



## International Journal of Engineering, Business and Enterprise Applications (IJEBA)

[www.iasir.net](http://www.iasir.net)

### To study the role of manufacturing competency in the performance of Sonalika tractor manufacturing unit

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**Abstract:** This study deals with the manufacturing competency of Sonalika tractor manufacturing unit. During the entire survey different factors have been analyzed like Product design and development, Quality control and Performance Parameters and different inferences have been concluded. It has been analyzed that the joint venture affects the sales because through the joint venture the maximum investment can be done in the Manufacturing plant & precise testing has been possible which automatically increase the testing level & production level as well. It has also been concluded that sales have improved with an improvement in competitiveness of manufacturing unit.

**Keywords:** Competency, manufacturing unit, quality control, production time.

#### I. Introduction

A competency is the capability to apply a set of related knowledge, skills, and abilities to successfully perform functions or tasks in a defined work setting. Competencies often serve as the basis for skill standards that specify the level of knowledge, skills, and abilities needed for success, as well as potential measurement criteria for assessing competency attainment. A core competency is a fundamental understanding, capability, or proficiency in a specific subject area or skill set. For example, an individual who becomes licensed as a Microsoft Certified Software Engineer (MCSE) is said to have a core competency in certain Microsoft systems and networks. Companies with definite strengths in the marketplace, such as data storage or the development of accounting applications, can be said to have a core competency in that area.

The core part of the term indicates that the individual has a strong basis from which to gain the additional competence to do a specific job or that a company has a strong basis from which to develop additional products. The term core competency was originally introduced in 1990 by the Harvard Business Review to describe the management concept of corporations possessing specialized expertise in a specific area. Competence is the functional /technical traits required to perform a job better. For example presentation skills for a marketing person, IT skills for systems guys. Competence is the ability to perform particular tasks and duties to the standard of performance expected in the workplace. In other words: doing the required task to the required standard. Competency is the behavioral traits required for the job to be performed better, e.g good communication skills, analytical skills, negotiation skills etc. Competency is the description of the knowledge, skills, experience and behavioral attributes necessary to carry out a defined function to the standard of performance expected in the workplace. In other words it is "the performance standard".

The Competence is an ability to acquire through learning, exposures to the tasks and series of trainings. This ability is engaged to suffice the performance of a particular job. The skill wherein the little potential of an individual is given a chance to grow, mature, and immense so that adequate and appropriate steps will be exerted so that performance would be in accordance with the set of rules. Management of a company should look into the gaps of each member of the company in order to guide and give proper trainings to the concerned. In short, competence is acquired by chance or by choice. Meaning competence needs third party to invoke and push through the potentials of an individual. For example, the company is looking for an employee to go up the organizational hierarchy, and the competences needed were itemized. If an employee has no particular competence the company needs, he cannot fill up the post. In that case, because of the push by outside force, he is willing or force to find ways in order to acquire the needed competence.

The competency framework is an important part of the performance evaluation system because this serves as a guideline on how to properly evaluate also serves a guideline that how well an employee is doing. Defining the key competencies will help the supervisor/manger to find an effective approach on how to handle an employee with poor productivity level and on how to further strengthen an employee with good performance. An

established competency framework also serves as an effective tool in training needs analysis. To retain an employee is to promote professional growth & development within the organization. The framework will determine that what are the skills or competencies needed for an employee to develop its potentials and eventually improve his performance by creating more chances for growth. The competency framework serves as a backbone of an organization by giving support to the company and its employees. Without defining the key competencies, the employees won't have a clear direction and will have difficulty to understand their very important roles in the organization. The framework is very helpful to both the company as well as its employees in achieving their goals for them to accomplish the mission and vision of the organization.

