

**EFFECT OF MANUFACTURING COMPETENCY ON
STRATEGIC SUCCESS: A CASE STUDY IN AN
AGRICULTURAL MANUFACTURING UNIT**

Chandan Deep Singh*

Jaimal Singh Khamba**

Abstract

As in present time the key feature of economy has changed from individual to collective effort. A conceptual framework has been built around the idea that in interorganizational network, which depended on the competencies built by each firm and influenced the condition for strategy formulation. The transition of production systems to new organizational forms and managerial practices under the pressure of radical changes in competition, marketplaces, technologies, and socioeconomics has attracted much research attention. The manufacturing function can be a formidable weapon to achieve competitive superiority. This paper presents a detailed case study in an agricultural manufacturing unit.

Keywords: Manufacturing Competency, Strategic Success, Case Study, Agricultural Manufacturing Unit

* Assistant Professor, Department of Mechanical Engineering, Punjabi University, Patiala – 147002, Punjab, India

** Professor, Department of Mechanical Engineering, Punjabi University, Patiala – 147002, Punjab, India

INTRODUCTION

Intermediate strategic variables related to knowledge (combinative capabilities and absorptive capacity) and strategic flexibility effect the relation between CEOs' social networks and organizational performance. A complete framework of the capturing of knowledge and information from outside the organization performed by CEOs and the process they use to assimilate, transform and use this knowledge in the organization (Fernández-Pérez *et al.*, 2012). A qualitative analysis of knowledge management can help researchers and managers to deal with the complexities of social behavior in organizations, and suggest frameworks for understanding the personality of knowledge management. Involvement of workers as well as managers in knowledge management and strategic action is important as knowledge plays an important role in the process of "negotiating culture" (Fiona Moore, 2011). Various habitual expression modes used by individuals for conveying their desires for product forms. An oral styling procedure is conducted to describe the form of their imagined car to a designer, who progressively sketches the car as it is described (Chang *et al.*, (2005).

The composition of individual capabilities within the self-managed teams translates into greater effectiveness for multi-team systems (MTS) in the embedded teams. The team members amassed to form a collective construct in a wide range of self-management competencies that influences the productivity of a team network. Multiteam systems comprising teams whose members widely practice self-management strategies to attain higher productivity gains and that multi-team systems consisting of highly cohesive teams of self-managers are the most productive (Millikin *et al.*, (2010). In response to the economic downturn following the recent financial crisis, the automobile industry switched to 're-insourcing'. The objective of this paper is to explore underlying motives and decision-making in manufacturing strategy, especially with regard to re-insourcing in the automobile industry. While there has been a lot of research on the topic of 'outsourcing', its opposite has not been researched widely. Even though there are some papers on the automobile manufacturing industry, a deeper industrial insight into re-insourcing is missing. Owing to the increased amount of re-insourcing implemented during the economic crisis, the latter lends itself well to gaining a deeper understanding of the phenomenon (Drauz, 2014).

While different organizations can have strong linkage between business and technology strategy, the approach has been reasonably different for technology acquisition and development. The strategic technology management (STM) practices in select organizations in the auto component industry in India is studied. The findings suggest that an effective STM can contribute to faster technology absorption and overall business performance (Sahoo *et al.*, 2011).

Despite the fact that in recent years performance management and measurement (PMM) techniques and tools have attracted much research interest and that many scholars claim that implementing PMM yields many advantages, there is only a limited number of rigorous, systematic, scientific analysis of empirical studies into the benefits actually experienced by organizations in practice after introducing PMM. In addition little is known about specific reasons for organizations to start using PMM, and about the various relationships, if any, between the advantages, disadvantages and reasons for PMM use. This research shows that management needs to make the advantages of PMM explicit before the PMM implementation starts and keep stressing these advantages during and after implementation. This will heighten commitment of organizational members for PMM and increase a successful use of PMM (Waal and Kourtit, 2013).

