Importance of stakeholders in enhancing the Entrepreneurship skills: An Interface between Academia, Industry and Government

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Abstract

With a goal to make India the global powerhouse in research and innovation, a new range of technology is required to fill the gaps existing in the present structure. There is a tremendous need to create other avenues that need to be intensified, stimulated, and above all integrated, for a close interaction between academician and industry by the Government through all stages of technology development starting from conceptualization down to commercialization. This initiative is a part of broader set of activities to train and support students, allowing them to act as entrepreneurs, social entrepreneurs or entrepreneur managers in different geographical and cultural contexts. In this era of globalization, to stay alive in the race for competitive excellence of global market, industries will have to restructure its research and development (R&D) initiatives. This approach must be directed by a complete paradigmatic shift from a simple capital oriented business format to a technology driven entrepreneurial one. For conducting industry oriented applied R&D, academic-industry – R&D lab consortia could be a very fruitful mechanism. Moreover, public-private partnership and industry involvement are really very important in connection with applied R&D, where there has to be a focus on market access of the research outcomes and technologies developed. Inclusion of industry practitioners in academician's research activities through academic programmes, could be very important for achieving the desired outcomes in this direction. The paper gives an overview of the interface between academia-industry and government as a collective action helping the cooperative society as a business entrepreneur throughout the country which in turn benefits the employees and also increasing the economy of the country. The above theory is tested in the study of Krishna District Milk Producers' Mutually Aided Co-operative Union ltd., (KDMPCUL), in Andhra Pradesh, India which is the largest supplier of milk and milk products. The study was carried in the field for about three months to collect the data with structured questions from the employees from KDMPCUL, and data collected from the academic sources like laboratory through observation and interview guide is used to elicit the information from the authority of KDMPCUL and the government officials. The information collected through different sources visibly shows the importance of collaboration of stakeholders in enhancing the entrepreneurial skills. In the State of the art era of knowledge driven economy, a productive interface between industry, academician and Government is a critical requirement in facing socio-economic challenges. Finally, it can be said that, in this era of knowledge-driven global economy for promoting sustainable academia-industry interface multilevel collaboration is required with the help of Government for the development of profitable industry.

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Introduction

With globalization taking place, the job market has become even more competitive and with the advent of a new knowledge-driven society, there is a quantum leap in higher education. There is growing demand for a higher education since it serves various important functions in our society, the foremost being creation of knowledgeable individuals who will provide service to the society by creating more jobs for the ever-increasing population. If the region is to grow in prosperity and stability, it is this process of innovation and change rooted in reality with stakeholders for enhancing the entrepreneurial skills which in turn leads to overall development in knowledge management.

Entrepreneurship has been encouraged in India by systematic attempts at removal of state – imposed structural and regulatory roadblocks. The granting of licenses and policies on controls and taxation has been cited as one of the major hurdles in setting up and running new businesses. More progressive governments have tried to make it easier for entrepreneurs to set up businesses. The growth of Bangalore and Hyderabad as hubs for IT companies is a direct outcome of government support in the form of tax holidays for start-ups and special economic zones(SEZs) to start new ventures.

The Government of India is increasing its efforts in making finances available to businesses. In the current banking paradigm, it is easy for an established business person to get loans for starting new ventures or expand current businesses. In order to catch up with the pace of the developed countries, India needs many entrepreneurs willing to make their businesses bigger. However, a new entrepreneur wishing to start a new business finds it very difficult to procure basic funds to set up and run a business. Entrepreneurship is a matter that involves everyone – the government, society and the educational institutions. If Entrepreneurship education in India's higher education system cannot completely address major obstacles in pursuit of national economic development and employment, at least it can offer a start. The lowering of borrowing rates from the banks has also made it worth for the entrepreneurs to start business.

Interface between Government and Academia

Government as a potential unit exercises its authority in a territory, controls and administers public policy, and guides and controls the actions of its subjects through various Departments like Human Resource Development and University Grants Commission. Both academic and industry associations are always in search of government funding for their advancement. Practically academia's are run by government aid and academics are paid by government through university employment. Besides giving the money, governments further have the capability to track and account for funding and its meaningful application (Dollinger 2003, pg.57). Moreover, government has also the ability to identify more societal needs across the globe. A very significant role for government lies in generating a buffer within which disadvantaged groups can be nourished and benefited accordingly. Starting a business in India is costly in terms of the time required and the cost involved. However, Entrepreneurship education should be progressively integrated into the curriculum and should cover the pre-start-up phase, the start-up-phase and the growth phase. This initiative is part of a broader set of activities to train and support students allowing them to act as entrepreneurs in different geographical and cultural contexts.

