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Chapter V
Conclusions and Recommendations

5.1 Summary of Findings

This chapter presents the concluding remarks of the present study based on the empirical results obtained in the previous chapter. Furthermore, it recommends some pathways for further development of West Bengal jute industry, and identifies the loopholes of the present empirical study as well. But before that, it becomes necessary to review the findings of the previous chapters of the present study and summarise them accordingly as is done below.

Since the primary objective of the present dissertation is to develop a bankruptcy prediction model considering some important financial variables as found available in the related literature and collected dataset to address financial distress in West Bengal jute industry, chapter I has prepared the background accordingly. It has identified the nature of the problem, made literature survey, explored the research gap, and thereafter summarised the objectives of the present research work and its methodology. And finally, a chapter plan has been laid down at the end of this chapter.

Chapter II has identified that the motivation behind the empirical researches in corporate bankruptcy prediction is an early detection of financial distress symptoms which may help to initiate some corrective measures within the purview of the bankruptcy law prevailing in a particular country. The second chapter has therefore, laid down the conceptual aspects of financial distress in an attempt to clarify the bankruptcy process and its legal framework in the U.S.A, U.K. and India. It has identified that there is dearth of provisions relating to specific tests for analyzing the actual cause(s) of financial failure of an industrial unit in India, and sometimes the whole bankruptcy procedure takes a longer time to get resolved in India and hence the need is felt to have a less stringent, unified, and comprehensive law relating to corporate bankruptcy in India. The existing Indian regulatory provisions on corporate bankruptcy appear to be stringent in certain cases when compared with that of U.S.A and U.K. The recently enacted Indian Insolvency and Bankruptcy Protection Code, 2016 is expected to provide such a foundation by bringing about a sea-change in the sphere of bankruptcy laws and regulations prevailing in India by way of relaxing the stringent norms and shortening the entire bankruptcy procedure. Furthermore, this chapter has described the different bankruptcy prediction models under the three broad heads
namely, statistical, artificial intelligence expert system (AIES), and theoretical models. Discriminant analysis is found to be the primary method for bankruptcy prediction during 1960-1975, and thereafter, some modern methods of bankruptcy prediction like logit analysis and neural networks have come into existence from 1980 onwards. The chapter has revealed that multivariate discriminant analysis and neural networks are the most promising methods for bankruptcy prediction till date, while the AIES approach is relatively new, and the theoretical models are comparatively unusual. The consistently high predictive accuracy of multivariate discriminant analysis and Logit models with low Type I and II error rates have been identified in a large number of studies, over the years suggesting that these models are considered as the most reliable methods of bankruptcy prediction.

Based on the above conceptual understanding of financial distress made in chapter II, Chapter III has made an attempt to present the overall scenario of Indian jute industry with special reference to West Bengal by evaluating its growth, contribution, and recent performance, its problems and prospects etc. The chapter has identified that the West Bengal jute industry is facing two big challenges in recent times which are high production cost and inadequate supply of capital. West Bengal still follows the traditional methods of manufacturing jute products, and as a result, the finished jute products involve high production costs and are exported at higher rates as compared to that of other Asian countries. Besides, poor supplies of raw material, increasing labour cost, lack of proper policies are also affecting this industry. For all the above reasons, total production of jute goods in West Bengal fluctuates/decreases every year, and as a result, though West Bengal occupies a major share in India’s jute production and export, it is far behind the optimum level that could be achieved if the problems of this industry are detected at an early stage and curative measures are taken. It is, therefore, imperative to identify the causes of financial downsides of the jute industry in West Bengal so that preventive measures can be suggested. Proper efforts should also be made to find out the possibility of its revival, and devise appropriate package of restructuring and rehabilitation strategies for the West Bengal’s jute industry. In this perspective, Chapter IV of the study is drafted.

Accordingly, Chapter IV has identified empirically the difference between the Sick and Non-sick jute mills in terms of their liquidity, profitability, capital structure, asset utilization and other activity/performance indicators to facilitate the formation of a bankruptcy prediction model to predict the group membership of the concerned jute mills.
Thereafter, it has explored the driver(s)/factor(s)/predictor(s) that have maximum discriminating ability to differentiate the Sick and Non-sick jute mills, or are mainly responsible for sickness in West Bengal jute industry. While doing so, the chapter has first conducted a graphical analysis of the selected 12 predictors/financial ratios for two years i.e. 2003-2004 and 2004-2005 to showcase the difference between the Sick and Non-sick jute mills on a univariate basis. The graphical analysis has been successful in exploring the differences between the Sick and Non-sick groups in respect of their liquidity, profitability, capital structure, asset utilization and other activity indicators and establishing the fact that the Sick jute mills are really constrained by the selected variables in comparison to the Non-sick jute mills, as expected. The graphical results could motivating the formation of a bankruptcy prediction model considering the above selected predictors together, and identifying their combined effect in classifying the Sick and Non-sick jute mills accordingly. Consequently, multivariate discriminant analysis and logistic regression have been used to form the bankruptcy prediction model to identify the most significant predictor(s), of financial distress in West Bengal jute industry. The research could successfully establish that out of the sampled sick and non-sick jute mills from West Bengal jute industry, some mills have revived, while others are either struggling hard or tending towards sickness over the period of study i.e. 2004-2005 to 2015-2016. It has subsequently identified Current Ratio (CR) as the main predictor of sickness in West Bengal jute industry. This proves that West Bengal jute industry suffers mainly from liquidity crisis as far as the other parameters like profitability, capital structure, asset utilization and other performance indicators are concerned, and hence sound liquidity/working capital management should be the main focus of improvement to tackle such financial anomalies.