Companies who choose a strategy of diversification are likely to use, exclusively, managerial practices of open innovation, while firms focused on a strategy of efficiency are inclined towards open innovation practices and to a lesser extent to the development of core competencies. The obtained model confirmed most of the relations hypothesized, giving useful indications on how to define competitive strategy and coherent level of open innovation in order to pursue improved firm performance. Results highlight that firms, which pursue an innovative strategy, are those who invest more on technical skills and core competencies. The main original contribution is the development of an integrated model that links company's strategy, open innovation and innovation performance in SMEs (Crema *et al.*, 2014).

CASE STUDY IN AN AGRICULTURAL MANUFACTURING UNIT

In the mid-sixties, with the Green Revolution triggering large-scale tractor usage, there was a need for the country to build sufficient indigenous capacity to meet this growing demand.

In 1965, the Central Mechanical Engineering Research Institute (CMERI), Durgapur initiated design and development of Agriculture products based on indigenous know how. That is how the idea for development of agricultural products was initiated. The first prototype was ready in May 1967 and by April 1970, field experience of over 1,500 hours had been gained. At that point, it was decided to christen a name for the product – signifying Indian, easy to pronounce and signifying power and grace.

Mission Statement

To create India's largest agriculture-related products distribution network by providing dealers and customers with the largest choice of unique world-class products and service.

Vision Statement

Indians are second to none in the world. The founders of India and of this company passionately believed this. People here try to prove them right by believing in themselves and by making this organisation known worldwide for the quality of its products and services.

MANAGEMENT INITIATIVES

Core Values are influenced by the past, tempered by the present and are designed to shape one's future. They are an amalgam of what they have been, what they are and what they want to be. Core values are the compass that guides the actions, both personal and corporate:

Citizenship Professionalism

They have always sought the best people and given them the freedom and the opportunity to grow. They will continue to do so. They will support innovation and well reasoned risk-taking, but will demand performance.

Customer First

This organisation exist and prosper only because of their customers. They will respond to their hanging needs and expectations speedily, courteously and effectively.

Quality Focus

Quality is the key to delivering value for money to the customers. People here will make quality a driving value in their work, in their products and in their interactions with others. They will do it "first time right".

Dignity of the Individual

They value individual dignity, uphold the right to express disagreement and respect the time and efforts of others. Through their actions they nurture fairness, trust and transparency.

Continuously improve systems and processes.

Deming promoted the Plan-Do-Check-Act approach to process analysis and improvement. Emphasize training and education so everyone can do their jobs better.

Use kaizen as a model to reduce waste and to improve productivity, effectiveness, and safety.

Train for consistency to help reduce variation. Build a foundation of common knowledge. Allow workers to understand their roles in the "big picture."

Encourage staff to learn from one another, and provide a culture and environment for effective teamwork.

Implement leadership. Expect supervisors and managers to understand their workers and the processes they use. Don't simply supervise – provide support and resources so that each staff member can do his or her best. Be a coach instead of a policeman. Figure out what each person actually needs to do his or her best.

Emphasize the importance of participative management and transformational leadership.

Find ways to reach full potential, and don't just focus on meeting targets and quotas. Eliminate fear.

Allow people to perform at their best by ensuring that they're not afraid to express ideas or concerns.

Let everyone know that the goal is to achieve high quality by doing more things right and that you're not interested in blaming people when mistakes happen. Make workers feel valued, and encourage them to look for better ways to do things.

Ensure that leaders are approachable and that they work with teams to act in the company's best interests.

Use open and honest communication to remove fear from the organization. Break down barriers between departments.

Build the "internal customer" concept – recognize that each department or function serves other departments that use their output.

Build a shared vision. Use cross-functional teamwork to build understanding and reduce adversarial relationships.

Focus on collaboration and consensus instead of compromise.

Let people know exactly what you want – don't make them guess. "Excellence in service" is short and memorable, but what does it mean? How is it achieved? The message is clearer in a slogan like "You can do better if you try." Don't let words and nice-sounding phrases replace effective leadership. Outline the expectations, and then praise people face-to-face for doing good work.

Eliminate management by objectives.

