

Technical Modeling Of Employment Potential And Economic Viability of Agro Based Industries

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ABSTRACT

The paper discusses in detail the importance of agro based industries. This whole debate of the agro based industries can be traced back to the economic development of the developing economies around the world. India has been basically an agriculture driven economy, the story of the development of the other agriculture driven economies suggest that they stated their development story with the view of also taking agriculture growth into account. They led to the path of development i.e. industrial sector and services sector but also took along agriculture with itself. This step was taken to make the growth process inclusive, that is development of all the sectors composing the economy at that point in time. But in india the growth process has not been inclusive that is, the urban centers has marched ahead while the rural sector stays behind. The development of industrial sectors has been centralized along the urban areas. This imbalance has led to a flourishing urban centre and a ruining rural centre. Now this imbalance has led to the problem of migration, unemployment in rural centres, underemployment in rural centres, acute poverty. So to tackle this problem of rural distress industrialization of rural india is a necessity and along with it growth of agriculture is also required. To tackle this dual problem the development of agro based industries is a necessity. Now there are several aspects involved in the development of an industry, I am taking into account the problem of economic viability of such rural units.

1. INTRODUCTION

1.1 Definition of Agro Based Industries

The Famine Enquiry Commission (1944) said that agro based industries are those which not only assist in the industrialization of the state, but also those which are involved in supplying the farms with agricultural inputs, besides handling the products of the farms.

The National Council of Applied Economic Research (1965) has defined agro based industries as those which either use agricultural raw materials or make things that farmers need for their agricultural needs. They include not only seeds, fertilizers, implements, plant protection chemicals etc., but also the repair and servicing of farm implements or machinery.

1.1.2 Brief and Salient Features of Agro Based Industries :

The features of agro based industries are:

- 1) Developing countries like India which are agriculture driven economies integrating agriculture with industries is a prerequisite.
- 2) Agro based industries provide new avenues of employment at a small capital cost. Agro industries provide better employment opportunities to labor during off season.
- 3) A low import element of capital structure of agro based industries reduces the need for foreign exchange.
- 4) Agro based industries helps in infrastructural development.

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1.2 Types of Agro Based Industries

Agro based industries can be classified into four types:

- **Agro Produce Processing Units:** These units do not produce anything new they just process the raw material so that it can be preserved or transported at lower costs. E.g. Rice mills, Dal mills etc
- **Agro Produce Manufacturing Units:** These units produce a new product taking agriculture produce as the major raw material. The finished goods are entirely different from the major raw materials. E.g: Sugar Factories, Bakeries etc.
- **Agro Inputs Manufacturing Units:** The industrial units that produce goods for the mechanization of agriculture or to increase the productivity of agriculture come under this category. E.g. fertilizers, insecticide, pumpsets etc.
- **Agro Service Centers:** Agro Service Centers are workshops and service centers that are involved in repairing servicing pumpsets, tractors etc.

As there are many types of agro based industries as discussed above we will define for our research work Agro based Industries as only those industries that take major raw material from an entirely new product or process the agro produce so that it can be transported at lower cost. In the current study we have taken only two types of agro based industries into consideration these are:

- a) Agro Produce Processing Units
- b) Agro Produce Manufacturing Unit

1.3 How to define Economic Viability

- a) Economic viability means that the real returns from operations, relative to the asset value and labor inputs, are competitive with other small business, career, or investment alternatives.

- b) Able to sustain operation on the basis of current and projected revenues equal to or in excess of current and planned expenditures. In other words, an activity that can support itself financially. It can be applied to any economic unit, from a single project to a business to a country.

To discuss economic viability in further details we must take into consideration the following points:

- **Financing of business:** In Rural India the main problem has been of financing a particular business as the people are illiterate and their credit rating is very low, therefore the banks and other non banking financial institutions hesitate in giving loans to them. The basic reason for this is in the recent past there have been a large number of cases of default reported in the rural areas (Gill, 2004), (Chadda, 1996). There is a further need to bring awareness in the people about how to strategically use the funds that are given by the institutions to start the business, and they must be taught not to use that fund for personal uses. Also they must keep the record of financial transactions made by them during business (S, 1998).
- **Interest being charged:** Also a point of major concern is that the interest charged by banks and non banking financial institutions are very high (RM, 2008). The reasons for this is:
 - a) The credit rating of rural people is very low
 - b) The cost of going to the interiors and providing services is very high

As the above problems are the point of concern so there is a need to look into it and the local bodies and government must try to lower the interest rate for loans given to rural people (Venugopal, 2006). As the interest rates are high there is a problem that the breakeven in the business gets delayed. Also a completely new structure of providing loan to the rural people should be developed (Siddhu R S, 2004).

- **Capital Structure:** In a business the capital structure of an enterprise plays a very crucial point in determining its economic viability. There are basically three types of capital involved

- a) Money invested from ones own pocket,
- b) Money taken through debt,
- c) Capital generated through floating of shares.

