CHAPTER 7

CONCLUSION, SUGGESTION AND PROSPECTS

OF PLYWOOD INDUSTRY

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7.1 CONCLUSION

The objective of the study is to present the development and prospect of plywood industry in Raipur division with a special reference to Raipur district. Therefore, to examine the development and prospect, ten sample units has been selected according to the growth of year by collecting financial statement from 1995-1996 to 2005-2006. From the ten sample units of Raipur division, eight industries are collected from Raipur district and two from Rajnandgoan district.

According to the study on these industries it has been observed that progress of plywood industry in Raipur district is more than Rajnandgoan district, as study says that in year 1994-1995 and 1998-1999, only two units were established in these district i.e. Kech boards private Ltd. and Hitech boards private Ltd.

Accordingly on the other hand the growth of plywood industry of Raipur district is found progressive and satisfactory on comparison with Rajnandgoan district, but it is necessary to say here that in Raipur district in year 1996-1997, 1997-1998, 2001-2002, 2002-2003 and 2003-2004 the growth rate in this industry was stagnant. The reason for this year has been found on following indicators.
• Raw materials for industry.
• Manufacturing problems of industry.
• Marketing and taxation.
• Financial source and utilization.
• Taxation problem

For which proper solutions has been given in point no. 7.2 in this chapter. Hence overall performance of the plywood industry of Raipur division found averagely satisfactory. According to Chapter no. 1 to Chapter no. 6 it can be analyzed that plywood industry in Raipur division has growing in consumer mode.

Therefore according to all the aspect, it is concluded that a new entrepreneur can take an opportunity to establish a new unit in Raipur division especially in Raipur district. It is necessary to say here that in Rajnandgoan district the growth rate of plywood industry is so poor, i.e. new units are coming up in this area which shows a basic problem of financial sources and interest of entrepreneur. Transportation, supply of material is not a serious problem in this district.

One of the important reasons is location of whole sale market of local area, because they had to supply their produce to Raipur, Bilaspur, Kanker, Durg Whole-sellers and retailers, for which the burden of transportation cost and other cost is increased.
The whole-sellers of the above mentioned places preferred to purchase from the manufacturers of Raipur district as they provide attractive discounts, credit facility. These are all the basic reasons that a growth rate of plywood industry in Raipur district is more as comparison to Rajnandgoan district.

7.2 SUGGESTION

Plywood industry in Raipur division especially in Raipur district has its importance among all small scale industries to this particular. According to the study and field survey following problems and suggestions has been enumerated in different indicators of the plywood industry of Raipur division.

7.2.1 PROBLEM FOR MATERIAL AND SUGGESTION

The material like face, core, veneer, and adhesive like Phenol has been use by industry. In case of face, Core, Veneer it is mostly purchased from Kolkata, Vishkapatnam and Kerla. As this material is purchase from other States, therefore, some times it happen that supplier of materials makes a shortage of materials which leads to low production rate of plywood industry in Raipur district. Seasons also affect the supply of material which results for low production rate.

In fact it is also necessary to write here that change in government policy of plantation, also make an impact on material because the Core, Face and Veneer are peeled from the timber logs, teak, and silver oak.
As the cost of Face, Veneer, Core, Adhesive stands approximated 48.39 percent to total cost of production in plywood with minor variations depending upon the quality and type of plywood sought to be produced.

To produce better quality of plywood, Timbers of high quality are required, in the same way high quality of adhesives are used. Some industries like Bhagat wood product, Kothari timber of Raipur district, purchase the adhesive from other industry, which may some time result a shortage.

Hence according to the study on problem of material especially for Core, Veneer and Face it is suggested that material purchase process and handling should be slightly changed, as far as possible logs should be peeled in the factory, similarly, replacement scheme for plywood- timber trees should be introduced urgently.

If the maturity period of common plywood tree considered being thirty years\(^1\), the total requirement of timbers at present rate of growth of production, for this industry by 2020 is assumed to be about 1.50 mm\(^3\) per annum on all over India basis. The survival rate being 50 percent, the state has to plant at-least 3.50 lakh plywood timber trees every year to meet annual requirements of the plywood industries along from 2020 onwards.

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\(^1\) N.S. Adkoli, Wood Panel Products for 21st Century, paper presented in Panel
The forest department might be considering finance as the major constraint for plywood plantation. It is virtually the investment capacity of the department which has to be significantly placed under plywood plantation schemes. All the unclassed and salvageable areas have to be brought under the department for planting fast growing Timber, Teak, Oak trees.

