

# INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, IT & MANAGEMENT

I  
J  
R  
C  
M



A Monthly Double-Blind Peer Reviewed (Refereed/Juried) Open Access International e-Journal - Included in the International Serial Directories

*Indexed & Listed at:*

Ulrich's Periodicals Directory ©, ProQuest, U.S.A., EBSCO Publishing, U.S.A., Cabell's Directories of Publishing Opportunities, U.S.A.

Open J-Gate, India [link of the same is duly available at Inlibnet of University Grants Commission (U.G.C.)],

Index Copernicus Publishers Panel, Poland with IC Value of 5.09 & number of libraries all around the world.

Circulated all over the world & Google has verified that scholars of more than 1771 Cities in 148 countries/territories are visiting our journal on regular basis.

Ground Floor, Building No. 1041-C-1, Devi Bhawan Bazar, JAGADHRI – 135 003, Yamunanagar, Haryana, INDIA

<http://ijrcm.org.in/>

# CONTENTS

Sr. No.	TITLE & NAME OF THE AUTHOR (S)	Page No.
1.	SIGNIFICANCE OF COST MANAGEMENT TECHNIQUES IN DECISION MAKING: AN EMPIRICAL STUDY ON ETHIOPIAN MANUFACTURING PRIVATE LIMITED COMPANIES (PLCs) <i>DR. FISSEHA GIRMAY TESSEMA</i>	1
2.	TECHNICAL EFFICIENCY ANALYSIS AND INFLUENCE OF SUBSIDIES ON THE TECHNICAL EFFICIENCY OF FARMS IN THE SLOVAK REPUBLIC <i>DR. ING. ANDREJ JAHNÁTEK, DR. ING. JANA MIKLOVIČOVÁ &amp; ING. SILVIA MIKLOVIČOVÁ</i>	10
3.	A COMPARISON OF DATA MINING TECHNIQUES FOR GOING CONCERN PREDICTION <i>FEZEH ZAHEDI FARD &amp; MAHDI SALEHI</i>	14
4.	DETERMINANTS OF CONSTRAINTS TO LOW PROVISION OF LIVESTOCK INSURANCE IN KENYA: A CASE STUDY OF NAKURU COUNTY <i>THOMAS MOCHOGE MOTINDI, NEBAT GALO MUGENDA &amp; HENRY KIMATHI MUKARIA</i>	20
5.	PERCEPTIONS OF ACCOUNTANTS ON FACTORS AFFECTING AUDITOR'S INDEPENDENCE IN NIGERIA <i>AKINYOMI OLADELE JOHN &amp; TASIE, CHUKWUMERIJE</i>	25
6.	AN ASSESSMENT OF MARKET SUSTAINABILITY OF PRIVATE SECTOR HOUSING PROJECT FINANCING OPTIONS IN NIGERIA <i>I.S. YESUFU, O.I. BEJIDE, F.E. UWADIA &amp; S.I. YESUFU</i>	30
7.	AN EXPLORATORY STUDY ON THE PERCEPTION OF CUSTOMERS TOWARDS THE ROLE OF MOBILE BANKING, AND ITS EFFECT ON QUALITY OF SERVICE DELIVERY, IN THE RWANDAN BANKING INDUSTRY <i>MACHOGU MORONGE ABIUD, LYNET OKIKO &amp; VICTORIA KADONDI</i>	35
8.	BUSINESS PROCESS REENGINEERING AND ORGANIZATIONAL PERFORMANCE <i>C. S. RAMANIGOPAL, G. PALANIAPPAN, N. HEMALATHA &amp; M. MANICKAM</i>	41
9.	CUSTOMER PERCEPTION OF REAL ESTATE SECTOR IN INDIA: A CASE STUDY OF UNORGANISED PROPERTY ADVISORS IN PUNJAB-INDIA <i>DR. JASKARAN SINGH DHILLON &amp; B. J. S. LUBANA</i>	46
10.	INNOVATIVE TECHNOLOGY AND PRIVATE SECTOR BANKS: A STUDY OF SELECTED PRIVATE SECTOR BANKS OF ANAND DISTRICT <i>POOJARA J.G. &amp; CHRISTIAN S.R.</i>	51
11.	THE PROBLEMS AND PERFORMANCE OF HANDLOOM COOPERATIVE SOCIETIES WITH REFERENCE TO ANDHRA PRADESH INDIA <i>DR. R. EMMANIEL</i>	54
12.	IMPACT OF GENDER AND TASK CONDITIONS ON TEAMS: A STUDY OF INDIAN PROFESSIONALS <i>DEEPIKA TIWARI &amp; AJEYA JHA</i>	58
13.	MOTIVATIONAL PREFERENCES OF TEACHERS WORKING IN PRIVATE ENGINEERING INSTITUTIONS IN WESTERN INDIA REGION: AN EXPLORATORY STUDY <i>DD MUNDHRA &amp; WALLACE JACOB</i>	68
14.	CHANNEL MANAGEMENT IN INSURANCE BUSINESS <i>DR. C BHANU KIRAN &amp; DR. M. MUTYALU NAIDU</i>	74
15.	MANAGEMENT INFORMATION SYSTEM APPLIED TO MECHANICAL DEPARTMENT OF AN ENGINEERING COLLEGE <i>C.G. RAMACHANDRA &amp; DR. T. R. SRINIVAS</i>	78
16.	A STUDY ON THE PERCEPTIONS OF EMPLOYEES ON LEADERSHIP CONCEPTS AND CONSTRUCTS IN LIC <i>H. HEMA LAKSHMI, P. R. SIVASANKAR &amp; DASARI.PANDURANGARAO</i>	83
17.	TEXTURE FEATURE EXTRACTION <i>GANESH S. RAGHTATE &amp; DR. S. S. SALANKAR</i>	87
18.	INDIAN BANKS: AN IMMENSE DEVELOPING SECTOR <i>PRASHANT VIJAYSING PATIL &amp; DR. DEVENDRASING V. THAKOR</i>	91
19.	DEVALUATION OF INDIAN RUPEE & ITS IMPACT ON INDIAN ECONOMY <i>DR. NARENDRA KUMAR BATRA, DHEERAJ GANDHI &amp; BHARAT KUMAR</i>	95
20.	SERVICE PRODUCTIVITY: CONCERNS, CHALLENGES, AND RESEARCH DIRECTIONS <i>DR. SUNIL C. D'SOUZA</i>	99
21.	A STUDY OF THE MANAGERIAL STYLES OF EXECUTIVES IN THE MANUFACTURING COMPANIES OF PUNJAB <i>DR. NAVPREET SINGH SIDHU</i>	105
22.	FINANCIAL LEVERAGE AND IT'S IMPACT ON COST OF CAPITAL AND CAPITAL STRUCTURE <i>SHASHANK JAIN, SHIVANGI GUPTA &amp; HAMENDRA KUMAR PORWAL</i>	112
23.	REACH OF INTERNET BANKING <i>DR. A. JAYAKUMAR &amp; G.ANBALAGAN.</i>	118
24.	THE PROPOSED GOODS AND SERVICE TAX REGIME: AN ANALYSIS OF THE DIFFERENT MODELS TO SELECT A SUITABLE MODEL FOR INDIA <i>ASHISH TIWARI &amp; VINAYAK GUPTA</i>	122
25.	ESTIMATION OF STOCK OPTION PRICES USING BLACK-SCHOLES MODEL <i>DR. S. SARAVANAN &amp; G. PRADEEP KUMAR</i>	130
26.	MIS AND MANAGEMENT <i>DR.PULI.SUBRMANYAM &amp; S.ISMAIL BASHA</i>	137
27.	REFORMS IN INDIAN FINANCIAL SYSTEM: A CONCEPTUAL APPROACH <i>PRAVEEN KUMAR SINHA</i>	147
28.	NATURAL RUBBER PRODUCTION IN INDIA <i>DR. P. CHENNAKRISHNAN</i>	151
29.	QUALITY IMPROVEMENT IN FREE AND OPEN SOURCE SOFTWARE PROJECTS <i>DR. SHAIK MAHABOOB BASHA</i>	157
30.	ICT & PRODUCTIVITY AND GROWTH BUSINESS: NEW RESULTS BASED ON INTERNATIONAL MICRODATA <i>VAHID RANGRIZ</i>	160
	REQUEST FOR FEEDBACK	165