In this scenario generally only two types of capital are generated mainly Capital through ones own pocket and debt capital are only used. The biggest drawback of this system is whether you have profit in your business or not you have to pay the interest to your debtors. My suggestion is a platform should be created for agro based industries and other rural industries so that they can register their company and take capital from market through shares. But care should be taken because share holders are the owners of the company so they share the profit made by the company. So in the capital structure a balance should be maintained between equity and debt capital (Ranga, 2005).

- **Type of business:** The type of business is very important because in agro based industries the production is seasonal so the business type to some extent is also seasonal. As the working increases to a great extent during harvesting time (Das, 2009).

- **Quantity of Production/ Economies of Scale:** The quantity of production is of prime importance because it is the price of the product that draws the attention of the consumer. The rural agro based industries has to compete with big players in the sector like Dabur etc. So there is a need that either agro based industries increase their production to reach economies of scale or the government should intervene to give some support to agro based industries so that they can stand in the competition.

- **Raw Material Procurement:** The cost of procurement of raw material is very less for agro

based industries because the major raw material i.e the farm produce is available nearby and in abundance. So the raw material is cheaply available and also the transportation cost is very low. To lower the cost for procurement the people producing the same product should form groups and place the order for raw material so that they are in a better position to bargain because of more quantity and the transportation cost gets reduced significantly.

- **Training being imparted to run the business:** The training that is being imparted to the rural people to run the business is generally done by non banking financial institutions before giving them loans. They are trained in soft skills to run the business, but a major initiative by the government is needed in order to increase the frequency and effectiveness of training. Industry experts need to be called so that the rural people know the cost effective ways of production (Goyal, 1996).
- **Proximity to the feeding areas:** This is also a major challenge because as the distance between manufacturing and feeding area increases the transportation cost also increases. So the industry must be set up so that the feeding areas are not far away.

In light of the above discussion to check the economic viability of the agro based industries we would collect information from agro based industries about following variables:

- 1) Capital
- 2) Reserve Funds
- 3) Equity
- 4) Net Profit
- 5) Borrowings
- 6) Current Liabilities
- 7) Total Liabilities
- 8) Total Inventory
- 9) Agro Produce Inventory

- 10) Current Assets
- 11) Net Working Capital
- 12) Fixed Assets
- 13) Total Assets
- 14) Opening Stock (Agro Raw Material)
- 15) Opening Stock (Total)
- 16) Total Sales
- 17) Sale of By products
- 18) Total income
- 19) Total purchase
- 20) Total Expenses
- 21) Net Worth

To study the economic viability after collecting the above data from agro based industries some ratios will be used to get a correct picture of economic viability of the industries. The ratios that will be used are:

1) **Test of liquidity:** The liquidity ratios are used to measure the ability of an enterprise to meet immediate cash obligations. The ratios under this head are:

- **Current Ratios:** The formula for current ratio is: Current Asset/ Current Liabilities.
- **Acid Test Ratio:** The formula is: Quick Assets/ Current Liabilities and formula for Quick Assets: Current Assets- Inventory.
- **Liquid Assets to Total Assets Ratio:** The formula is Liquid Assets/ Total Assets the formula for Liquid Assets= cash in hand + Cash At bank+ Inventory+ Bills+ Accounts Receivable+ Deposits In Bank withdraw able on demand.
- **Inventory ratio:** Inventory / Net working capital the formula for Net Working Capital= Current Assets- Current Liabilities.

2) **Test of Solvency:** The solvency ratios would reflect medium term and long term solvency position, indicating its ability to meet medium and

long term obligations. The ratios under this head are:

- **Total Liability to Owned Fund ratios:** Total Liability/ owned funds.
- **Fixed Assets to owned Funds Ratios:** Depreciated value of fixed assets/ Owned Funds.
- **Debt Equity Ratios:** Long term Borrowings/ (share capital+ reserves).

3) **Test of Turnover:** The turnover ratios indicate the effectiveness with which different assets were utilised in the business. Turnover means the number of times the asset flows through the firms operations into its total sales. The ratios are:

- **Inventory turnover ratios:** Annual Sales/ Average inventory and the formula for average inventory= (opening stock+ closing stock)/2.
- **Total Assets turnover ratios:** Total sales in a given period of time/ total assets in a given period of time.
- **Working Capital turnover ratios:** Total Sales/ Total Working Capital.

4) **Test of Efficiency and profitability:** Test of efficiency indicates the utilisation of capital and income whereas the profitability test are meaningful measures, which can be used to diagnose the financial status and the overall efficiency of a business organisation.

- **Efficiency of capital ratios:** This ratio analyses the efficiencies of factories to capital utilisation. The ratio is: paid up share capital/ Annual sales value.
- **Gross Ratio:** This ratio tells how efficiently the companies gross income was utilised i.e. through Total expenses / gross income.