Finally, after a summary of the four chapters designed for this present dissertation, the present concluding chapter V enumerates a few policy recommendations emerging out of the study, besides highlighting the limitations of the present study and scope for further research in the following sections.

5.2 Policy Recommendations

Liquidity problem generally arises due to a number of factors like excessive cash loss from operations, delay in collecting book debts, accumulation of inventory (mainly finished goods and stores), increasing turnover of current liabilities and absence of systematic planning and control of cash etc. Now the questions that inherently arise are
what could be the reasons behind such liquidity crisis of selected sick jute mills? Could it be general or mill-specific in nature? For answering such questions, an enquiry into the constituents of working capital of individual jute mill is needed. But insufficient data in this regard hinders such investigation and specific root to the problem could not be traced. Hence the liquidity crisis in the present context is considered to be general/common (industry specific) and non-mill specific in nature, and accordingly recommendations are made for the overall improvement of the liquidity position of West Bengal jute industry considering the mills that have already revived; those that are still sick and obviously the mills which are tending towards sickness. The suggestions are categorized as follows:

Current asset management/Working capital management

Maintaining a proper balance between current assets and current liabilities keeps sickness away from the production unit. Therefore, current asset management plays an important role in preventing sickness from an early stage. It includes scientific and systematic selection of debtor/creditor policy, proper evaluation and implementation of inventory management and budgetary control etc. The suggestive measures in the present context are enumerated below.

• Financing current assets by long term sources of finance can be a solution to the problem prevailing in West Bengal jute industry as it reduces the cost of financing by way of saving the higher interest costs on short term financing sources for the business. As a result, such cash savings in terms of reduced interest payment on short term borrowings may help improve short term availability of cash for the concerned jute mills.

• Current assets/sales graph makes it clear that most of jute mills are following aggressive working capital policy because increase in sales does not result in proportionate increase in their current assets. Thus they should either follow conservative or moderate approach of managing working capital to tackle the prevailing liquidity crisis.

• The current ratios of the sampled jute mills are far away from the standard proposition of current assets and current liabilities i.e. 2:1, and in some cases the amount of current liability is more than the total amount of current assets. On the other hand, working capital turnover of the sampled mills depicts a contrasting picture as revealed in total sales/working capital graph. This may be due to the fact that the concerned mills are being run at minimum or lower operating capacity,
which results in lower requirement of working capital and a consequent higher working capital turnover.

*Revision of production and marketing policies*

Production and marketing policies have significant impact on operating results of a firm. A sound production and marketing policy minimizes the chances of cash loss from operations. Besides, it performs routine checkup of the operating units by various technical methods like inventory and supply chain management, Total Quality Management (TQM), reengineering when necessary, and scrutiny of the production and sales report. The ways in which the jute mills can mitigate their liquidity crisis through revisions of their production and marketing policies are suggested below.

**Production policy revision**

- Diversified production policy may help the jute mills to tackle the existing liquidity crisis. Engagement in production of various diversified products like fashionable accessories, home furnishing, clothing etc., besides the main stream products i.e. traditional packaging materials can reap benefits during the slack period by utilizing the physical resources and work force thereby avoiding unnecessary blockage of capital in the main stream production.

- The time gap between purchase of raw material and production of finished goods i.e. the length of manufacturing or production cycle has an impact upon liquidity or cash resources because shorter the manufacturing cycle, smaller will be the working capital requirement. This can be done by technological up gradation and modernization of the age old infrastructure of the jute mills.

**Marketing policy revision**

- It is found that huge accumulation of unsold stock in case of majority of the jute mills results in poor revenue generation leading to shortage of cash resources. This situation is not at all desirable and hence proper marketing policies like organizing discount offer/special day offer/jute fair etc. frequently to clear such unsold stock as early as possible can improve the present liquidity crisis.

