



IIMS Journal of Management Science

Vol.3, No.2, July-December 2012

Contents

Transient Analysis of Two-Dimensional State Non-Markovian Queueing System with Multiple Working Vacations

---*Indra Rani, Ruchi*

Paired Comparison of Promotional Methods in Context of Banking Services:

An Application of Multidimensional Scaling

---*S.L. Gupta, Arun Mittal*

Measurement of Pharmacy Retail Service Quality-An Indian Experiment

---*Jasmin Padiya*

Technical Efficiency of Indian Life Insurance Companies-A Mathematical

Programming Approach 227

---*Ram Pratap Sinha*

Impact of Futures Trading on Volatility of CNX Nifty

---*Ginjan Malhotra*

A Study of Credit Lending and Prediction of Bankruptcy using Back-Propagation Neural Networks

---*Roli Pradhan, K.K. Pathak, V.P. Singh*

The Moderating Role of International Joint Venture Manufacturing Experience on the Transfer of Technological Knowledge from Foreign Partners to Uganda

---Mary BasaasaMuhenda

Consumer Perceptions of Quality towards Beautification Products: A Developing
Country Perspective

---Jashim Uddin Ahmed, HumayanKabir Chowdhury

Interdependence between Globalisation, Knowledge-Based Economy and
Information Society

---AgnieszkaRzepka

Transient Analysis of Two-Dimensional State Non-Markovian Queueing System with Multiple Working Vacations

Indra Rani*, Ruchi**

ABSTRACT

This paper analyses the transient behavior of a first-come, first-served, two-dimensional state, non-Markovian queueing system with multiple working vacations such that the server works with different service rate rather than completely stop service during a vacation period. This queue approximates a multi-queue system in which each queue operates either at a fast service rate or a nominal service rate, and the fast service mode cyclically moves from queue to queue with an exhaustive schedule. For such a queue, we provide a recursive method, using the supplementary variable technique as the remaining service time during busy period, to obtain the Laplace transform of the probabilities of exact number of arrivals and departures by a given time t , number of units arrived by time t and number of units departed by time t . It is assumed that the service time during working vacation period and working vacation times are both exponentially distributed. The emphasis in this paper is theoretical, but numerical assessment of operational consequences is also given and presented graphically for exponential service time during the busy period. Finally, some particular cases are derived

KEYWORDS: Non-Markovian queueing model; Multiple working vacations; Two-dimensional state queueing model; Laplace transform; Supplementary variable technique

JEL Classifications: C44

BIOGRAPHICAL NOTE: Dr. Indra Rani is a Professor and Chairperson of the Department of Statistics & O.R. Kurukshetra University, Kurukshetra. Her research interests are Application of Stochastic Process in Operations Research. She has published various research papers at international and national journals. She can be reached at radha_indra@rediff.com

Ms. Ruchi is currently a research scholar in the Department of Statistics & O.R., Kurukshetra University, Kurukshetra. Her research interest is Working Vacation Queueing Systems. She can be reached at rup_ruchi@yahoo.co.in

Paired Comparison of Promotional Methods in Context of Banking Services: An Application of Multidimensional Scaling

S.L Gupta*, Arun Mittal

ABSTRACT

Promotion has five major components, viz. advertising, sales promotion, personal selling, publicity and public relations and direct marketing. Literature in promotion has many dimensions. In integrated marketing communication, these methods are set together in such a way that they give maximum results in minimum investments. In other studies, the best methods for various industries have been found with the help of theoretical studies. The present study does not deny the importance of all these facts, but its stress is on the positioning of promotional methods. In the present study, the promotional methods have been positioned with the help of multidimensional scaling. The data have been collected from 160 bank executives on the basis of a judgment sampling. For application of multidimensional scaling, SPSS software has been used. The research is empirical in nature, where a survey method has been used. The responses have been captured through structured questionnaire. The bank executives have given advertising a separate position in itself, while few other methods are placed at a different place and just opposite to advertising. The study gives significant insights to the existing literature by setting up positioning of various major methods of promotion. However, the research is limited to the responses of executives' opinion regarding promotional methods, which may be further extended with the help of the opinion of advertising agencies and customers also.

KEYWORDS: Promotional mix; Promotional methods; Positioning; Multidimensional scaling

JEL CLASSIFICATION: M31

BIOGRAPHICAL NOTE: Dr. S.L. Gupta is Director at the Birla Institute of Technology (Deemed University), Mersa, Ranchi, Patna Campus. Professor Gupta has written 10 books in different areas of marketing management. He has more than 50 research papers and articles published

in the journals of repute. He is the editorial board member of MAG Scholars Journal. He can be reached at drslgupta@gmail.com

Arun Mittal is an assistant professor at the Birla Institute of Technology (Deemed University), Mesra, Ranchi, Noida Campus. He has published about 15 research papers. He can be reached at arunmittal1985@gmail.com

