental issues that the company was confronting one after another. As CEO of the company, I had discussed informally the issues with our directors, dealers and bankers. No one in the beginning gave any heed to what was coming. It was evident that our operations will get completely paralyzed leave aside the task of Turnaround. Central Motor Vehicles Rules (CMVR), 1989 had already come in force but the company had to continue selling its products even when they were not meeting exhaust emission norms. The motor vehicle registering authorities, too, were merrily registering these 3-Wheelers. This was because of no dissemination or insufficient dissemination of the new rules. The process front was worse as Environmental Pollution Act (1986) was already in force. The factory was carrying on various processes like melting, shot blasting, welding, spray painting, heat treatment etc. which resulted in air, water and land pollution beyond the limits provided in the Act. The most sensitive was the salt bath (cyanide) process for heat treatment. The state pollution control board had raised the issue a number of times but it could be persuaded not to take any punitive action. The factory's operations, however, came under close scrutiny by the Pollution Control Board as the courts started hearing public interest litigations and resorted to judicial activism. In one of such actions the High Court of Allahabad, Lucknow Bench banned plying of Company's 3-Wheeler in Lucknow. This made the management and all employees to pull up their socks and remedy their poor environmental performance.

The strategic group identified people as the first and foremost factor in making the company Environmental friendly and accordingly every one was trained in Environmental aspects and impacts for the company, especially those in their area of operation. Many employees were given higher level of training and the CEO was asked to lead from the front. He underwent Advanced Lead Auditors Course in Environmental Management Systems. There was change of mindset and a fresh breeze was blowing across the company making everyone worry and act to make company's processes and products environment friendly. While taking stock of the situation, it was observed that a number of Acts and Rules (Table 1) were applicable to the company many of which were not being complied. The action started from the scrap yard. Foundry, Die Casting, Forging were on the firing line. Some immediate investment had to be made to comply with the pollution laws. Fume and dust extractors, hoods, dust bags, chimneys etc had to be installed but the savings outstripped the expenditure. Paint shop and Heat Treatment shops called for huge investments as the basic process itself had to be changed. This required introduction of equipments with new technology. Machine Shop, Press Shop, structural Shop and Assembly line, too, required marginal investments. Auxiliaries and utilities required much support but they were brought to the desired level of environmental performance with an in plant effort. With these actions taken, it was observed that the scrap yard started dwindling. As no separate environmental account was kept, it is difficult to say the return on environmental investments. However, the production (*Figure 3*) went on increasing. The losses started reducing and profits started rising. The highest impact on productivity, cost reduction and consequent profit came from savings in material (*Figure 4*). The power and fuel consumption reduced (*Figure 5*) considerably. In fact, the experts, financial institutions and bankers never thought that Energy cost in a unit like ours could ever go below 4%. The manufacturing and operating costs (*Figure 6*) which includes indirect material and overheads also showed a declining trend. The employee loved the new working environment and showed their enthusiasm through their higher productivity and creativity. Despite their salary and wages going up, there was considerable reduction in

employee cost (Figure 7). The newly found creativity resulted in ever improving products. Vikram EV (Electric 3-Wheeler) was the result of this innovation and creativity. Even President Clinton (Figure 8) admired this product during his visit to India. The pursuit to environmental excellence made the strategic group to generate further ideas and create new businesses out of environmental requirements of future and company’s strength developed in the process of turn around. The future strategic opportunities are depicted in Figure 9.