## CHIEF PATRON

**PROF. K. K. AGGARWAL**

Chancellor, Lingaya's University, Delhi  
Founder Vice-Chancellor, Guru Gobind Singh Indraprastha University, Delhi  
Ex. Pro Vice-Chancellor, Guru Jambheshwar University, Hisar

## FOUNDER PATRON

**LATE SH. RAM BHAJAN AGGARWAL**

Former State Minister for Home & Tourism, Government of Haryana  
Former Vice-President, Dadri Education Society, Charkhi Dadri  
Former President, Chinara Syntex Ltd. (Textile Mills), Bhiwani

## CO-ORDINATOR

**AMITA**

Faculty, Government M. S., Mohali

## ADVISORS

**DR. PRIYA RANJAN TRIVEDI**

Chancellor, The Global Open University, Nagaland

**PROF. M. S. SENAM RAJU**

Director A. C. D., School of Management Studies, I.G.N.O.U., New Delhi

**PROF. M. N. SHARMA**

Chairman, M.B.A., Haryana College of Technology & Management, Kaithal

**PROF. S. L. MAHANDRU**

Principal (Retd.), Maharaja Agrasen College, Jagadhri

## EDITOR

**PROF. R. K. SHARMA**

Professor, Bharti Vidyapeeth University Institute of Management & Research, New Delhi

## CO-EDITOR

**DR. BHAVET**

Faculty, M. M. Institute of Management, Maharishi Markandeshwar University, Mullana, Ambala, Haryana

## EDITORIAL ADVISORY BOARD

**DR. RAJESH MODI**

Faculty, Yanbu Industrial College, Kingdom of Saudi Arabia

**PROF. SANJIV MITTAL**

University School of Management Studies, Guru Gobind Singh I. P. University, Delhi

**PROF. ANIL K. SAINI**

Chairperson (CRC), Guru Gobind Singh I. P. University, Delhi

**DR. SAMBHAVNA**

Faculty, I.I.T.M., Delhi

**DR. MOHENDER KUMAR GUPTA**

Associate Professor, P. J. L. N. Government College, Faridabad

**DR. SHIVAKUMAR DEENE**

Asst. Professor, Dept. of Commerce, School of Business Studies, Central University of Karnataka, Gulbarga

**DR. MOHITA**

Faculty, Yamuna Institute of Engineering & Technology, Village Gadholi, P. O. Gadholi, Yamunanagar

***ASSOCIATE EDITORS***

**PROF. NAWAB ALI KHAN**

Department of Commerce, Aligarh Muslim University, Aligarh, U.P.

**PROF. ABHAY BANSAL**

Head, Department of Information Technology, Amity School of Engineering & Technology, Amity University, Noida

**PROF. A. SURYANARAYANA**

Department of Business Management, Osmania University, Hyderabad

**DR. SAMBHAV GARG**

Faculty, M. M. Institute of Management, Maharishi Markandeshwar University, Mullana, Ambala, Haryana

**PROF. V. SELVAM**

SSL, VIT University, Vellore

**DR. PARDEEP AHLAWAT**

Associate Professor, Institute of Management Studies & Research, Maharshi Dayanand University, Rohtak

**DR. S. TABASSUM SULTANA**

Associate Professor, Department of Business Management, Matrusri Institute of P.G. Studies, Hyderabad

**SURJEET SINGH**

Asst. Professor, Department of Computer Science, G. M. N. (P.G.) College, Ambala Cantt.