Academia is the collective term for the community of students, faculty and scholars engaged in higher education and research. Academia in the context of universities definitely possesses the research ability and motivation, as well as experience, in delivering the essence of education through courses and workshops to large sections of a population. Academia is also in a position of offering a neutral environment to bring culturally and ethnically diverse people together. Moreover, academia has the capability to explore concepts which are too dodgy for business. Also, academia has a responsibility to upgrade the society through interaction with its diverse community. The

shape of education in India is too complex to envision with precision. The main task is to strengthen the base of the pyramid which will help the billion people of the country to face the future with hope. Equally, it is important to ensure that those at the top of the pyramid are among the best in the world. Our cultural well springs has taken good care of the both ends in the past, the skew set in foreign domination and influence. It should now be possible to further intensify the nationwide effort in Human Resource Development, with education playing its multifaceted role involving the Entrepreneurial skills.

Interface between Government –Industry- Academia

Industry refers to any type of economic activity producing goods or services. It is part of a chain- from raw materials to finished product, finished product to service sector, and service sector to research and development. There are four main industrial economic sectors, the primary sector; the secondary sector; tertiary sector; and the quaternary sector, a relatively new type of knowledge industry which focuses on technological research, design and development such as computer programming, and biochemistry. Industry is the engine that generates the tax base for government revenues and strengthens the economic viability of a population in a country. Industry also provides the basis of the problems and opportunities for application of university borne new technology of innovations that can be the prime focus of academia-industry collaborations. Large scale industry has the required resources to invest in the initiatives of new technology development, but it often tends to depend on bought out technologies, generally from the foreign countries. Academic intervention may be needed only in minor technological innovation or modification focused at technology absorption or implementation. Medium and small scale enterprises are a special aspect of industry that comprises the vast majority of businesses across the globe but they do not have the required resources to explore concepts and remove uncertainties of survival. To make the academia-industry interface a grand success, all the stakeholders should collaborate and interact with their own resources and potentiality to make it a win-win partnership. Usually government cuts across a wide swath of industries and is reasonably consistent with fewer annuals ups and downs than often happens in business. Today, industry is a very important part of most societies and nations. Therefore, a government should have some kind of industrial policy, regulating industrial placement, industrial pollution, industrial labour and financing.

*Stakeholders' role in increasing the output in the Krishna District Milk Producers' Mutually Aided Co-operative Union ltd., (KDMPCUL) Vijayawada***.**

The advent of liberalization and globalization to Indian business environment has created several new business opportunities (Sainis: 1999, pg. 58). Enthusiastic entrepreneurs of both native and foreign are competing with one another to grab the uncommon opportunities. Small enterprises, business and industries have been estimated to contribute more than 40% of India's Industrial production and exports. Indian exports emanate from agro-based and traditional products, to a large extent. Dairying is supplementary activity in rural areas with preponderance on agriculture.

The Dairy development activities are carried on by the Government through the Dairy Development Department. The Andhra Pradesh Dairy Development Co-operative was formed on 2-4-1914 as a State Government undertaking for the application of commercial principles, with the mission of industrializing rural dairying. Planning for organized Dairy Industry in Andhra Pradesh was conceived in 1959 and a pilot scheme of milk supply was started in 1960-61 as a prelude for the integrated milk project, Hyderabad and Vijayawada for which the United Nation's International Children's Emergency Fund gifted Dairy equipment valued Rs. 1 crore with the main objective of linking up and supplying surplus milk producing area to consuming area.

Background and Industry Profile

The main occupation in Andhra Pradesh is cultivation. The villages reflect the socio-economic, moral and cultural values of the human race. Dairy stands as the back bone of agriculture and at the same time it plays an important role for the stability of rural economic conditions and helps to maintain nation's health by supplying not only milk but also income to the milk producers by creating village Entrepreneurship. Every 10th litre of Indian milk is from Andhra Pradesh, arresting the oscillations in milk price as well as supply of toned milk for every needy by accelerating Dairy Development to a peak period with efforts by A.P.D.D.C and National Dairy Development Board(N.D.D.B).

The Krishna District Milk Producers' Mutually Aided Co-op. Union Limited (Milk Factory), Vijayawada was commissioned on 11th April 1969. The Organization underwent a number of basic changes. It was under Animal Husbandry Department as Integrated Milk Project until 1960. Due to the policy changes in 1981, it came under the control of A.P.D.D.C and was named as the Krishna District Milk Producers' Mutually Aided Co-operative Limited on Anand pattern and was registered in 1983.