One type of offensive corporate strategy by using the insights of transaction cost economics (TCE) in order to develop the concept of strategic disruption. According to TCE, a firm will establish a governance structure guided by the attributes of the transaction in question. This paper focuses on a critical case in world manufacturing and trade [1] the significant changes both in the strategic management field with the development of the competence-based management and use of the concept value. The design of the management field is with the diffusion of matrix based tools that helps to manage the interdependencies of the product, process and organization. [2] This paper documents research have conducted to investigate the existence and nature of core competency concepts within a section of UK Small and Medium sized enterprises (SMEs) manufacturing organizations [3] The causality relationship between automobile production quantities and automobile loan amount of deposit banks was analyzed with the assistance of co integration and VEC Models [4] The author suggested that the meaning of competitive advantage is self-evident, so there is no evident need to define its exact meaning. He supposed that differentiation based on key buying attributes of a product is the base of an advantage [5] the short-term competitive advantages are those which would last through a business cycle and long-term competitive advantages are those which would last over more than one business cycle [6]. The analytic hierarchy process (AHP) is an intuitively easy method for formulating and analyzing decisions. The analytic hierarchy process (AHP) provides a structure on decision-making processes having a limited numbers of choices but each has a number of attributes.[7] Factors such as government regulation of emissions, advances in technology, and increases in oil prices, the automobile market has entered into a period of flux and uncertainty. Vehicle manufacturers have reacted by developing several power train alternatives to the internal combustion engine (ICE). [8]

## II. Case Study at Sonalika

Being Situated in the Punjab (The leading Agriculture state in India), Sonalika have deep knowledge of the farming requirement and also done an extensive research on the requirement and the actual need of the farmers, which resulted in development of the most suitable tractors and equipments for the Agriculture and commercial applications. International Tractors Ltd. has its own in house R & D setup which is recognized by Govt. of India. Ministry of Science and Technology Department of Scientific and Industrial Research. Ultra modern R&D facilities capable of Designing & Developing of components equipped with the following designing & Analyzing Facilities.

Incorporated in 1995 International Tractors Limited has become a renowned name in tractor manufacturing industry. ITL, one of the top three tractor selling companies in India, has come of age to establish itself as a distinct and excellent tractor manufacturer. ITL is the proud manufacturer of the best selling tractors between 20 HP to 90 HP. The tractors manufactured by ITL bear testimony to greater performance, unmatched quality and higher reliability in the market because of their better pulling power, minimal fuel consumption and low emission. With their exceptional qualities these tractors cater to the demands of agriculture sector not just in India but also in various other countries. ITL tractors are fitted with engines which are compliant to smoke & mass emission for India certified by ARAI, Pune (Euro II) & also has approval from Environmental protection Agency, Washington DC for EPA compliance and from TUV for Euro III compliance. All tractor models of ITL are tested & approved by Central Farm Machinery and Tractors Training & Testing Institute, Bundi (MP) India, (the Government of India Institute authorized for issuing test reports). These Certifications have enabled ITL to enter in to various countries across the Globe. Moreover, the tractors manufactured by us are approved and tested dimensionally and structurally on the ground of specification, according to EEC and other international standards and homologations. So they offer our customers the best in class hydrostatic transmission, power steering, differential lock and advanced safety devices.

ITL's top-end manufacturing processes, international quality control systems and advanced research and development facilities are duly ISO-9001:2008 certified by the joint accreditation system of Australia and New Zealand. Moreover, ITL is the first tractor manufacturing company in the country to be accredited with ISO-14001 certification, TS16949. Today, taking the voyage of success further, Sonalika Group sits on a strong platform with a turnover of approx. 650 million USD. The annual average growth of 30% is the testimony of achievements and makes one of the fastest growing corporate in India. Moreover, Sonalika Group is also one of the few debt free corporate of the world. Its strength of 5000 people includes some of the renowned names in

industry. Sonalika Group has also joined hands with some of the leading international names like Yanmar of Japan, JM Finance Trustee & Magma Sharachi Finance. Today Sonalika has become synonymous to prosperity, success and growth. With international technologies, state-of-the-art production units, experienced teams and tailor-made solutions Sonalika has responded really well to its customers' needs in India and abroad. The coming years will bring the same results for Sonalika, their associates and customers provided to go along with the same fervor and optimism. "To us at Sonalika Group, Quality is not something that we engineer, inspect and input into our tractors. It is an innate desire to attain the best that comes from within each of us. It defines our lives at work and at home and ripples out into the world around us". To maintain quality levels, every engine is also thoroughly tested on computerized machines after being manufactured.