***TECHNICAL ADVISOR***

**AMITA**

Faculty, Government H. S., Mohali

**DR. MOHITA**

Faculty, Yamuna Institute of Engineering & Technology, Village Gadholi, P. O. Gadholi, Yamunanagar

***FINANCIAL ADVISORS***

**DICKIN GOYAL**

Advocate & Tax Adviser, Panchkula

**NEENA**

Investment Consultant, Chambaghat, Solan, Himachal Pradesh

***LEGAL ADVISORS***

**JITENDER S. CHAHAL**

Advocate, Punjab & Haryana High Court, Chandigarh U.T.

**CHANDER BHUSHAN SHARMA**

Advocate & Consultant, District Courts, Yamunanagar at Jagadhri

***SUPERINTENDENT***

**SURENDER KUMAR POONIA**

## CALL FOR MANUSCRIPTS

We invite unpublished novel, original, empirical and high quality research work pertaining to recent developments & practices in the area of Computer, Business, Finance, Marketing, Human Resource Management, General Management, Banking, Insurance, Corporate Governance and emerging paradigms in allied subjects like Accounting Education; Accounting Information Systems; Accounting Theory & Practice; Auditing; Behavioral Accounting; Behavioral Economics; Corporate Finance; Cost Accounting; Econometrics; Economic Development; Economic History; Financial Institutions & Markets; Financial Services; Fiscal Policy; Government & Non Profit Accounting; Industrial Organization; International Economics & Trade; International Finance; Macro Economics; Micro Economics; Monetary Policy; Portfolio & Security Analysis; Public Policy Economics; Real Estate; Regional Economics; Tax Accounting; Advertising & Promotion Management; Business Education; Management Information Systems (MIS); Business Law, Public Responsibility & Ethics; Communication; Direct Marketing; E-Commerce; Global Business; Health Care Administration; Labor Relations & Human Resource Management; Marketing Research; Marketing Theory & Applications; Non-Profit Organizations; Office Administration/Management; Operations Research/Statistics; Organizational Behavior & Theory; Organizational Development; Production/Operations; Public Administration; Purchasing/Materials Management; Retailing; Sales/Selling; Services; Small Business Entrepreneurship; Strategic Management Policy; Technology/Innovation; Tourism, Hospitality & Leisure; Transportation/Physical Distribution; Algorithms; Artificial Intelligence; Compilers & Translation; Computer Aided Design (CAD); Computer Aided Manufacturing; Computer Graphics; Computer Organization & Architecture; Database Structures & Systems; Digital Logic; Discrete Structures; Internet; Management Information Systems; Modeling & Simulation; Multimedia; Neural Systems/Neural Networks; Numerical Analysis/Scientific Computing; Object Oriented Programming; Operating Systems; Programming Languages; Robotics; Symbolic & Formal Logic and Web Design. The above mentioned tracks are only indicative, and not exhaustive.

Anybody can submit the soft copy of his/her manuscript **anytime** in M.S. Word format after preparing the same as per our submission guidelines duly available on our website under the heading guidelines for submission, at the email address: [infoijrcm@gmail.com](mailto:infoijrcm@gmail.com).

## GUIDELINES FOR SUBMISSION OF MANUSCRIPT

### 1. **COVERING LETTER FOR SUBMISSION:**

DATED: \_\_\_\_\_

**THE EDITOR**  
IJRCM

**Subject:** SUBMISSION OF MANUSCRIPT IN THE AREA OF \_\_\_\_\_.

(e.g. Finance/Marketing/HRM/General Management/Economics/Psychology/Law/Computer/IT/Engineering/Mathematics/other, please specify)

**DEAR SIR/MADAM**

Please find my submission of manuscript entitled ' \_\_\_\_\_ ' for possible publication in your journals.

I hereby affirm that the contents of this manuscript are original. Furthermore, it has neither been published elsewhere in any language fully or partly, nor is it under review for publication elsewhere.

I affirm that all the author (s) have seen and agreed to the submitted version of the manuscript and their inclusion of name (s) as co-author (s).

Also, if my/our manuscript is accepted, I/We agree to comply with the formalities as given on the website of the journal & you are free to publish our contribution in any of your journals.

#### **NAME OF CORRESPONDING AUTHOR:**

Designation:

Affiliation with full address, contact numbers & Pin Code:

Residential address with Pin Code:

Mobile Number (s):

Landline Number (s):

E-mail Address:

Alternate E-mail Address:

#### **NOTES:**

- a) The whole manuscript is required to be in **ONE MS WORD FILE** only (pdf. version is liable to be rejected without any consideration), which will start from the covering letter, inside the manuscript.
- b) The sender is required to mention the following in the **SUBJECT COLUMN** of the mail:  
**New Manuscript for Review in the area of** (Finance/Marketing/HRM/General Management/Economics/Psychology/Law/Computer/IT/Engineering/Mathematics/other, please specify)
- c) There is no need to give any text in the body of mail, except the cases where the author wishes to give any specific message w.r.t. to the manuscript.
- d) The total size of the file containing the manuscript is required to be below **500 KB**.
- e) Abstract alone will not be considered for review, and the author is required to submit the complete manuscript in the first instance.
- f) The journal gives acknowledgement w.r.t. the receipt of every email and in case of non-receipt of acknowledgment from the journal, w.r.t. the submission of manuscript, within two days of submission, the corresponding author is required to demand for the same by sending separate mail to the journal.

2. **MANUSCRIPT TITLE:** The title of the paper should be in a 12 point Calibri Font. It should be bold typed, centered and fully capitalised.

3. **AUTHOR NAME (S) & AFFILIATIONS:** The author (s) **full name, designation, affiliation (s), address, mobile/landline numbers**, and **email/alternate email address** should be in italic & 11-point Calibri Font. It must be centered underneath the title.

4. **ABSTRACT:** Abstract should be in fully italicized text, not exceeding 250 words. The abstract must be informative and explain the background, aims, methods, results & conclusion in a single para. Abbreviations must be mentioned in full.