The attitude of the Union Government has been gradually changing in favour of private participation in countries forests. Many Sates have already invited private participation in their forests for commercial uses.

For plywood industry of Chhattisgarh it would be worth while, if Chhattisgarh Government invites the Raipur division plywood manufacturers Association of some selected industrialists to build up necessary infrastructural and harvesting facilities in its forests.

As per scientific management of forests, a forest Development Corporation may be incorporated in Chhattisgarh. Its functioning, however, should not conflict with the activities of forest department, Government of Chhattisgarh.

The ultimate success infact lies on education about the sense of responsibility of our people towards forestry and forest products. Establishment of forest school, colleges in the reason also deserves careful consideration. This would help in providing training facilities for
some local people to cope with the forest problems whether technical or otherwise.

As understood, the industry has been waging a continuous battle against ever increasing cost of Timber along with power and skilled labour shortage and transportation bottlenecks. The battle has been sought to win by increasing productivity through redevelopment of retired technically skilled persons reducing wastage in power consumption. It is indeed the engineering application which has to be developed, to a relatively high degree, for the plywood industry of Raipur Division.

As Timber supply to this industry is steadily declining, the improved methods of manufacturing process can bring a relative fall of cost of plywood production and success for this industry.

In case of adhesive like Phenol formaldehyde (PF), resin based adhesive is conventionally used to manufacture higher grade plywood. PF resin is easy to prepare, has fairly long storage life and easy to apply for preparation of panel products. Plywood made with PF resin based adhesive resists long time weathering and boiling in water.

As an industrial practice of plywood industries of Raipur division especially Raipur district adhesive technologist has always tried to find out phenol substitute in phenolic resin in order to reduce cost. Many material of natural origin having some phenol like characteristics have been used for this purpose. Success has been met with many materials
like Cardanol, lignin, tannin and a few formulations have being commercialized.

In one such attempt, lignin has been used to replace phenol in PF resin. Lignin containing phenolic-OH group, behave in some of its reactions, like phenol and has been suitably utilized to replace phenol in phenolic resin. In some reaction, Ammonium lingo-sulphate has been used and found to be quite compatible with phenol in polymerization. This has given an idea whether sulphonated phenol may be utilized to substitute phenol in phenolic resin.

As noticed the quality of adhesive produced in the plywood factories is of low grade. Temperature variation is one of the important causes for such low quality of adhesive beside non availability of technically skill persons; nevertheless, the introduction of resin plant in the factories of Raipur Division has proved cost saving.

Because while the cost of factory made adhesive used in making one square meter of plywood was Rs.4.60 only the price of the same quality of adhesive available in the market was Rs.5 in 1999-2000 similarly. While the cost of UF resin produced in the factory was Rs. 3.95 per kilogram. The market price of it was 4.58 per kg.

Although preliminary and fixed costs raised manifold because of the establishment of adhesive unit, the present position of the industry as for the availability of adhesive is reported to have been solved. However,
certain precautions are suggested to avoid reoccurrence of scarcity of adhesive in the future.

- The government should introduced pricing control for saleable adhesive ingredients.
- Per unit cost of adhesive produced in the factories should not go beyond the market price.
- The quality of adhesive produced in the factories should be upgraded for quality production.

7.2.2 PROBLEM OF MANUFACTURING AND SUGGESTION

In course of manufacturing operation, the plywood industry of Raipur division has been facing some traditional and new problems. One of the attributes table causes is increase in cost of production which result due to poor use of material logs or low productivity of labour and machines which results to unnecessary delay in stages in production.

It is also note worth here that this industry is labour intensive. Method of production, hence fuller utilization of man power along with machines, plant and building is essential, hence following suggestions are here by put forth.

- Technical development for manufacturing operation should be introduced for small log handling available locally.
The latest improvements developed in lathe charging systems, automatic chucking devices, high speed clipping and multi day light processing should be immediately followed.

Depletion of peel able logs has to be logically recognized for updating technical innovation in the factories of Raipur division. Value Added productivity must gain importance in these industries.

Constructional practices for assembling vendors are so old that loss of wood for finished plywood increases. Uses of large number of veneer peel thickness are therefore suggested.

Quality control is the key factor for easy and steady growth of market for Raipur district plywood. Hence, all the operational steps starting from lathe tolerance to grading should be updated through increasing skill and efficiency of the workers and the machines.