- Producing world class Products in Quality and Reliability.
- Total customer satisfaction.
- Creating a culture among all Employees towards Total Quality Control Concept.
- Constant up gradation of Technology and Human Excellence

International Tractors Limited is an ISO 9001: 2008 for Tractor Assembly and TS16949 for In-house Gears and Shafts manufacturing. Sonalika Group firmly believes in matching the international Quality Standards to meet the Customer Satisfaction. To achieve this, Sonalika Group is always working on continuous focus on Quality for both its in-house manufacturing as well as chain of suppliers, and thrives to achieve excellence in Product Quality. The plant has in house latest technology to manufacture and ensure quality standards in HMS (Heavy Machine Shop), LMS (Light Machine Shop), Gear Shop and Press & Fabrication Shop. This includes chain of CNC Machines, VMCs, HMCs, PLC controlled Presses, Seal Quench furnaces, Gear Testers, 3D CMM and 2D CMM. Production staff and workers are technically qualified and regular trainings are imparted as per their job profiles besides focus on Zone wise 5S concept across the organization. ITL believes in Team Approach in the working with its chain of Suppliers through continuous up gradation in Process and initiatives of 'Direct On Line'. Our endeavor is to share voice of customer with suppliers at every stage. We encourage our suppliers to work for the concept of 'Cannot Make Defects' and 'Right First Time' at any stage of manufacturing.

The main quality steps taken are:

- a) Quality Check of Gear Boxes
- b) A Total Grip on Quality Check

The Dream Project of Sonalika group is to cater the agricultural and auto industry with quality abrasive products through untiring dedication and leadership. **MISSION STATEMENT** - We pay personal attention to our customers so that, we can build products they need, and not merely sell the products we build. Established in 1969, Sonalika group since the inception has tried to understand customer need to be facilitating them with its value for money products. To become the World's leading tractor manufacturing company and a major player in automotive products and services & to provide value for money to the customers by producing High Quality Innovative Products at competitive price the management are doing the following practices:

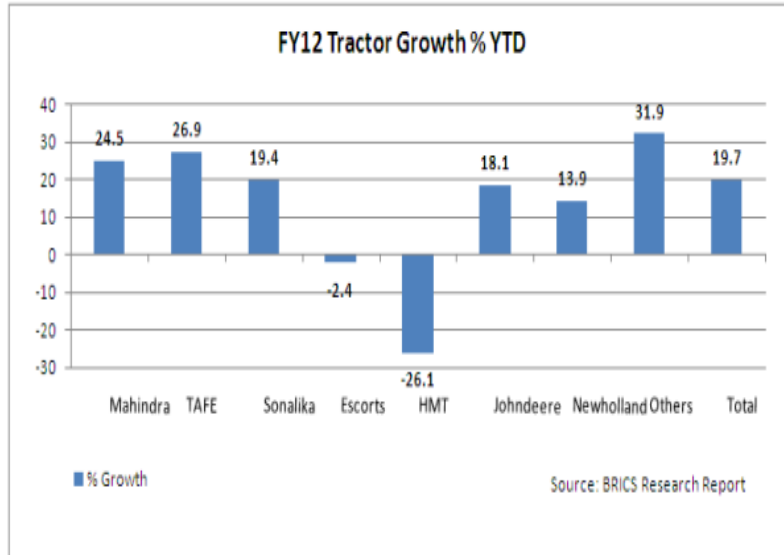
- Fast adaptability to change
- Offer service with a smile to customers
- Provide enjoyable working environments to employees
- Innovative in fields and business

The company was producing 140 units of tractors per day two years ago now its daily production capacity is 300 tractors and ramping up. The company is also increasing its dealers' network in India and will appoint over 200 dealers by the end of this year. ITL currently has 850 dealers in India. Sonalika is having collaboration with Yanmar, and raised its production to 200 tractors per day. Sonalika is the one of the top 3 tractor manufacturing companies in India, other products include of, Multi utility vehicles, engines and various farm equipments. Today the group stands tall with an approximate turnover of 5000 Crore INR. An average growth of 30% makes it one of the fastest growing corporate in India. It is also one of the few debt free companies. Group has strength of about 2500 employee technocrats.