Look at how the process is carried out, not just numerical targets. Deming said that production targets encourage high output and low quality. Provide support and resources so that production levels and quality are high and achievable.

Measure the process rather than the people behind the process.

Remove barriers to pride of workmanship. Allow everyone to take pride in their work without being rated or compared. Treat workers the same, and don't make them compete with other

workers for monetary or other rewards. Over time, the quality system will naturally raise the level of everyone's work to an equally high level.

Implement education and self-improvement.

Improve the current skills of workers. Encourage people to learn new skills to prepare for future changes and challenges. Build skills to make workforce more adaptable to change, and better able to find and achieve improvements. Make "transformation" everyone's job.

Improve overall organization by having each person take a step toward quality.

Analyze each small step, and understand how it fits into the larger picture.

Seven Principles

1. Lack of constancy of purpose to plan product and service that will have a market and keep the company in business, and provide jobs.
2. Emphasis on short-term profits: short-term thinking fed by fear of Unfriendly takeover, and by push from bankers and owners for dividends.
- 3 Personal review systems: Management by objective, on a go, no-go basis, without a method for accomplishment of the objective, is the same thing by another name. Management by fear would still be better.
4. Mobility of management; job hopping.
- 5 Use of visible figures only for management, with little or no consideration of figures those are known or unknowable.
6. Excessive medical costs.
7. Excessive costs of liability.

TECHNOLOGICAL INITIATIVES

During the years under study, the farm division focused on retaining fuel efficiency advantage while meeting the upcoming engine emission norms in India and US. This was done on the complete range of the engines with improvement focused on engine technology and system level overall tractor optimisation. Beyond tractor, efforts were focused on development of a range of mechanisation solutions for focused crops.

- Global vision backed by long term strategy, with specific focus on exports Capability displayed in developing new products required for the export market World-class manufacturing quality.
- Low costs due to improved productivity and various cost re-engineering efforts
- Skilled and motivated workforce
- Capability to develop sales and service network, as demonstrated in the US markets Sustained market leadership in the Indian tractor market, the largest in the world
- Rapidly increasing exports World-class Quality and Management systems certified first through ISO/QS 9000, and subsequently recognised with the Deming Prize Technological edge

FES' technological edge lies basically in three areas:

- a) World-class Product Development and R&D facilities manned by over 300 well-qualified engineers and equipped with world-class design and testing facilities. These have contributed to the development of new and attractive product offerings for export and domestic markets
- b) Manufacturing facilities complete with world-class engine assembly plant, CED Paint Shop and resourced by a skilled work force
- c) Constant exposure to the sophisticated US market through subsidiary - MUSA.

Initiatives for Conservation of Energy

- Installation of heat recovery equipment for furnaces and ovens.
- Use of piped natural gas in place of electrical heating for heat treatment and industrial washing.
- Installation of LPG Flux saver in ovens.
- Installation of VFDs (Variable Frequency Drives)
- Rainwater harvesting and water consumption.
- Installation of Mag coupled magnetic lamps instead of sodium/mercury vapour lamps.
- Cycle time reduction of various manufacturing processes through introduction of new technology and process improvement.
- Use of heat recovery in Paint shop for ASU heating during winter reducing gas consumption.

- Optimising temperature settings on HVAC units, considering seasonal changes.
- Use of Oven heat recovery for using it in Hot water generator.

QUALITY

Model of Excellence, which was in general based on the Deming Model, can be summarised as follows:

- i) Foundation comprised the following: Company core purpose and core values. Top management leadership, Vision (of Global Leadership) and Strategy
- ii) The main pillars of their model of TQM comprised: Quality Assurance systems (based on standards) in New Product Development, Manufacturing, Supplier Management, Sales and Customer Operations.
- iii) Policy Deployment - A top management led process/system of setting and deploying long-term targets that were effectively pursued with employees integrating them into their annual targets. Their achievement was assured through the effective practice of Daily Work management. Standardized Support Services like IT, Cost Management, Management and Human Resource Management.
- iv) On the top of this structure/model stood the Purpose: Satisfaction of all stakeholders, employees, customers, suppliers and society. The whole organisation was steered in one direction, due to effective implementation of policy deployment. Involvement of all three major stakeholders, namely, employees, suppliers and dealers, in working together improved tremendously

EFFECT OF COMPETENCIES ON STRATEGIC SUCCESS OF Agricultural Products

The growth strategy going forward is therefore to kick off operations with imported technologies and slowly localize them over a period of time. Further, considerable R&D work has to be still undertaken for making inroads in the tractor segment.