Measurement of Pharmacy Retail Service Quality- An Indian

Experiment

Jasmin Padiya*

ABSTRACT

Service quality is considered as an important determinant of consumer satisfaction. Very little research has been carried out on service quality perception in India. Retail sector is witnessing dramatic changes in India and also, as expected, in pharmacy retail. Given the relatively mature markets where the service quality scales have been developed, it seems unlikely that these measures would be applicable in the Indian context without adaptation. The study is conducted in two phases. In first phase, exploratory research is carried out in order to generate ideas and understand the current practices in pharmaceutical retailing and purchase of medicine by customers. The second phase is descriptive in nature; in this stage of research, a tool to measure service quality expectation in retail pharmacy context is developed. The major contribution of this study is adapted pharmacy retail service quality scale in Indian context. Results indicate that the prime requisite or expectation of a medicine shopper is availability of all medicines at one outlet. In addition to availability of medicines, knowledge of the staff, neat and clean appearance of the stores and proper explanation of dosage by pharmacist are the major expectations.

KEYWORDS: Service, Quality, Retail, Pharmacy

JEL CLASSIFICATION: M

BIOGRAPHICAL NOTE: Dr. Jasmin Padiya is working as an Associate Professor–Marketing Area with GLS Institute of Technology (MBA Programme) affiliated with Gujarat Technological University. Dr. Padiya is having 4 years of industry experience in pharmaceutical sales, brand management and training area. Dr. Padiya possesses 7 years of experience in teaching post graduate management students. He has authored and published several research articles in journals of national and international repute. He can be reached at jasmin@glsict.org.

Technical Efficiency of Indian Life Insurance Companies-A Mathematical Programming Approach

Ram Pratap Sinha*

ABSTRACT

In view of the liberalisation of the Indian life insurance sector, the relative performance of the life insurance companies is of interest for both academicians-researchers and policy makers. The present paper compares the technical efficiency (TE) of the major life insurance companies operating in India for the period 2005–06 to 2008–09 using the Charnes Cooper Rhodes (CCR) and Banker Charnes Cooper (BCC) envelopment model and the slacks-based measure model developed by Tone (2001). The results suggest that there still exist a significant gap between the Life Insurance Corporation of India and other life insurance companies in terms of TE.

KEYWORDS: Life Insurance, Technical efficiency, Data envelopment analysis

JEL CLASSIFICATION: C61, D21, G22

BIOGRAPHICAL NOTE: Dr. Ram Pratap Sinha is an Associate Professor of Economics at the Government College of Engineering and Leather Technology, Kolkata. He has also presented research papers in many important national and international conferences. He can be reached at rp1153@rediffmail.com

Impact of Futures Trading on Volatility of CNX Nifty

Gunjan Malhotra*

ABSTRACT

This paper focuses on the volatile behaviour in the equity market in individual stocks after the introduction of future trading on individual stocks. One of the innovations in financial markets in recent years has been the introduction of derivatives with the introduction of stock index futures. Futures and options play an important role in price discovery, portfolio diversification and hedging. This paper examines the stock market volatility of individual stocks listed on the S&P (US-based Standard & Poor's Financial Information Services) CNX ('C' stands for CRISIL, 'N' stands for NSE and X stands for Exchange or Index) Nifty index after the introduction of futures trading. It uses the family of generalised autoregressive conditional heteroscedasticity technique to capture the time-varying nature of volatility and volatility clustering phenomenon in the data. The empirical evidence suggests that in most of the stocks, there is no significant change in the volatility of stock market. But with regard to the information flow to the spot market, future trading has increased volatility.

KEYWORDS: Volatility, Derivatives, CNX Nifty, Futures trading, India

JEL CLASSIFICATION: M

BIOGRAPHICAL NOTE: Gunjan Malhotra is an assistant professor in the Institute of management Technology (IMT), Ghaziabad, India. She has actively contributed research articles in various international and national journals and conferences. She is also an editor of a national journal and a reviewer for few international journals. She can be reached at mailforgunjan@gmail.com

A Study of Credit Lending and Prediction of Bankruptcy using Back-Propagation Neural Networks

Roli Pradhan*, K.K. Pathak*, V.P. Singh*

ABSTRACT

Bankruptcy prediction is very important for all the organisations in the financial sector, as it affects the economy and leads to rise in many social problems with added incremental costs. There are large number of techniques that have been developed to predict the bankruptcy, which help the decision makers, such as investors and financial analysts. One of the bankruptcy prediction models is back-propagation neural network (BPNN). The paper first surveys the existing literature for various techniques that have been developed to assess credit risks, including the credit scoring models and quantitative models pioneered by Beaver and Altman, which focuses on the borrower's inability to meet credit obligation. Thereafter, this paper, using the tailored BPNN, endeavours to predict the financial ratios expressing the position of a firm to regulate the bankruptcy and assess the credit risks. It first estimates the financial ratio for a firm from 2001 to 2008 to the train the BPNN and uses the estimates of the year 2009 and 2010 values in the validation process. Finally, it dwells to draw predictions for the period 2011—2015 and emphasises the growing role of BPNN application-based prediction models for banking sector with a case study of Oriental Bank of Commerce. We conclude with practical suggestions on how best to integrate models and research into credit lending decisions.