The trend reflects the changing dynamics in rural India where marginal farmers with small landholdings are going for tractors due to reasons including labor shortage and rising costs of bullock carts. Competition is on its heel, though. Punjab-based Sonalika Tractors is developing two categories of sub-Rs 2 lakh tractors including a specialized one for horticultural farmers who grow high-end specialized produce like orchids and maintain vineyards. A combination of factors labor scarcity and rising wages, better affordability of small marginal farmers and sales are plateauing in traditional markets like Punjab among others. Sonalika Tractors, meanwhile, expects its specialized tractor for horticultural farmers to be a hit because states like Haryana have been nudging their farmers to diversify into on higher-yielding horticulture crops. In the first quarter of the current financial year alone, 30 hectares of additional area were brought under fruit cultivation. Low horsepower tractors work

well in soft soil conditions, such as river basins. At present, tractor penetration in Punjab, Haryana and parts of UP is almost saturated. The International Tractors Limited (ITL), a flagship company of Sonalika Group is a zero-debt company which is now looking at a much higher share of exports to grow. The ITL already exports to about 70 countries and has set up assembly lines in Nigeria, Cameroon, Algeria, Brazil, Germany and Argentina, co-owned with local distributors. Now, the idea is to focus on higher HP tractors and reach out to developed markets in Europe and the United States. There's a good reason for looking outside India — a tractor sold overseas fetches 30% higher margin than a unit sold locally.

**Table 1-Market analysis of the tractors in India (<http://www.moneycontrol.com>)**



#### *Progress during the past years*

2010

- Sonalika Tractors are now EURO –III A Norms Compliant
- Started Export of Tractors to Argentina & Serbia
- Executed the export order to Cameroon worth 40 Million US\$.

2009

- Grand Launch of technical advanced worldtrac series of tractors. The series comprises of tractors with advanced features.
- Developed in-house unique DIESEL SAVER UNIT FOR SONALIKA Tractors.
- Became only Company in India To Produce 90 Hp Tractors.

2008

- Launch of RX Series of Tractors. Aesthetically appealing designs and shape accepted across the world.
- Export of Tractors Started to USA.

2007

- Joint Venture between International Tractors Ltd. and Magma Shrachi Finance.

2006

- Successfully Developed Four Wheel Drive front axles and Transmission of tractor for Yanmar.

2005

- Achieved turnover of USD 235 Million.
- Joint venture with Yanmar of Japan for manufacturing of Tractors in India.

2001

- Started in house manufacturing of engine for tractor application.

2000

- Entered into Joint venture with Renault-France and Class-Germany, which helped the group to upgrade its technology and systems.

Currently, ITL has international sales of about 10,000 tractors a year, which accounts for 17% of its revenues. Going forward, Sonalika wants 30% of the increased sales of 100,000 tractors to come from exports. "We are at

just 10% in India [market share]. By expanding reach and network, it shouldn't be difficult to get to 15-16%," in near future. In 2010, a Greenfield manufacturing facility was commissioned at Fatuah, Bihar, with a capacity of 20,000 units a year, while last year the Hoshiarpur factory was expanded by 20,000.

### III. Conclusion

The following conclusions have been made.

- The both tractor manufacturing units are technically sound and is fully equipped with the latest & precise machinery.
- Due to the span of time the profitability of both the tractor manufacturing unit has been improved.
- Due to the joint venture of Sonalika the market share has enhanced more than the other during the past time.

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