5. **KEYWORDS:** Abstract must be followed by a list of keywords, subject to the maximum of five. These should be arranged in alphabetic order separated by commas and full stops at the end.
6. **MANUSCRIPT:** Manuscript must be in **BRITISH ENGLISH** prepared on a standard A4 size **PORTRAIT SETTING PAPER**. It must be prepared on a single space and single column with 1" margin set for top, bottom, left and right. It should be typed in 8 point Calibri Font with page numbers at the bottom and centre of every page. It should be free from grammatical, spelling and punctuation errors and must be thoroughly edited.
7. **HEADINGS:** All the headings should be in a 10 point Calibri Font. These must be bold-faced, aligned left and fully capitalised. Leave a blank line before each heading.
8. **SUB-HEADINGS:** All the sub-headings should be in a 8 point Calibri Font. These must be bold-faced, aligned left and fully capitalised.
9. **MAIN TEXT:** The main text should follow the following sequence:

**INTRODUCTION**

**REVIEW OF LITERATURE**

**NEED/IMPORTANCE OF THE STUDY**

**STATEMENT OF THE PROBLEM**

**OBJECTIVES**

**HYPOTHESES**

**RESEARCH METHODOLOGY**

**RESULTS & DISCUSSION**

**FINDINGS**

**RECOMMENDATIONS/SUGGESTIONS**

**CONCLUSIONS**

**SCOPE FOR FURTHER RESEARCH**

**ACKNOWLEDGMENTS**

**REFERENCES**

**APPENDIX/ANNEXURE**

It should be in a 8 point Calibri Font, single spaced and justified. The manuscript should preferably not exceed **5000 WORDS**.

10. **FIGURES & TABLES:** These should be simple, crystal clear, centered, separately numbered & self explained, and **titles must be above the table/figure**. **Sources of data should be mentioned below the table/figure**. It should be ensured that the tables/figures are referred to from the main text.
11. **EQUATIONS:** These should be consecutively numbered in parentheses, horizontally centered with equation number placed at the right.
12. **REFERENCES:** The list of all references should be alphabetically arranged. The author (s) should mention only the actually utilised references in the preparation of manuscript and they are supposed to follow **Harvard Style of Referencing**. The author (s) are supposed to follow the references as per the following:
  - All works cited in the text (including sources for tables and figures) should be listed alphabetically.
  - Use (ed.) for one editor, and (ed.s) for multiple editors.
  - When listing two or more works by one author, use --- (20xx), such as after Kohl (1997), use --- (2001), etc, in chronologically ascending order.
  - Indicate (opening and closing) page numbers for articles in journals and for chapters in books.
  - The title of books and journals should be in italics. Double quotation marks are used for titles of journal articles, book chapters, dissertations, reports, working papers, unpublished material, etc.
  - For titles in a language other than English, provide an English translation in parentheses.
  - The location of endnotes within the text should be indicated by superscript numbers.

**PLEASE USE THE FOLLOWING FOR STYLE AND PUNCTUATION IN REFERENCES:**

**BOOKS**

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

**CONTRIBUTIONS TO BOOKS**

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

**JOURNAL AND OTHER ARTICLES**

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

**CONFERENCE PAPERS**

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

**UNPUBLISHED DISSERTATIONS AND THESES**

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

**ONLINE RESOURCES**

- Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

**WEBSITES**

- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Political Weekly, Viewed on January 01, 2012 <http://epw.in/user/viewabstract.jsp>



## DETERMINANTS OF CONSTRAINTS TO LOW PROVISION OF LIVESTOCK INSURANCE IN KENYA: A CASE STUDY OF NAKURU COUNTY

**THOMAS MOCHOGE MOTINDI**  
LECTURER  
CHUKA UNIVERSITY COLLEGE  
KENYA

**NEBAT GALO MUGENDA**  
LECTURER  
CHUKA UNIVERSITY COLLEGE  
KENYA

**HENRY KIMATHI MUKARIA**  
LECTURER  
CHUKA UNIVERSITY COLLEGE  
KENYA

### ABSTRACT

*Insurance companies today are embracing livestock insurance as a means of improving the overall performance of the livestock sector in the country. However, there are a number of insurance companies that still do not provide livestock insurance cover. The purpose of this study was to explain the causes for low provision of livestock insurance in the insurance market in Kenya. This study focused mainly on the supply and demand related challenges. The target population comprised all insurance companies that operate in Nakuru. Primary data was collected from the underwriting personnel of the insurance companies under consideration. Hypotheses were tested using Chi-square at 95% degree of confidence. The major findings of this study were that low levels of training of personnel and complex constraints of supply and demand related issues are responsible for low provision of livestock insurance. Based on the study findings, two key recommendations were made; there is need for insurance providers to increase their market share in the insurance product through innovation of new ways to facilitate their underwriting process and also encourage shared ownership of potential buyers so as to make the product affordable to them.*

### KEYWORDS

Livestock Insurance, index based, Underwriting, Kenya.

### INTRODUCTION

#### BACKGROUND

Livestock insurance is a type of insurance whereby the livestock is insured against communicable and non-communicable diseases, as well as fire, natural disasters, theft, malicious acts of third persons and other risks. Livestock (also cattle) refers to one or more domesticated animals raised in an agricultural setting to produce commodities such as food, fibre and labour. Dairy and livestock farming generally account for the utilisation of 30% of the high to medium potential land and 8% of the Arid and Semi-arid Lands (ASAL). Livestock related production alone accounts for nearly 421 million hectares out of a national total of 484 million hectares used mainly for crop and livestock production. Kenya's livestock and poultry production sector is dominated by dairy, dual purpose and beef cattle. Commodities from cattle that are beef and milk account for more than 75% of marketed livestock production from the national stock of nearly 12 million cattle (Ephraim, 2010).

### LITERATURE REVIEW

#### LIVESTOCK INSURANCE

Livestock insurance is a type of insurance where livestock is insured against communicable diseases and non-communicable diseases as well as fire, natural disasters, theft, malicious acts of third persons and other risks (Livestock refers to domestic animals such as cattle or horses raised for home use or profit especially on a farm).

Livestock insurance raises a farmer's credit worthiness. Large farms, agricultural processing business and slaughter houses could easily obtain loans but small farmers at the very end of the line. This is because large agricultural farmers could afford insurance covers for their animals (Kuria, 2010).