KEYWORDS: Credit lending, Back propagation neural network, Credit lending, Ration analysis

JEL CLASSIFICATIONS: G17

BIOGRAPHICAL NOTE:Dr. Roli Pradhan is an Assistant Professor in MANIT, Bhopal. She can be reached at pradhanroli@gmail.com

Dr. K.K. Pathak is a professor in the civil engineering department, Nittr, Bhopal. He can be reached on kkpathak1@rediffmail.com

Professor V.P. Singh is a Director in Sagar Institute, Bhopal. He can be reached on singhvp@gmail.com

The Moderating Role of International Joint Venture Manufacturing Experience on the Transfer of Technological Knowledge from Foreign Partners to Uganda

Mary Basaasa Muhenda*

ABSTRACT

The Government of Uganda encourages local firms to form joint ventures (JVs) with foreign partners in the hope that international JVs (IJVs) could tap into external knowledge bases on the premise that organisations learn by collaborating with other firms. The study investigated the extent of transfer of technological knowledge from foreign partners to IJV in Uganda's manufacturing sector, established the factors under which the knowledge is transferred and examined whether the effect of these factors on the extent of knowledge transfer is contingent on IJV alliance duration. We believe that outstanding performance of long-established inter-firm links in comparison with shorter links is attributed to the familiarity and expertise to know when and how to draw from partners' resources. This suggests that, as the alliance duration increases, partners' develop relational-specific routines and are able to share hard-to-transfer resources. The study, cross-sectional design in nature, used self-administered questionnaires in addition to key informant interviews to gather data from a total of 120 respondents who returned the questionnaires. Factor and reliability analysis and multiple and hierarchical regression were the various statistical analysis carried out using SPSS. The study revealed that the effect of communication behaviour, structural attachment and creativity and flexibility on transfer extent is contingent on IJV alliance duration. Future research could be directed to conducting a longitudinal study to investigate the effects of technical and organisational infrastructure factors on the extent of transfer and to examine other types of knowledge, preferably in service industries, as this study only investigated technological knowledge in the manufacturing sector.

KEYWORDS: Knowledge, Knowledge transfer, Manufacturing experience, Joint ventures

JEL CLASSIFICATIONS: D02, D83, O31, O32, O33

BIOGRAPHICAL NOTE: Dr. Mary Basaasa Muhenda works at the Uganda Management Institute, Uganda. She can be reached at mmuhenda@yahoo.com

Consumer Perceptions of Quality towards Beautification Products: A Developing Country Perspective

Jahim Uddin Ahmed*, Humayun Kabir Chowdhury*

ABSTRACT

This study investigates the influence of some important extrinsic cues relevant to Bangladesh, i.e. brand image, perceived price and perceived country of origin, on consumer perceptions of quality towards beautification products. An instrument for measuring consumer perceptions of quality towards beautification products is developed. Covariance structure analysis has been performed using a total of 309 responses. Results from structure analysis reveal a broader conceptualisation of consumer-perceived quality in Bangladesh in the form of a model. This paper discusses the implications for theory, research and practice, and makes suggestions for future research.

KEYWORDS: Beautification, Perceived quality, Brand, Perceived county-of-origin, Perceived price

JEL CLASSIFICATIONS: M3, M31

BIOGRAPHICAL NOTE: Dr. Jashim Uddin Ahmed is an Associate Professor at School of Business and Director of BBA Program, North South University, Dhaka, Bangladesh. He received his Ph.D. in management sciences from University of Manchester Institute of Science and Technology (UMIST), UK. His current research interests include the areas of strategic management, change management and contemporary marketing thoughts. He can be reached at jashim@northsouth.edu, jashimahmed@hotmail.com.

Dr. Md. HumayunKabir Chowdhury is a Professor at Department of Business Administration, East West University, Dhaka, Bangladesh. He has published more than 30 research articles in reputed journals and conference proceedings. His research focuses on consumer behaviour, contemporary issues in marketing. He can be reached at hkabar@ewubd.edu, mhkchowdhury@yahoo.com

Interdependence between Globalisation, Knowledge-Based Economy and Information Society

Agnieszka Rzepka*

ABSTRACT

The modern world is increasingly being defined by the term 'globalisation'. Important changes in the global economy have become the main determinants of this phenomenon. Of course, we must not forget that globalisation should not be analysed without looking at social, political and cultural factors, given that all these are bound together. The aim of this article is to determine whether the interdependence between the processes of globalisation exist in the global economy or not. Second the paper tries to find the process of globalisation and how can this process be defined? Finally, the paper tries to know the interdependence between the globalisation of the knowledge-based economy and the information society.

KEYWORDS: Knowledge-based economy, Globalisation, Information society, Definition of globalisation

JEL CLASSIFICATIONS: M21, O16, D80, D83

BIOGRAPHICAL NOTE: DrAgnieszka Rzepka is a Director at the Institute Development & Research, Sandomierz, Poland (www.instytutagarzepka.com). She has 33 publications in national and international journals of repute and has presented her research findings in more than 25 national/international conferences (Harvard, IJAS and LSE). She can be reached at agarz@wp.pl