5) **Test of Financial Strength:** This ratio ascertains the real worth of the company.

- **Net Capital Ratios:** Total Assets/ Total liabilities, greater the ratios, the better it is.
- **Equity Capital Ratios:** This ratio includes composition of owners equity. The formula is Owners Equity/ Paid up share capital.

2. EMPLOYMENT POTENTIAL

The potential on agro based industries to create employment can be categorized in two different forms one is direct employment and the other indirect employment i.e. through forward and backward linkages.

1) **Direct Employment:** In the case of direct employment, employment is generated in different agro based industries in the area. It has been observed that one agro based industry employ up to 5 people in a flour mill unit.

2) **Indirect Employment:** It is generated by the forward and backward linkages in the agro industries sector like:

- **Agriculture:** As the demand for agriculture produce will increase due to the development of agro based industries, it would also result in increase in the number of people involved in agriculture as there would be a readily available market to sell their produce. So there would be an increase in the employment in agriculture sector.
- **Supply Chain management:** The process of purchasing the raw material for agro based industries also can employ people. To procure the raw material the agro industries producing the same end product form a group and procure raw material in a large batch size. A group formed for the procurement of raw material comprises of experts in quality checking etc. So agro industries help in creating employment in this field.

- **Marketing of Product:** Marketing of product plays a very important role in every industrial development or a new product launch. Since with the help of marketing the producer informs the end consumer that, this particular product with these qualities are available in the market and my company produces it, so you can buy this product (Pandita, 1997). Also the products produced in the agro based industries have to compete with the products of big industries also. So marketing plays a major role in the selling of product. In many rural areas where a number of agro based industries exist, marketing of products is outsourced to government agencies or private entities, which market their product (Gunasekaran, 2006).

- **Selling:** Selling is the key of all business. All business work on the line of making profit and profit is calculated on the number of units sold of a particular product. As we know, selling is only possible when:

- 1) People see the product available in the market, then people tend to buy the product.
- 2) Sales Agent tells the customer that the particular product is useful and should buy the product.

In agro based industries, since the manufacturing is done in rural areas. So, people are required to take the product in the urban/ rural market so that customer buys the product. So, there is a need of a sales team so that it can sell the product.

- **Training :** In order to run an agro based unit proper training in some skills is required. Training need to be given to the rural people about how to read and write, how to best utilize the loan given to them, how to handle the machinery? Also the knowledge about the government schemes are available in the area etc. There is a need for a training institute or government training centers so that proper training can be given to the needy (Kumararaj, 2007).

- **Transport:** In an industrial area need of transport cannot be underestimated. As we know transportation is needed for raw material as well as finished goods. So, employment is also generated in the transportation area (singh, 2004).
- **Infrastructure Development:** The first and foremost criteria for agro based industries or any other industry is to flourish in infrastructure development (Das, Electricity and Rural Development Linkages, 2007). It will provide employment to many, so that road, electricity, water, rail transport can be made available for industries to grow (Ragu, 2008)

After the above discussion, the economic viability can be measured taking following variables into consideration :

- 1) Capacity of the unit
- 2) Production cycle
- 3) By products
- 4) Feeding Areas
- 5) Training Being Imparted

REFERENCES

- [1] Chadda, G. K. (1996). The industrialisation strategy and growth of rural industries in india. *international labour organiation* .
- [2] Das, K. (2009). Broad Basing Rural Industrialisation in India: Approaches and Challenges. *Gujarat institute Of Development Research* .
- [3] Das, K. (2007). Electricity and Rural Development Linkages. *epw* .
- [4] Gill, A. (2004). Interlinked Agrarian Credit Markets. *epw* .
- [5] Goyal, S. K. (1996). Policies Towards Development of Agro Based Industries. *epw* .
- [6] Gunasekaran, C. (2006). Marketing Products: A great Migraine afflicting rural enterprises. *Industrial Economist* .
- [7] Kumararaj, M. (2007). Problems of Rural Labour: Issues and Challenges. *Cuddalore. Pallavan Book publishing company ltd* .
- [8] Pandita, R. (1997). Marketing Policies for Khadi Village Industries. *Khadigramodyog, Monthly* .
- [9] Ragu, D. (2008). Investment in Rural Infrastructure is crucial. *the Hindu daily* .
- [10] Ranga, R. (2005). Review of Rural Credit. *Infinity J Management* .
- [11] RM, S. (2008). Special and Preferred Sector Finance. *MacMillan India Ltd.*
- [12] S, S. H. (1998). Rural credit and Indebtness. *IDC* .
- [13] Siddhu R S, S. S. (2004). Agricultural Wages and Employment. *epw* , 37-50.
- [14] singh, I. (2004). deceleration of industrial growth and rural industrialisation strategy of indian punjab. *epw*, 271-284.
- [15] Venugopal, G. (2006). Institutional Finance to Agro based industries.