Other benefits of obtaining livestock insurance include: stabilisation of farmers incomes; guaranteed automatic protection against losses of the farmers stock from accidents or diseases; gives confidence to venture into modern farming methods that increase livestock yields; sharing of losses amongst farmers and price stabilisation of livestock products *Chattered Institute of Insurance* (CII, 2000).

Challenges faced by insurance providers and livestock insurance buyers include: Process issues as a result of high transaction costs where the costs are incurred in identification of an animal, assessment of cattle, claim settlement process and other administrative processes; product issues; premium pricing marked by absence of historical data and hence no actual fair pricing; lack of ability and willingness to pay; lack of awareness and non-standardized risks reducing practices. Insurance products offered are limited to catastrophic death and disability; absence of proper distribution channels as well as low literacy and awareness among the citizens and as a result livestock was below 10% in 2009 (Sharma 2009).

#### LIVESTOCK INSURANCE IN OTHER COUNTRIES

Around 50 million households in India depend on livestock for sustenance. Livestock acts as insurance for households that depend on agriculture for income for close to 18 million households, livestock is the primary source of income. While the share of agriculture in the Gross Domestic product (GDP) has steadily been on the rise (Sharma, 2009).

Agriculture in Mongolia is dominated by livestock husbandry which accounts for some 87% of agricultural GDP and which employs some of agricultural work force, providing rural households with an important but vulnerable source of income and food security. Livestock's importance to rural livelihoods increased dramatically during the 1990s with the transition from collectivized farming to family based herding and between 1990 and 2000 the number of herding of herding households increased 75000 to 190,000. Mongolian herders are subject to catastrophic weather related shocks, such drought and severe winter spring colds. Between 1999 and 2002, a series of winter, spring colds led to the loss of one-third of the national herd, seriously impacting national GDP. The high levels of livestock mortality in Mongolia with winter-springs had major effects on rural poverty and many of the households that had entered herding during the 1990s

were stripped off their principle assets. Addressing the problem of such severe weather related risk in an effective and sustainable way posed a difficult challenge for the country and for the World Bank. The Mongolian government endorsed a programme of improved pastoral risk management that includes activities from the community to the national level, including increased investment in infrastructure services and hay fodder reserves while these activities can be helpful in the context of the limited, low- level risks, they are insufficient to prevent the kinds of losses incurred in extreme winter cold seasons. The alternative suggested was government intervention such as restoring programmes which have been found to be expensive, insufficient and likely to provide perverse incentives for herders not to take steps to lower herd mortality. It not only revealed problems but was also susceptible to corruption hence to the development of the livestock insurance (Roberts, 2002).

### INDEX-BASED LIVESTOCK INSURANCE

In Mongolia the project pilots insurance plans in three provinces: Bayakhogor, UVS and Khenti, which consists of five components. The first provides the mechanism to pilot two index-based livestock insurance (IBLI) products: The *Base Insurance Products* (BIP) which is commercial risk instrument sold and serviced by insurance companies, for which herders pay a fully loaded premium rate. It pays out when a district's mortality rate exceeds a defined "trigger"; The Disaster Response Product (DRP) which is a social safety net product financed and provided by the government that begins payments at mortality rates that exceeds the exhaustion point of the BIP. Herders who purchase the BIP are automatically registered for the DRP on the same species of livestock at no additional cost; those herders who have not purchased the minimum value BIP must pay a contribution to cover DRP administrative costs. The second component of the project entails a variety of targeted promotional and public awareness activities to foster awareness and inform stakeholders about the details of the two products and the IBLI pilot; the component supports the institutional framework and capacity necessary to expand the availability of the insurance products once the viability of IBLI instruments has been established.

The fourth component monitors a variety of stakeholders during the IBLI pilot in tracking access by different social groups, monitoring how the products received and in determining whether herders modify their behaviour in response and if so, how their behaviour changes. The project's fifth component implementation until its management functions (Mahul 2006).

### LIVESTOCK INSURANCE IN KENYA

Livestock insurance in Kenya is a recently introduced cover since the collapse of KNAC. It wasn't until 2010 when four insurance companies took up livestock insurance. They include CIC, APA, UAP and ICEA insurance companies.

According to Riungu (2010) the livestock sector contributes about 12% of the National Gross Product and that 42% of the total agricultural GDP employs 50% of agricultural labour force. The sector's contribution comes in form of dairy products, dairy bi-products such as manure and some form of money paid in taxes. Such a source of income needs to be protected against adverse effects through livestock insurance.

The latest statistics from the National Feedlot Accreditation Scheme given in 2009 indicates that only a partly 6.8% of Kenyan populace use insurance products while 91% have never taken any insurance cover. Livestock insurance being lately introduced product, falls even much lower (Ng'aru, 2010).

There is an index based livestock project in northern Kenyan aimed to develop insurance products to protect livestock keepers from drought related asset losses they particularly those in drought prone areas (ASAL). For pastoralists whose livelihoods rely on partly livestock, the resulting high livestock mortality rate has devastating effects on asset levels, rendering them amongst vulnerable populations in Kenya.

Index Based Insurance products represents a promising and exiting innovation that could allow the benefits of insurance to protect the climate – related risks vulnerable rural small holders farmers and livestock keepers face. Because Index Insurance is based on the realization of an outcome that cannot be influenced by insurers or policy holders (such as the amount and distribution of rainfall over a season, it has a relatively simple and transparent structure. This makes such products easier to administer and consequently to more cost effective to develop and track. Indeed the success of several pilot programmes conducted in India, and the feasibility and affordability of such products (Sharma, 2009).

Gold (2010) explains the main challenge faced by pastoralists in Kenya is drought. Sommarat Chantarat, a post doctoral researcher and his colleagues designed the newly launched insurance programme. Chantarat first visited northern Kenya in 2007 and began thinking about the problem as a Cornell graduate working with Chris Barret, a professor of applied economics and management and Andrew Mude, PhD '06, a researcher scientist at the *International Livestock Research Institute* (ILRI) in Kenya, dedicated her PhD thesis to finding a solution, and the product she designed – an index- based livestock insurance plan make payments based on an aggregate index of predicted livestock mortality for the region, instead of on individual losses – which was officially launched in the Marsabit region in January 22, 2010.