As for application of technical know-how the industry must develop it for large scale uses of soft wood which are commonly available in Raipur division. This would, however need seasoning treating process at high cost. But the life of plywood so produced would go up for 20/25 years as against 3/5 years otherwise for ordinary commercial plywood. This in the long run would minimize timber scarcity.
- Necessity of in-service training facilities for personnel and workers of this industry should be developed. It is for keeping them a best of latest development and to instill in them the desired confidence.

- To develop manufacturing efficiency the plywood, people have to be urgently acknowledged with businesses policies, managerial problems etc. apart from educational knowledge.

Hence plywood industry of Raipur division, management should provide motivational schemes especially by Bhagat wood product, Mahavir laminates and plywood.

7.2.3 PROBLEM OF MARKETING AND SUGGESTION

Marketing indicates income producing side of an industry or a business. It is therefore, revealed to the development of plywood industry of Raipur division. Until quite recently plywood industry of Raipur division was not facing any marketing problem as such. There was a ready market for plywood as such the industry did not fill the necessity of having any marketing policy of strategy.

But today the industry is well versed in marketing management concept. Today, the industry involves itself in a marketing philosophy even before it has a product and find out what the customers are going to need. How ever the force that has induced this change is growing intensity of product diversification, growing competition with other substitutes, changing choices of users and changing distributive patterns.
Hence some suggestion has been put forth regarding research and development, domestic market, transportation cost due to transport bottlenecks and long distance especially for Rajnandgoan district.

- Cheap, durable and multipurpose furniture designs are required to be developed for the rural people along with sophisticated panels for urban people and awareness brought by the advertisements.

- The price for plywood has to be possibly reduced by minimizing unnecessary wastage of timber, adhesive and other expanses and attractive discount offer should be provided.

- The plywood panels required wider propaganda and publicity. The multiple uses of plywood panels should be demonstrated visually, so as to, attract the fancy of the rising rapidly, therefore, plywood is awaiting flourishing market in near future. The industry is yet to meet largely the challenges posed by some important fields, such as, building industry, structural engineering and other new dimensions of its uses. Engineering application of plywood, excepting concrete shuttering, is practically unknown in India, where sample scopes for Chhattisgarh-plywood exist.

- A share in export so although plywood industry of Raipur division not make to boost-up export, the union government should come up with every possible co-operation. Central Excise should reduced, export subsidy and duty free import of high-tech.
machineries should be allowed for the plywood industry. Plywood export promotions board may be set up to boost-up exports.

7.2.4 **PROBLEM OF FINANCIAL SOURCES AND SUGGESTION**

The plywood industry of Raipur division especially Raipur district manufacturer invest their capital by own and maximum plywood industry are partnership based. The support of the finance by the government is comparatively low, with comparison to other industries. Hence the suggestions, for financial sources have been based on retained Profits which is considered as a sound practice to finance the fixed and working capital requirements from the ‘retained profits’ of an existing unit.

It is the cheaper and the most convenient method of securing capital by an enterprise. This method is directed, on the one hand, to increase the quantum of the profits through the provision of additional depreciation allowance, development rebates on undistributed profits, and, on the other, to prevent an excessive distribution of profits by dividend limitation, progressive taxation of dividend or by compulsory deposit of company reserve.

There is no need to define the seasonal or special requirements of the plywood industry and harp on the same string. Sources may be briefly discussed, whereby the variable working capital can be easily procured.

The practice commercial banks in India is regard to industrial finance is largely based on British traditions of commercial banking
under which banks as a rule provide only the working capital requirements of industries, principal, on the security of floating assets and avoid long-term advances against fixed assets.

This policy has been justified on the ground that a very large percentage of the funds of commercial banks consist of demand deposits which are liable to be withdrawn without notice. This requires them to keep large part of their investments in liquid assets so that if there is large-scale demand for withdrawal of deposits, the bank should be able to obtain cash to meet it by selling these investments.

Another notable development in the field of Indian banking has been the nationalization of big commercial banks and establishments of the industrial development bank. Long and medium term working capital requirements can be satisfied by obtaining loans from these institutions, particularly the latter. They are also playing the role of company underwriters.

7.2.5 PROBLEM ON TAXATION POLICY AND SUGGESTION

The industry makes considerable contribution to both the union and state government either in forms of central excise or state taxes. In the years 1995-1996 the plywood industry of Raipur division paid total tax liability [excise and sales tax] of Rs 15.50 crores and being 43.80 crores in 2005-2006. These are being a tremendous load to this industry. It is
production for decades. Adoptive and applied research on developing technologies for manufacture of particle board, fiber board, medium density fiber board and oriented strand board from wood and other lignocelluloses materials are required to be developed in making cost effective and quality panel products.