- Introduction and promotion of e-commerce/online shopping facility, setting up of discount stores and warehouse/wholesale clubs/speciality store etc. to promote and sell diversified jute products at the national and international level are the need of the hour to improve the overall business situation for West Bengal jute industry.
**Government intervention**

It is not just financial support, but other measures are also necessary to rehabilitate the sick industrial units and eradicate sickness efficiently and successfully. Accordingly, the strategies to tackle sick industrial units can be of two types mainly viz. corrective and preventive. Corrective measures include the strategy to close some units, revive others and combine some with other industrial units, while the preventive measures are mainly in the form of financial assistance, technological up gradation, research and development and advisory assistance etc. The recommendations in this regard are mentioned below.

**Corrective measures**

- The jute mills which have already fallen sick or are tending towards sickness in West Bengal need to be nationalized and regulated by the government to reap the advantages of good governance and practice, as is done in Bangladesh and Pakistan.
- Merger can be another way of overcoming the present financial crisis. Not only horizontal merger like that of Anglo India jute mill and Champdany jute mill, but vertical and conglomerate mergers are also to be encouraged, if possible. As for example, a jute mill can merge with a supplier of basic components or raw materials or with a distributor or retailer that sells its products to improve efficiency or reduce costs, and/or a jute mill can merge with a business that belongs to a different industry or firms operating in different geographic areas as such merger can serve various purposes like extending business territories and expanding a product range etc.

**Preventive measures**

- Irregular supply of raw materials sometime result in larger stock size thereby increasing the working capital requirement to a greater extent. So regular supply of raw material must be ensured to minimize the pressure on working capital requirement, and the Government can play a role in this matter.
- Awareness campaigns on greater usage of green/eco-friendly jute products against plastic products can be arranged by the Government.
- All the jute mills may be brought under the purview of Jute Technology Mission (JTM) and regularly monitored by the Government/authority concerned to reap the advantages of modernization and technological up gradation.
• Support for research and development for jute product development on the part of the Government is needed for continuous improvement of the jute industry and exploring new market opportunities.

• Proper policies such as fixing Minimum Support Price (MSP) for jute products, allowing tax holiday to enterprises in jute industry etc. can be framed and implemented by the Government in order to improve the existing sales and revenue of jute mills, and encourage young entrepreneurs to take up jute business for promoting jute industry.

• Industrial development of any country depends on the efforts of entrepreneurs. The entrepreneurs are afraid of sickness of their entrepreneurial ventures as it involves loss of their invested capital, a lag in career opportunity and huge opportunity cost especially for intelligent entrepreneurs nowadays. The concerned authority should come forward with different measures such as proper training of entrepreneurs and flow of necessary information to reduce risks as far as possible.

5.3 Limitations of the Study

Though the present study has its own usefulness, the empirical analysis suffers from the following limitations:

• The sample for the empirical study is restricted to only those jute mills in West Bengal whose financial data are available for the concerned period of study from the office of the Jute Commissioner, Ministry of Textiles, Government of India. The complete and detailed financial data of the jute mills are hardly available from any other secondary sources, and hence the sample is drawn based on data availability, and not by the application of any statistical sampling method.

• The inferences drawn in the graphical analysis are subject to time bound interpretation. Such analysis could have revealed the differences between the selected Sick and Non-sick mills more prominently and in a consistent manner, had there been available data for two or three consecutive years before failure. Thus, due to unavailability of the previous years’ data in pre-failure period, the impact of the present research model before the year of failure could not be identified.

• Due to non-availability of detailed information regarding the financial and capital structure of the sampled jute mills, a number of other important variables under liquidity, profitability, capital structure, asset utilization and other performance indicators could not be computed while forming the independent variables set, and
12 independent variables could only be identified and entered for the empirical analysis accordingly.

The present study serves as a basic research work in relation to bankruptcy prediction in jute industry in general, and West Bengal in particular. Therefore, in spite of the above-mentioned limitations, the present study provides some insights into the financial performance measurement and bankruptcy prediction issues in West Bengal jute industry, which might have some policy implications to the Government and to the owners of the jute mills as well.

5.4 **Scope for Further Research**

Due to time and resource constraints, all relevant issues of bankruptcy prediction, especially in the connection with West Bengal jute industry, could not be dealt with in the present study. So, the following are some of the promising areas which may be explored for further research in the context of financial performance measurement of West Bengal jute industry and in Indian context, as well.

- Inclusion of some non-financial variables like workers’ participation in management, working condition, employee morale, and resistance to change etc. in the present set of independent variables/predictors may put some impact upon the results derived in measuring financial performance of West Bengal jute industry in the present study.

- The present research model and its predictors of financial performance of West Bengal jute industry can be applied to other regions of the country so as to make out region-wise differences in distress characteristics of the jute industry in India.

- Though, the study is to some extent region specific and limited to a particular industry only, yet it has usefulness as jute industry in India concentrates mainly in West Bengal, and not much documented research work relating to the financial performance measurement of the jute mills of West Bengal, especially distress prediction, are available in existing literature yet. Therefore, a further research, if carried on, with the jute mills identified as either deteriorating or improving in the present study may add some further impetus in overcoming the existing crisis and improving the overall situation of this age-old Indian industry.