As with traditional insurance plan, subscribers in the pilot plan pay premium when they sign up based in the value of the insured livestock and receive an indemnity payment if they experience loss beyond a certain level during the covered time period, but instead of using inspectors to certify the value of insured livestock and verify individual claims – a system that would be impossible to implement due to poor infrastructure. Deficient Northern Kenya – the plan uses an index based on satellite images showing the amount of available vegetation to estimate the aggregate loss in the last 10 years of satellite data with the household survey on livestock mortality collected by researchers in Marsabit over that period.

The outcome was to show whether herders would be able to accumulate more assets and grow their way out of poverty and if this is so, they would expand the programme to other countries in East Africa and beyond (Gold, 2010).

### INDEX APPROACHES TO LIVESTOCK INSURANCE

In livestock insurance evidence of damage is needed before an indemnity is paid. However, verifying such damage has occurred is expensive and making an accurate measurement of the loss on each individual insured farm is even more costly. An index policy operates differently with an index policy; measurement is derived not directly dependent in individual loss assessment.

The measurement traits most commonly considered in constructing an index for insurance relates to meteorological events which are expected to be damaging and which can therefore be used as the trigger for indemnity payments. The classic insurance policy replaced with a simple coupon. Instead of the usual policy wording which would give the indemnity payable for livestock mortality for losses form specific causes, coupon merely gives the monetary sum that becomes payable on certification that the named weather event has occurred. It is suited to weather perils that impact over a wide area e.g. drought as than case of Marsabit.

This is a theoretical possibility that indices derived from the events other than weather could be used as triggers for insurance products e.g. as used in Mongolia. The Mongolian authorities and the World Bank recently conducted a study to see whether an index of mortality could be used as a basis for indemnities on an area basis. Facilitating this fact is that there is a well established practice of conducting on annual livestock census in Mongolia. The feasibility study indicated that the concept has merit and may well be taken as steps towards meeting the strict conducting that would accept risk (Roberts, 2002).

### RISKS FACING LIVESTOCK FARMERS

Sharma (2009) identifies the risks to livestock dependent livelihood, where he categorised them into two;

Production risk and price risk: production risk include elements such as cattle mortality due to epidemics, natural calamities, non- availability of dry and green fodder animals, stoppage of milk production due to disease like mastitis etc on the other hand, price risks include fluctuations costs of livestock and its product as well as weak rural infrastructure.

Roth et al (2002) categorizes risk that faces livestock farmers into two: Market Related and non-market related. Market related risks are those that relate directly to transactions in the economy. They include availability of inputs, prices of inputs, the price of farm products, availability of farm outputs, the gross margins of agricultural enterprises and the revenue derived from farming operation.



Non- market related risks are those that relate to a variety of events, some involving human intervention directly or indirectly. They include: Group 1 health factors. They are associated with diseases/ epidemics with the risk of consequences including mortality, diminished production through diseases, and ban on sale of animal or animal products due to quarantine or health rulings, government slaughter order and increased on farm costs occasioned by quarantine curative measures. Group 2 climate and seismic events. They include drought, flood, windstorm, freeze, lightning, earthquake and tsunami. Group 3 accidents. They include fire, accident, poisoning and explosion. Group 4 infrastructure and environment problems. They include machinery/ electrical breakdown and power outages, malicious damage, riot, strike and pollution of water supply or water environment. Group 5 management issues. They include infertility loss of normal biological function, malnutrition due to unexpected food deficiencies and rustling, theft prediction escape. Group 6 consequential losses due to livestock losses and food safety considerations.

Candel (2007) points out the various natural perils that cause massive losses in the livestock sector in Latin America. Some of the perils mentioned include hurricanes, floods, droughts, mountain glaciers and winter storms in southern cone. She pointed out that Latin America is particularly susceptible to the consequences of climate change as mentioned above and its low insurance penetration adds to the injury.

As from the project on IBL in Kenya (2010) its evident that drought is most prevalent in the North- eastern part of Kenya which claims more livestock lives due to semi- arid conditions in that area.

### RISK MANAGEMENT TECHNIQUES IN LIVESTOCK

Sharma (2009) points out that livestock risk management aims at improving the value of livestock and reducing the vulnerability of low income households. He states that there are two major components of livestock management; risk reduction and risk transfer.

Roth et al (2006) categorizes risk management techniques into three parts: policy based risk management, on farm risk management and financial- based risk management mechanisms.

Policy based risk management includes: site licensing for certain types of production as required in certain jurisdiction as an attempt to minimize pollution; quarantine requirements as an attempt to help manage the risk of the introduction of exotic diseases or organisms that may be detrimental to the health or production of existing species in a given country e.g. foot and mouth disease; compulsory veterinary procedures which are used to ensure that the animals are kept healthy.

On farm risk management is categorized into three groups: Group 1, health factors – they include adherence to Official recommendations for preventing veterinary procedures.

Care also needs to be taken in the citing and construction of livestock handling facilities; Group 2, climate and seismic events – a normal farm management should ensure proper reservations of food supplies (hay or silage); Group 3, accidents – machinery and electrical breakdown can be prevented by appropriate maintenance.

Financially – based risk management mechanisms. These mechanisms according to Roth et al (2006) include shared ownership, marketing arrangements, whereby these mechanisms permit some of the financial burden of losses in livestock to be shared with an entity or individual outside the farm itself.