Fig. 1 No. of Sales

Below shown graph in fig. 1 provides data for number of sales for last 5 years .

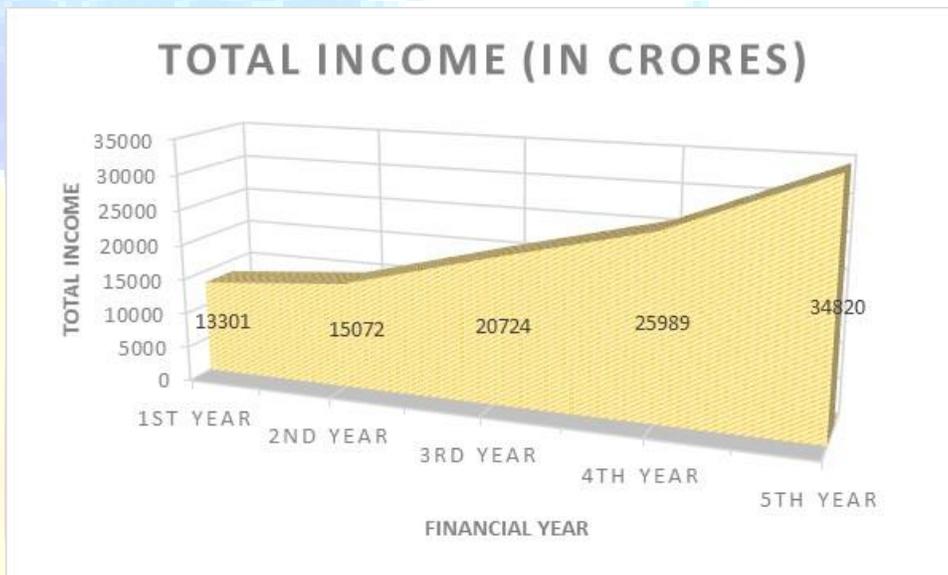


Fig. 2 Total Income

Fig. 2 shows the data regarding total income. Total income has increased continuously and there has been a steep rise in 5th year.

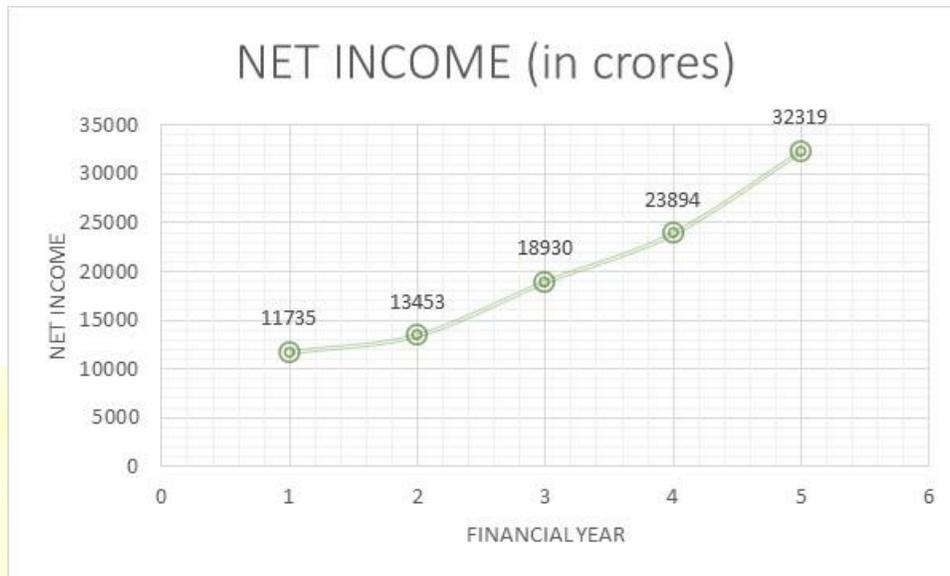


Fig. 3 Net Income

Net income is calculated by taking revenues and adjusting for the cost of doing business, depreciation, interest, taxes and other expenses. This number is found on a company's income statement and is an important measure of how profitable the company is over a period of time. Fig. 3 provides data for net income over the past 5 years.