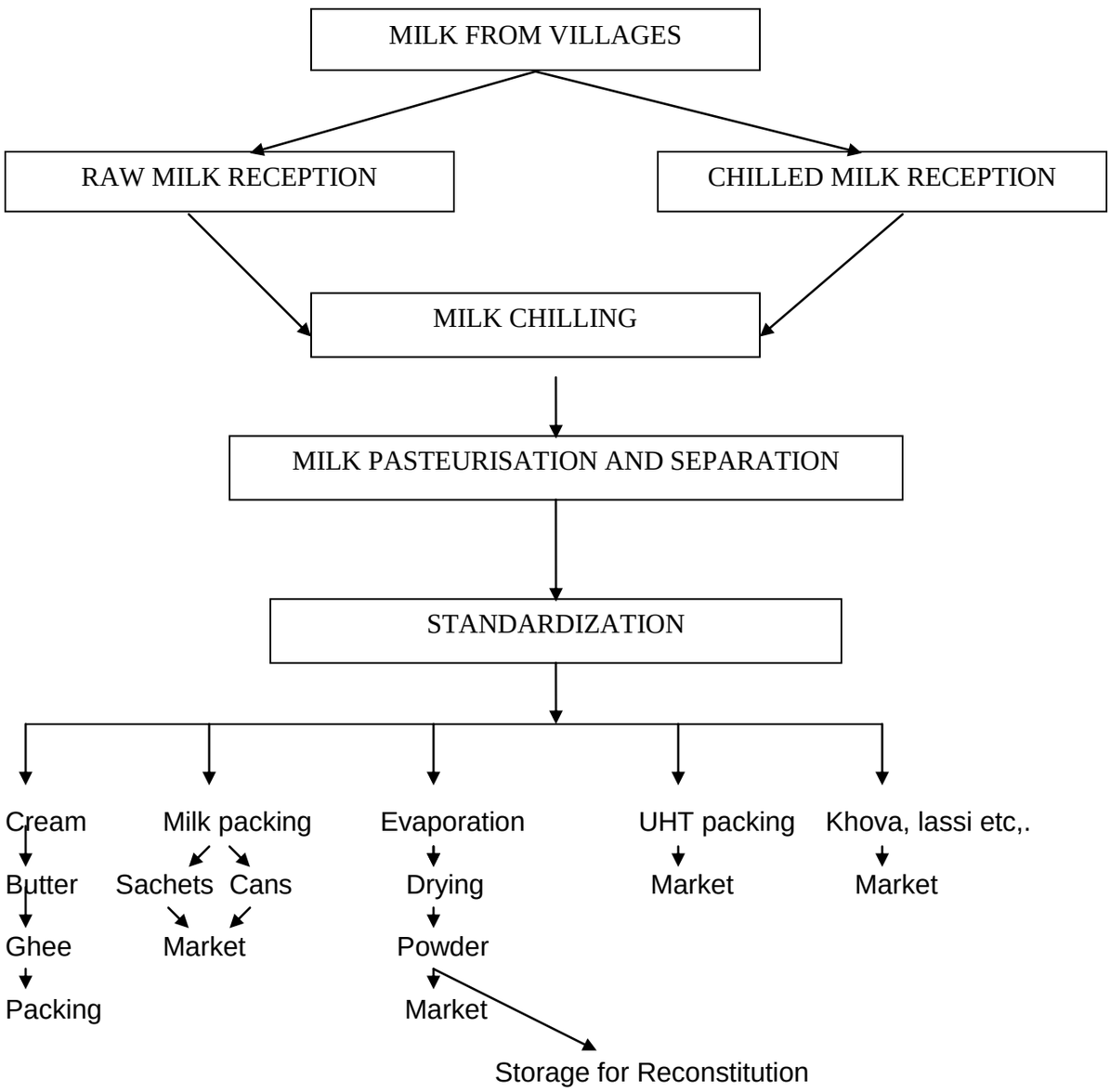
This factory has the handling capacity of 1.25 lakh litres per day in the first stage and expanded to handle 2.50 lakhs litres per day. It also had the distinction of handling surplus milk received from other districts, due to research and development wing. Krishna district has milk procurement ranging from 45,000 kgs to 105,000kgs per day from 1969 to 1998. District being buffalo concentrated has wide procurement fluctuations. In order to reduce the seasonal balance in milk production, introduction of "x" bred cows has been taken up since 1990 to increase milk production.