### FORMS OF LIVESTOCK INSURANCE COVER

Green J.W et al (2005) gave main forms of livestock insurance: full mortality and specified risks. They emphasized on the features and conditions of livestock mortality insurance where they stressed that it is important to know that: livestock mortality insurance is written on the purpose of protecting the actual investment of the livestock owner not potential gain or profit; a mortality policy cannot be considered in any way as a maintenance coverage it does include veterinarian or similar expenses; a mortality policy cannot be considered in any way as a maintenance coverage which does include veterinarian or similar expenses; indemnity is payable only as a result of death loss; mortality coverage does not indemnify an insured against loss of an animal's ability to perform the function for which it is kept; death from natural or accidental causes included but mandatory slaughter by government authority or decree or expediency is not included (hence there exist a third type of cover i.e. slaughter policy); the basis for valuing an animal should be an actual sales price of fair and conservative appraisal by competent judges when no actual sales transaction has taken place. These values are subject to acceptance by the company; mortality both insurance is renewable only on censurability both to physical condition and market value;

Cancellation may only be effected by insured or by the company on notice given in conformation with the existing laws; policies may not be transferred from one insured to another subject to acceptance by the company.

### NEED OF THE STUDY

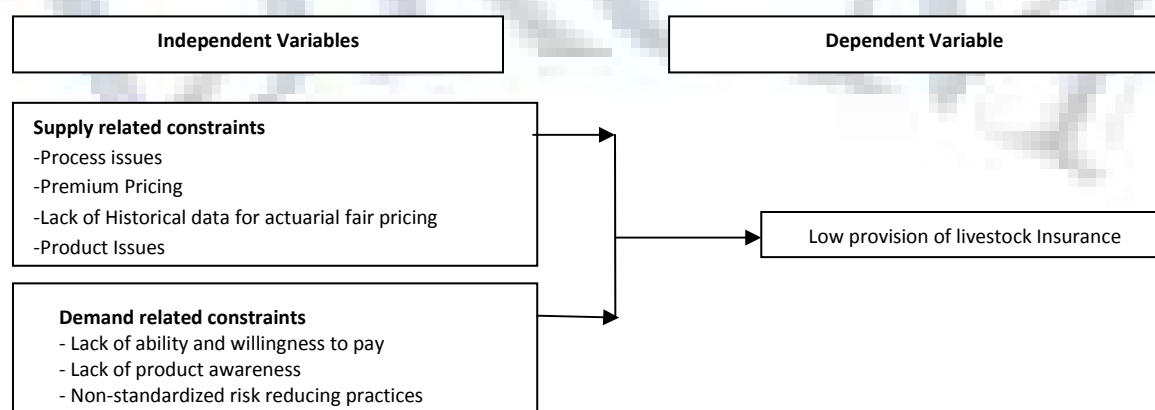
The findings of the study will enabled the gathering of information which reflects the problems and challenges faced by all the insurance companies underwriting livestock insurance in Kenya.

### CONCEPTUAL FRAMEWORK

Low provision of livestock insurance cover is marked by two main types of challenges, the first challenge beings, while the second are the demand related challenges. The supply related constraints include process issues due to high transactions cost, premium pricing as well as product issues.

The demand related constraints focus on the perception of insured's lack of ability and willingness to pay lack of awareness and lack of standardized risk reducing practices. If those challenges are solved, it would bring about increased business growth, high penetration of the product into the market as well as development of other livestock insurance products. However, if the challenges are not solved, it would lead to loss of income to livestock insurance providers, low demand for livestock insurance provider.

FIGURE 1: CONCEPTUAL FRAMEWORK



Source: Author (2011).

## STATEMENT OF THE PROBLEM

Livestock insurance is a type of insurance where livestock is insured against communicable diseases and non-communicable diseases as well as fire, natural disasters, theft, malicious acts of third persons and other risks. Insurance has remained a recognized essential element of risk mitigation and logical complement to other ongoing pastoral risk management activities. Insurance clearly has the potential to protect herders from unavoidable losses and to mitigate the need for government-sponsored re-stocking progress if innovative solutions to the problems of moral hazards and high verifications costs could be identified. Any such innovations would necessarily spread the risks and costs more evenly among herders, the government and the commercial insurance industry. The benefits that accrue from livestock insurance include raising the farmers' credit worthiness, stabilization of farmers' income, guaranteed automatic protection against losses of farmers stock from accidents or diseases and giving confidence to the farmers to venture into modern farming methods that increase livestock yields. In spite of these benefits, the provision of livestock insurance in Kenya has generally been low with only 4 firms undertaking livestock insurance out of the 43 insurance companies. Extant researches on this topic have focused mainly on challenges of provision of livestock insurance in developed countries (Sharma, 2009). This study however seeks to investigate the reasons for slow growth of livestock insurance in Kenya by examining the effect of supply and demand related factors on provision of livestock insurance in the Kenyan market.

## OBJECTIVES OF THE STUDY

The broad objective of the study was to evaluate factors that have led to low provision of livestock insurance in the Kenyan market.

### SPECIFIC OBJECTIVES

1. To determine the effect of supply related factors on provision of livestock insurance.
2. To determine the effect of demand related factors on provision of livestock insurance.

## HYPOTHESES

H<sub>01</sub>: Supply related factors do not significantly affect provision of livestock insurance

H<sub>02</sub>: There is no significant effect of demand related factors on provision of livestock insurance

## RESEARCH METHODOLOGY

### RESEARCH DESIGN

The research adopted was descriptive survey. It involved fact-finding enquiries of different independent variables that have an impact on the low provision of livestock insurance. These facts were obtained from underwriters of livestock insurance operating within Nakuru town.

A field research was conducted by use of questionnaires. This was considered most appropriate way of collecting information due to the inconveniences of booking appointments and the time available for the researchers to complete the research.

### TARGET POPULATION AND SAMPLE SIZE

The target population included all the 4 livestock insurance underwriters within Nakuru town. A complete enumeration of all the items in the population was conducted. This was due to the small population size that was intended to provide first-hand information. Two personnel from each underwriting departments were used as a source of information. It must be noted that this approach is consistent with the practice of surveying key informants knowledgeable about organizational matters by virtue of their positions. This is considered by many researchers as an impersonal method preferably to be used where questions demand a considered rather than immediate answer (John and Weitz, 1988)

### DATA COLLECTION

Primary data was collected using questionnaires. The questions included a combination of open-ended, structured and dichotomous questions. Open ended questions provided additional information relevant to the objective of the research. Structured questions allowed standardization of responses where the questions aimed at arriving similar responses within a given parameter of interest. Multiple choice questions aimed at obtaining standard responses and at the same time allowing flexibility of opinion of the respondent.