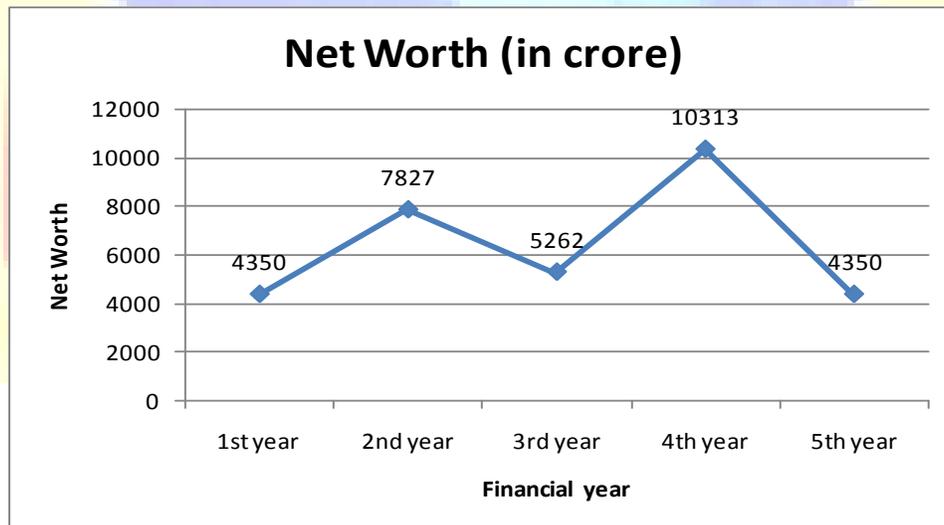


Fig. 4 Net Worth

Net Worth is the amount by which assets exceed liabilities. Net worth is a concept applicable to individuals and businesses as a key measure of how much an entity is worth. A consistent increase in net worth indicates good financial health; conversely, net worth may be depleted by annual operating losses or a substantial decrease in asset values relative to liabilities. Above graph in fig. 4 shows the variation for net worth for last 5 years which shows a fall in 3rd year and then again increases before falling to lowest in 5th year among the given time.

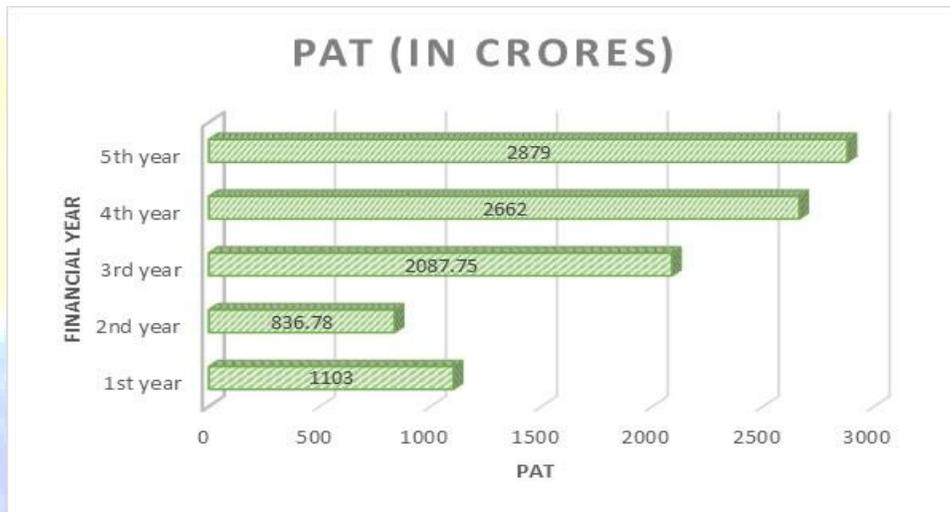


Fig. 5 Profit After tax

Above fig. 5 shows the line graph for Profit after Tax. The net amount earned by a business after all taxation related expenses have been deducted. The profit after tax is often a better assessment of what a business is really earning and hence can use in its operations than its total revenues.