The KDMPCUL is awarded for the excellence in productivity, quality innovation and management by the Institute of Economic Studies, New Delhi and it is also the first farmer's co-operative to obtain **ISO 9002** and **HACCP** certification in South India. It has become the first dairy in the country to win **SA 8000** certification from SGS International Agency of Sweden. The Dairy has bagged **ISO 14001** in 2004, which recognizes it as the only unit in the country producing products suitable to International market.

Functions of the Organization:

NATURE OF ACTIVITY

MILK PRODUCTION FLOW CHART



Sources: KDMPCUL Vijayawada.2006

Dairy Manager, the head of the production division supported by four Dairy Managers and other production staff, 11 Assistant Dairy Managers and other production staff is engaged in milk reception, milk processing, Butter making, Ghee making, Powder making and finished goods section. Main product is Milk. Different types of milk are- Diet Milk, Sterilized Milk, Premium Milk, Mixed Milk, Gold Milk. Bye-products are Cream, Butter, Ghee, Curd, Basundi, Milk Cake, Yogurt, Kazzura Kova, Skimmed Milk, Lassi, Doodpeda, Buttermilk etc.,

The Krishna District milk products, authorized share capital is Rs.5, 00,000; paid up capital is Rs.3, 02, 02,000. Number of societies are 193, number of societies afflicted is 165, amount of deposits are Rs.6, 61,500. The national finance board provides working capital loan of Rs.350 lakhs. The organization has a surplus cash of Rs. 101.28 lakhs. Milk factory, Vijayawada is situated in an area of 27.3 acres. Cost of UNICEF equipment and erection is about 19.4 crores, now it is 183-184 crores. The cost of factory building is Rs. 120 lakhs. Cost of indigenous equipment operation is Rs. 174 lakhs

commissioned on 11-04-1969; total staff is 2034 with annual turnover of 15.4 crores. In the year 1998-1999 its sales were 73, 079 (Lakh litres) which gave 59.40 crores of turnover. In recent years like 2007-2008, by producing 1.72 lakh litres they got 155.00 crores of turnover.

For every organization, marketing department is the heart of the company. Deputy Director(S&M) is heading the sales and marketing wing supported by a Sales Manager and 3 Assistant Sales Manager with a network of 700 booths, 300 round the clock, cold chain parlours for distribution and marketing of milk and milk products.

***Research and Development*:**

NDDB supports the development of dairy cooperatives by providing the milk units with financial assistance and technical expertise. Over the years, brands in milk products created by cooperatives have become synonymous with quality and value. It is an organizational innovation with a focus on human resource and cooperative development in India by placing technology and management in the hands of village societies and raising the standard of living of millions of poor people. These processes prove the true development of the people by providing the instruments to the people for the development. 'NDDB attributed increasing income of rural households and hike in salaries of government employees for rise in demand of milk'. Some of the NDDB's commercial operations include Indian Immunologicals Limited, Hyderabad; IDMC Limited, Anand; etc.

The Indian Council of Agricultural Research (ICAR) has sanctioned a scheme during 1970-77 to undertake research on milk products. Under this scheme, the soft cheese, butter, milk powder, curd, ice-cream etc., were manufactured. The cost of the scheme up to 75% was sanctioned by ICAR while 25% was borne by the state Government's APDDC. ICAR is an autonomous organization under the Department of Agricultural Research and Education (DARE), Ministry of Agriculture, Government of India. It is an apex body for coordinating, guiding and managing research and education in agriculture including horticulture, fisheries and animal sciences throughout the country. Its main objective is to plan, undertake, aid, promote and coordinate education, research and its application, in agriculture, agroforestry, animal husbandry, fisheries, home sciences, and allied sciences. Some of its research institutes which helped the dairy development are National Dairy Research Institute, Central Institute for Research on buffaloes, Indian Grassland and fodder Research Institute, National Bureau of Animal Genetic Resources, National Institute of Animal Nutrition and Physiology etc.,

The Government under various organizations like NDDB and ICAR etc. provides the necessary funds to conduct the research for the development and quality of the KDMPCUL. The process of research requires many academicians or scientists, in a way the government is providing the opportunities for the academia and at the same time helping the industry by providing the quality milk and products through its research where the collaboration of the government with academia and the industry is envisaged. With the help of the research done in different institutes of science and technology with the aid of Government, new products were developed. Not only the new products but the products which are in vogue are also improved in quality, taste and preservation since dairy products are consumed by every individual and it is not exaggeration to classify it as one of the basic need. So to cater to the daily needs of the people, continuous research is a must and industry should be able to deliver the technology to the market and vice- versa.

