

Doctoral Dissertation Abstracts

Development of a Credit Scoring Methodology for Assessment of Micro-Finance Borrowers

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Credit intervention is considered to be an effective tool to eliminate the curse of poverty. Delivering small-size of credit to poor in a cost-effective manner is still a challenge. Micro-finance lenders use subjective scoring whose effectiveness and accuracy is dependent on experience and skills of credit officer, which limits the growth of lending business. In contrast, statistical credit scoring forecasts risk based on quantified characteristics recorded in a database of loan applicants. Scoring can help reduce that time by prioritizing the visits to those borrowers who are more likely to default, leaving loan officers more time to identify and access new customers.

With the objectives of understanding enablers of recovery in money lending and predictors of creditworthiness of micro-finance borrowers the researcher pursued his research. Approach of our research is empirical and is exploratory and descriptive both in nature. Analysis was done using descriptive statistics, ANOVA, factor analysis, Chi Square test, Cluster analysis. Logistic regression and multivariate linear regression were used to develop a credit score for facilitating the process of decision making on credit call. Lastly we performed multivariate discriminant analysis to find out a critical score.

The research provides an approach to identify relevant variables and methodology to develop credit scoring models in micro-finance.

Keywords: Micro-finance, Credit Risk, Money Lending, Credit Scoring

Marketing of Refractory Products: A study in the refractory Industries in Orissa (India)

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The purpose of this study is to depict the perspective of the refractory makers like Tata Krosaki Refractories Ltd, IFGL Refractories Ltd, OCL India, Sarvesh Refractories and Manishri Refractories in the world, India as well as Orissa with the present operational parameters and marketing strategies adopted with their products for the domestic and international customers. In comparison to other industries, the refractory industries are small. They are yet to receive due recognition because of their insignificant size in comparison to the key user industries like steel, cement, aluminum etc.

However, these are highly specialized industries and their contribution to the Indian economy cannot be overlooked. Therefore, the present study will be an eye-opening for the Indian refractory industries in general and refractory industries of Orissa in particular to know themselves and to have a deeper understanding of the theory, principle and application of the refractory marketing philosophies to increase their staying power in the market.

Keywords: Refractory, Standardization, Globalization

Some Inventory Management Models for Perishable Items with Quadratic Demand Patterns

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The main interest of inventory models is due to its readily applicability to a large diversity of situations existing in business and industry. An inventory models are developed keeping stock for future demand which will be useful for developing optimal strategies and control. Since 1915, a wide variety of inventory models were developed with more emphasis on mathematical analysis. While developing these inventory models, the demand rate is considered as either linearly decreasing (increasing) or exponentially decreasing (increasing) in demand. Several mathematical modelers argued that, in realistic terms, the demand need not follow either linear or exponential trend. So, it is reasonable to assume that the demand rate, in certain commodities, due to seasonal variations may follow quadratic function of time/price/stock.

This idea has motivated us to develop interest to study the inventory models when the demand rate follows a quadratic function of time/price/stock. Few contributions in quadratic demand which formed the basis for the thesis are given. From the literature review it is found that very little work reported in recent times. Thus inventory models are developed for perishable items with quadratic demand rate. So, it may be reasonable to assume that the demand rate, in certain commodities, due to seasonal variations follow quadratic function of time [i.e., $D(t) = at^2 + bt + c$; $a \neq 0, b \neq 0, c \geq 0$] or a quadratic function of price [i.e., $D(p) = ap^2 + bp + c$; $a \neq 0, b \neq 0, c \geq 0$]. Here c , denotes the initial rate of demand, b is the rate with which the demand rate increases (decreases) and a is the rate with which the change in the rate demand rate itself increases. This functional form, time/price dependent quadratic demands, explains the accelerated growth/decline or retarded growth or decline in the demand patterns which may arise due to seasonal demand rate.

Keywords: Inventory, Perishable, Quadratic Demand, Deterioration.

A Study of Innovation Culture of Leading Innovative Organizations

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Innovation is a powerful tool for stimulating economic growth and changing the quality of human life. It is widely recognized as a critical element that enables organizations to maintain a competitive edge through sustained superior performance. This research investigated the role of innovation culture in bringing out innovations in India and abroad. Some of the important objectives of the study were: to investigate the influence of organization culture on innovation; to identify common innovation culture characteristics of successful innovative companies and to identify the unique attributes and practices of innovative organizations.

Six parameters were identified to study the innovation culture of organizations. These parameters were identified after extensive literature review and discussion with management experts and practicing managers. The six factors comprising innovation culture were: Organization Climate, Leadership, Core Values, Customer Focus, Creativity and Envisioning Future. Based on their innovation capabilities the companies were grouped into three categories: product, process and business model innovation organizations. Fifteen organizations were selected for the study. The participating organizations consistently ranked among the top 20 companies on global innovation survey studies. The study revealed common practices widely shared and practiced by these organizations, which helped them to emerge as leaders in their industries.

Keywords: Organization Climate, Leadership, Core Values, Customer Focus, Creativity, Envisioning Future