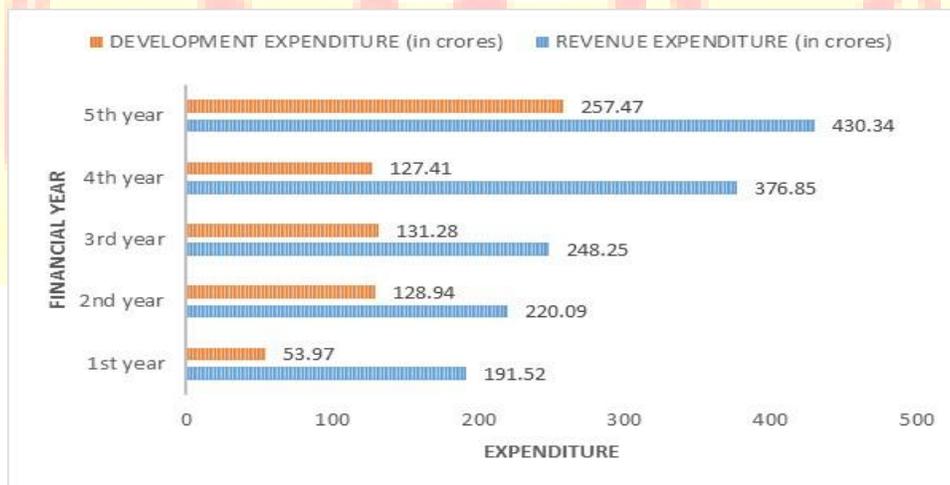


Fig. 6 Expenditure

Revenue expenditure refers to expenditure concerned with the costs of doing business on a day to day basis. When companies make revenue expenditure, the expense offers immediate benefits, rather than long term ones. This is differentiated with capital expenditures, which are long term investments to help a business grow and thrive. Within development (or developmental) expenditure, a distinction between revenue and capital expenditure is made and also between plan and non-plan expenditure. The important heads of developmental expenditure within the revenue account are (i) social and community services, (ii) economic services and (iii) grants- in-aid to states and union territories. The largest component in this group is economic services. Economic services include general economic services, agriculture and allied services, industry; and minerals, water and power and power development, transport and communication, railways, post and telegraphs etc. The components of development expenditure on capital account are: (i) loans and advances to states and union territories, (ii) loans for social and community development services and (iii) loans for economic services. Fig. 6 shows data for revenue and development expenditure.

Earnings per share serves as an indicator of a company's profitability. The portion of a company's profit allocated to each outstanding share of common stock. The portion of a company's profit allocated to each outstanding share of common stock. Earnings per share serves as an indicator of a company's profitability. Fig. 7 shows the Earnings per share variation for past 5 years.



Fig. 7 EPS

CONCLUSION

From above data of it has been seen that the company performance has kept on growing from the past years it. This is due to the company introducing new strategies and technologies in their products. It is very difficult to with stand in the competitive world. To withstand in the market every company has to use competency in their products.

This organisation continue its efforts on developing new products and technologies to meet the ever growing customer needs, regulatory requirements, competitive pressures and to prepare for the future. All the company's new technology and product programs are already operating. Sustainable mobility solutions are a key focus area and the company will continue to aggressively pursue technology development. Some of the key thrust areas in this direction are weight reduction by using alternative materials, designing modularity to take area of variants, VAVE (Value Analysis Vale Engineering) approach for meeting cost pressures. Development and adaption of safety technologies also remain a key focus area.

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