***Training and Development*:**

Personnel Management as an important branch which holds the key to all the managerial actions and successful management. The social objective of business can be achieved only through the efficient utilization of human efforts. Personnel department consists of Managing Director, Quality Control Officer, Procurements and Inputs Special

Officer, Production Manager, Senior Manager-finance, Deputy Director, sales and marketing etc. For all these officers, training will be given by NDDB and APDDCF and the members will be given training for Dairy technology in Micro-Biology, Bio-Chemistry, Food technology, Dairy microbiology, Dairy chemistry, Dairy Engineering by Indian Dairy Department (IDD).

Training forms only a part of the entire educational process. Development is defined as the nature and direction of change taking place among personnel through education and training processes. Due to the result of research in the field of training, a number of programs are introduced. In KDMPCUL, two types of training methods are followed – On the job and Off the job method. To utilize the research and technology in the best way, the industry gives training to the personnel either on the job or off the job depending on the necessity, so that more productivity is noticed. Performance Appraisal is useful mainly to stimulate and recognize the employees' hard work in order to improve the productivity.

Employee Welfare and Social Security:

Labour welfare is a social concept. A worker is a member of a family. A family lives in a society. The well-being of the worker depends upon his family and society. Hence, welfare programs must be aimed at achieving overall well-being of worker, his family and the society. To look after the employee welfare and social security in the industry, statutory provisions are provided by the government with the help of Labour Laws like Factories Act, Payment of Gratuity Act, ESI Act, Provident Fund Act etc. Government is not just providing the funds for research but also looks after the welfare of the workers.

Interface Output and Impact

Development of villages

- Socio-economic development
- Integrated milk development
- Human resource development

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Impact

Evolution of Knowledge: Giving rise to leading edge and useful products, technology, processes, services, high skills to meet the challenges of global economy

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Output

Mutually beneficial goals of the stakeholders

Industry	Government	Academia
Profit and prosperity	Generation of tax base for revenues	Marketing of its strength, more freedom and avenues for exploration of knowledge

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Achievements

Industry : Any type of economic activity producing goods or services like dairy products

Mechanism of interface involving Govt.

Academia: Research organizations, Institutes of Technology

INTERFACE

Encouragement of efficient work flow	Bilateral mobility of S&T programme (R&D)	Flow of technology from laboratory to market	Setting up of interface structures	Intensifying collaboration in research	Fostering public-private partnership
Provision of incentives	From academia to industry and industry to academia	Enhancement of technology transfer towards commercialization, creation of research park, setting up of venture funds to support innovative products	Academia-industry R&D lab consortia, common certification system, Center for applied research & interface	Convergence of interests towards applied research, diffusion of skill of conceptualization, acceleration of research interaction, international academic cohesion & industrial cohesion	Growth of technology clusters, funding mechanism, regulations and policies

Conclusion

In the Krishna District Milk Producers' Mutually Aided Co-operative Union Limited, Vijayawada, the role played by the government is very important in bridging the gap between academia and industry by providing funds for carrying the research on the milk production with the help of research institutions for improved quality and enhanced longevity with advanced new technology for the better production leading to organization growth and self-sustainment of villages making the society prosperous by creating employment. Government not only helps the Entrepreneurs but also takes care of the employees working in their organization through the welfare and social security schemes. The interface between the government, industry and academia helped the society to prosper economically, technologically and sociologically.

There is a huge gap between the rapidly evolving skill need of Indian businesses and those provided by our higher education system, there is a growing realization amongst the government, academic institutions and the industry, of the urgent need to bridge these skill gaps which is due to lack of substantial integration with industry and the other stakeholders in India and urged for adoption of new and innovative strategies to face the mammoth global challenges. Regular University – Industry interaction, which is critical to raising funds from corporate sources as well as restructuring the curriculum in tandem with changing needs of the industry, is missing in India.

Therefore, in order to strengthen academia- industry interface, different types of collaboration and interaction that are possible among the stakeholders should be sorted out. In spite of some shortcomings and inhibiting factors, government should put into place an integrated policy of academia- industry collaborative interaction encompassing a number of strategies enabling such an initiative to thrive in the country's quest for technological leadership.

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