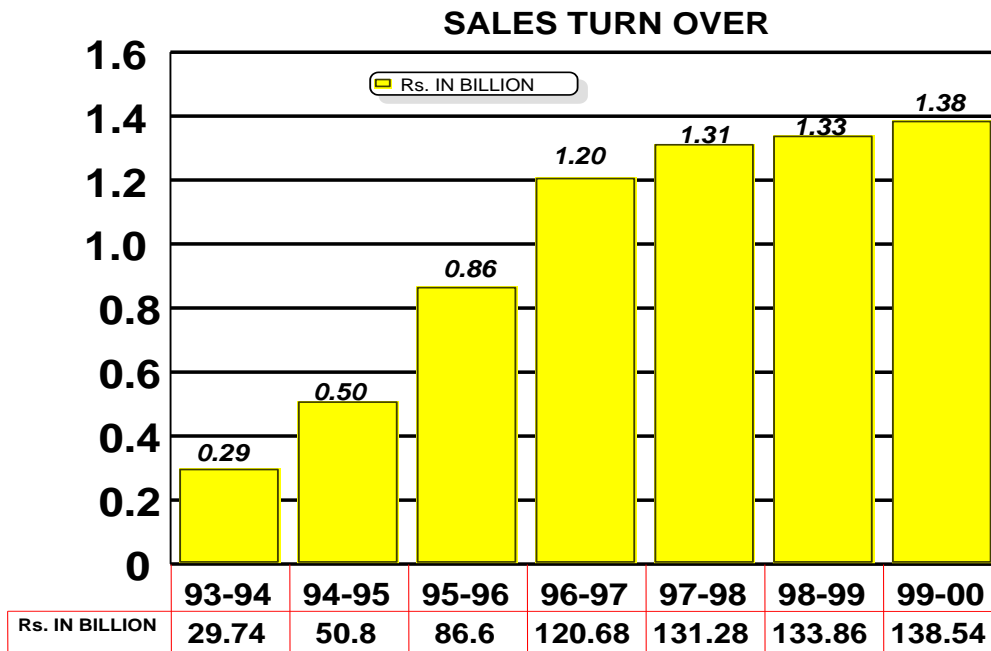


Figure 3

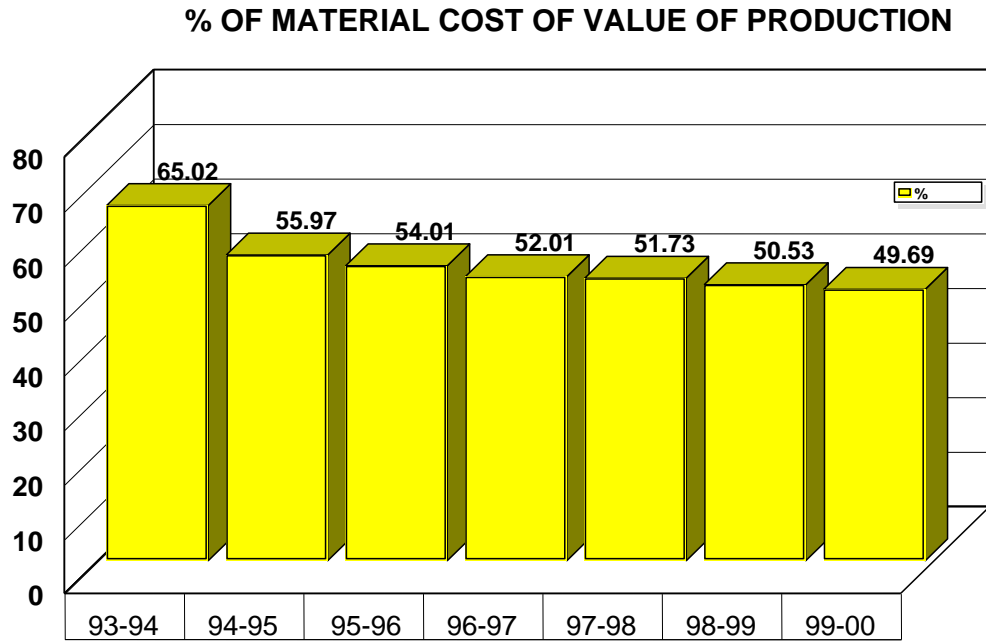


Figure 4

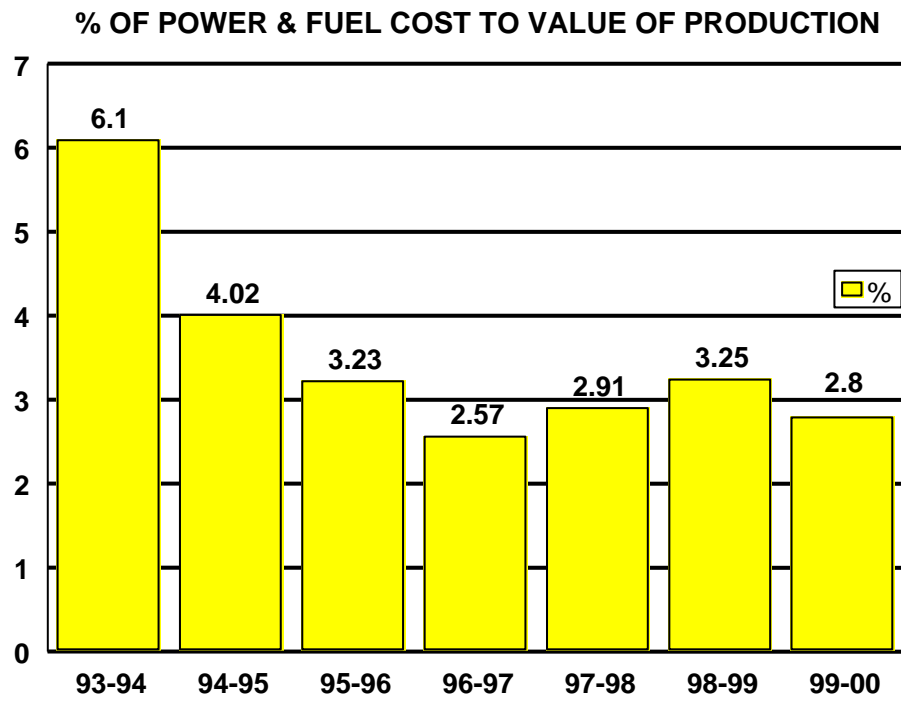


Figure 5