C. Wood substitution

Wood substitution is an important phenomenon that will have serious bearing upon timer products. Wood substitutes are developed from renewable material, such as plantation wood, bamboo, agro and forest residues.

A major policy initiative the govt. of India has recently established a national mission on bamboo application with a view to harnessing the full potential of the bamboo resource in the country [GoI 2006] the bureau of Indian standard is undertaking the revision of national building code 1983 and has decided to include a separate chapter on bamboo based housing and its structural uses and composites. Development of appropriate mode from technology transfer needs to be strengthened.

D. Economic, commercial production technologies, appropriate to local conditions using indigenously produced plant and machinery.

Prepare strength plan for boosting the wood processing industry particularly the plywood and other panel industry to make it competitive in the international market with high dependence on domestic timber
through appropriate technology development for both domestic market and export market.

Research on processing technologies like peeling small diameter logs, veneers scarf/finger joining, veneer drying, gluing and hot pressing, etc., are required to be developed in market quality panel products from plantation species.

7.3 PROSPECTS OF THE INDUSTRY

The plywood industry of Raipur Division with special reference to Raipur District on sampling 10 sample units it has been observed that this industry has good prospects and for a new entrepreneur it will be a good return investment programme provided that the problems presently faced by this industries should be removed on the suggestion which has been put forth in 7.2 (Suggestion) of this chapter.

In accordance with chapter five of this research work it proved that the financial growth rate of plywood industry in Raipur District is good with comparison to Rajnandgaon District because of financial support and availability of wholesale markets and retailers in Raipur District. It has been also necessary to project here that the production rate will be increased on installation of five to ten delight hot press and sophisticated equipments for this industry and regarding this matter the financial support is to be provided by the financial institution. The gradual development of certain qualities of plywood such as light weight, strength, water proof, weather proof etc. increased the application of plywood in commercial, industrial and social purposes. Presently,
Plywood consumption rate has been grown because of new infrastructure construction, after the existence of Chhattisgarh State on 1st November 2000. The utility of plywood has been made for shopping malls, and decorative official uses.

Future projection for this industry aims at reducing the elements of uncertainty in future associated with decision makings at present. According to the production data provided in Chapter – 5, Table No. 5.1. which is evident that in the year 1999 – 2000 the percentage has arisen by 26.82 in Raipur Division in which the major contribution is made by Raipur District in fact the production starts at 662640 square meter from the beginning of 1995-1996 and still on progressive upto 1823177 square meter in 2005-2006.

Taking the base of this production data by applying the time series analysis it is predicted that the production rate will be increase year to year but the necessity regarding the materials like face, core, veneer will also cause a serious problem for production of plywood in Raipur Division. If the alternate species of material or wood has been introduce this problem may eradicate.

The intensive application of wood science comes to the industries aid, the development of the plywood industry of Raipur Division input structure determines outcome of an industry by putting up the productivity, value added per men hour , value added as an outcome of productive capital and value added per machine.

To get a good prospects to this industry of Raipur Division capabilities to peal smaller girth logs must be develop. Improvement in the organisational structure of out put marketing required greater
attention a part from greater emphasis for infrastructural development. Finally it can be said that plywood industry of Raipur District has a good prospect against Rajnandgaon District as in this district at present only two industries are in operation therefore the growth has become stagnant due to lack of interest in new entrepreneur because the size of market is limited. The development rate of infrastructure is also moderate.

The profit is the basic economic of an Industry. It is essential to pay fare return on investment for payment of interest on loan & capital which is divided to the proprietors or partners for reinvestment and steady supply of future loan. The plywood industry of Raipur Division has shown surprising growth as judge by accounting ratio of 10 sample units for the period 1995-2005, which suggest a good indicator for the prospect of this industry.

The current ratio indicators also make an impressive object for a better prospect of this industry on fast circulation and movements of stock and cash flows in this industry. The trend of gross profit ratio and net profit ratio also projects the future of profit earning capacity in this business. As plywood industry of Raipur Division manufacture the standards of international quality but they donot make any export to the foreign market which prove to be inefficient contribution in Indian Economy. regarding this fact the prospect is not justified because of duties and tax structure framed by the Government.

Hence, according to the study it is confined that this industry has good prospects for the supply to the neighbour states due to which this division has good reputation for a market of plywood in other states.