% OF MANF. & OPERATING COST TO VALUE OF PRODUCTION

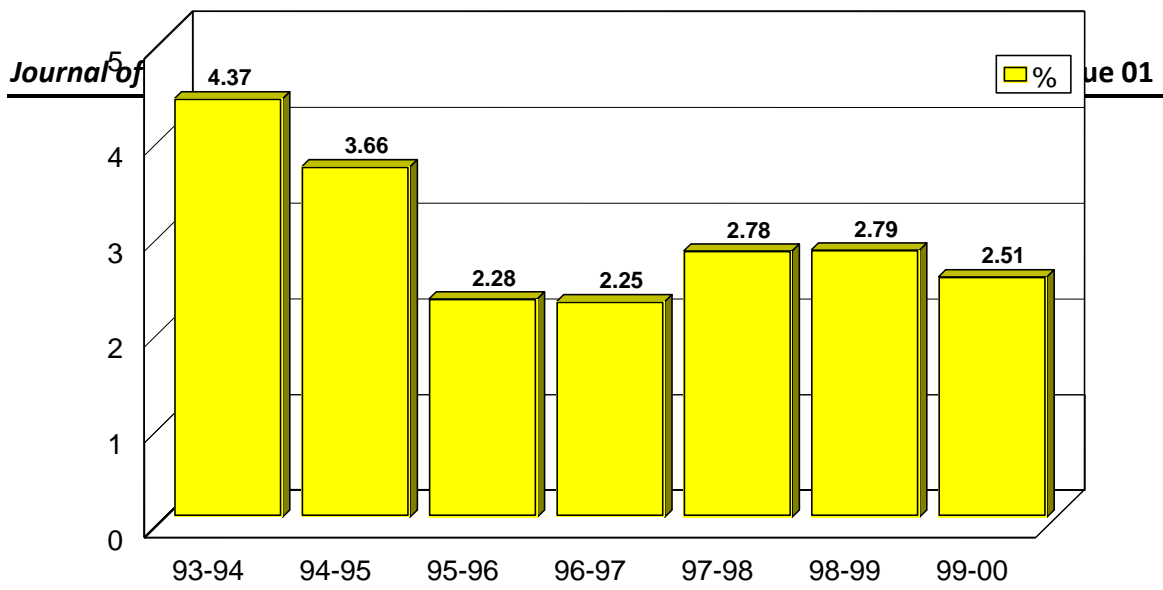


Figure 6

% OF EMPLOYEE COST TO VALUE OF PRODUCTION

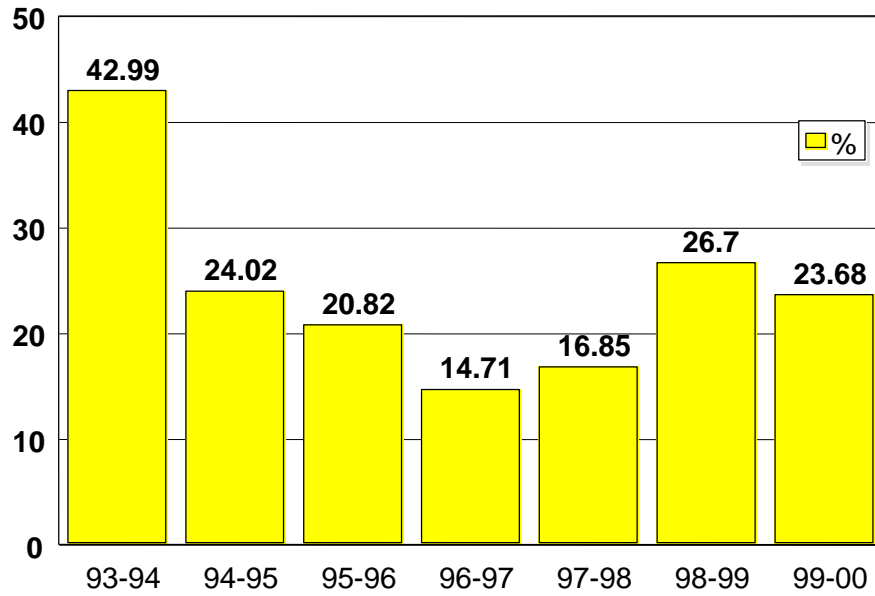


Figure 7



Figure 8: President Clinton Inspecting Vikram EV on Earth day
- 22nd March, 2000, outside Tajmahal, Agra

SIL'S SURVIVAL/COMPETITION MODEL

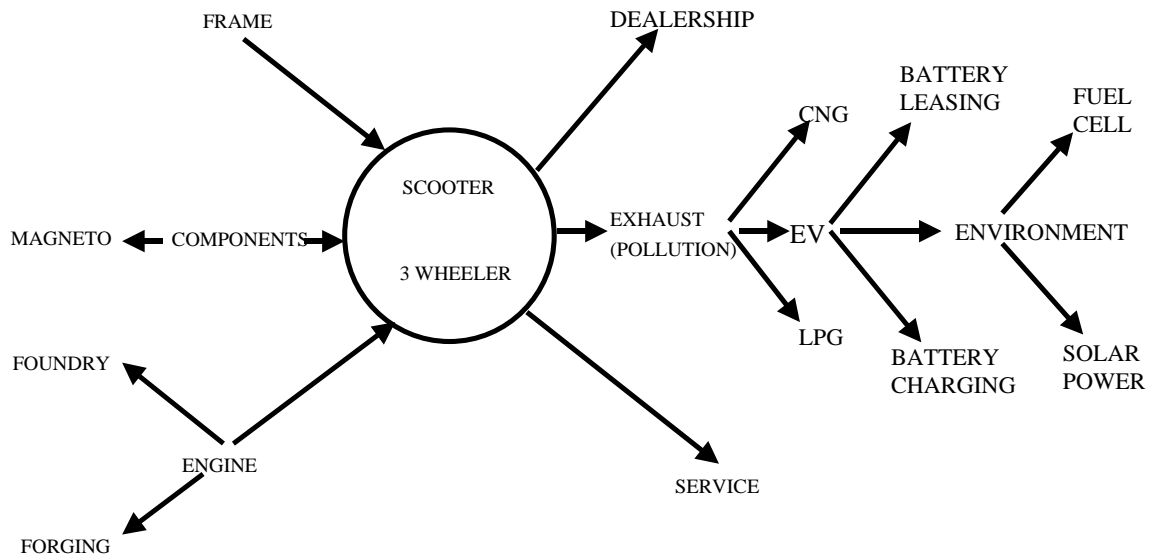


Figure 9