## DATA ANALYSIS AND PRESENTATION

TABLE 1 (A): SUPPLY RELATED CONSTRAINTS

Variables	Challenges		No challenges	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Identification of animals	1	16.67	5	83.33
Assessment of animals	5	83.33	1	16.67
Claim settlement process	4	66.67	2	33.33

Table 1 a. shows that 16% of the respondents rated identification of the animals as a major challenge linked to the low provision of the product while 84% had proper mechanisms of identifying the animals that is, tattooing, ear tags and Radio Frequency Identification (RFID). However, the respondents who identified it as a challenge said it was due to moral hazards of the insured like removal of ear tags and tagging other animals which are not insured especially during claims. In addition, 67% of the respondents faced challenges when settling claims where moral hazards were also associated to it leading to cancellation of the policies. The assessment of cattle value was also identified as a major challenge with 84% of the respondents linking it to moral hazard of the insured. 67% of the respondents found no challenges in their claim settlement procedures while 33% encountered challenges.

### TEST STATISTICS

	Identification	Assessment	Cattle Settlement Process
Chi-Square	2.667 <sup>a</sup>	2.667 <sup>a</sup>	.667 <sup>a</sup>
Df	1	1	1
Asymp. Sig.	.102	.102	.414

a. 2 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 3.0.

The computed p-values for each of the variable were less than 5% degree of significance. Thus we conclude that identification of animals, assessment of cattle value and cattle settlement processes have a significant effect on provision of livestock insurance.

TABLE 1(B): SUPPLY RELATED CONSTRAINTS

Variables	Yes		No	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Historical data	2	33.33	4	66.67
Innovation	4	66.67	2	33.33
Limited risk cover	5	83.33	1	16.67

Table 1(b) shows that 33% of the respondents indicated that the company did not have enough historical data on different breeds of livestock while 67% had relevant historical data on the breeds. 67% of the respondents saw no current intention of innovating the livestock product as the product was still in its early stages. In support of this 84% of the respondents indicated that the cover was adequate to meet nearly all the needs of the insured's. 50% evaluated the product awareness programme to be fair while the remaining 50% evaluated it as good.

TEST STATISTICS

	Historical Data	Innovation	Limited Risk Cover
Chi-Square	.667 <sup>a</sup>	.000 <sup>a</sup>	.667 <sup>a</sup>
Df	1	1	1
Asymp. Sig.	.414	1.000	.414

2 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 3.0.

The chi-square value for historical data was 0.667 at 1 degree of freedom with a p-value of 0.414 tested at 95% degree of confidence. Since the p-value is more than 0.05, we conclude that lack of historical data has a significant effect on provision of livestock insurance. Similarly, we found innovation and limited risk cover to have a significant effect on provision of livestock insurance with p-values more than 5% degree of significance.

TABLE 1 (C): DEMAND RELATED CONSTRAINTS

	Yes		No	
Variables	Frequency	Percentage (%)	Frequency	Percentage (%)
Ability to pay	5	83.33	1	16.67
Product awareness	3	50	3	50

The ability and willingness of the insured's to pay premium was evaluated as average with a support of 84% while 16% evaluated it as poor. 50% of the respondents opined that product awareness was good while 50% rated it as poor.

TEST STATISTICS

	Product Awareness	Ability to Pay
Chi-Square	.000 <sup>a</sup>	2.667 <sup>a</sup>
Df	1	1
Asymp. Sig.	1.000	.102

The chi-square value for product awareness was 0.000 at 1 degree of freedom with a p-value of 1.00 tested at 95% degree of confidence. Since the p-value is more than 0.05, we conclude that product awareness has a significant effect on provision of livestock insurance. Similarly, we found that ability to pay had a significant effect on provision of livestock insurance as scaled by chi-square value (2.667) and p<0.05 at 95% degree of confidence.

## SUMMARY

Livestock insurance being a new product in the Kenyan market has not achieved its target as most farmers have not purchased the product. Some of the reasons that have been identified include low income level among potential buyers, lack of a well established claim settlement process, problems of assessment of cattle value as well as other variables such as identification of animal and insufficiency of cover provided.

## RECOMMENDATION

Livestock insurance providers can increase their market share on the livestock insurance product through innovation of new ways to facilitate their underwriting process such as application of index- based on satellite images, so as to eliminate problems associated with poor infrastructure especially in the rural areas. They should also encourage shared ownership of potential buyers so as to make the product affordable to them, engage in micro-financing activities such as providing loans for the purchase of livestock and thus would even improve the performance of the product as well as its competitive advantage over the other insurers. The study did not focus on such issues such as the effect of the different styles of cattle keeping on the provision of livestock insurance. Further research is recommended on the impact of pastoralist, small scale farming and large scale farming on the demand for livestock insurance cover in Kenya (low livestock insurance uptake in Kenya)

## CONCLUSION

Livestock insurance product in the market is fair and can only be improved by finding solutions to the various supply related and demand related constraints as already analysed.

## REFERENCES

- Barrett, C.B., Chabari, F., Bailey, D., Coppock & Little, P.D (2003). "Livestock Pricing in the Northern Kenyan Rangelands." *Journal of African Economics*. 12, 2:127-155.
- Candel, F.M(2007), "Natural Calamities in America" .Publication of the Geneva Association on climate change32(1) Jan2007 climate change and the global insurance industry
- Gold, L (2010), Innovative Livestock Insurance Programme.
- Green, J.W., Driscoll, J.L & Brunch (2005), "The Economics of Livestock", CABI Publishing 875 Massachusetts Avenue 7th Floor Cambridge, MA 02139 USA (Website: [www.cabi-publishing.org](http://www.cabi-publishing.org))
- Insurance, Chattered Institute of Insurance Tuition text, 2000.
- John, G. & Weitz, B.A. (1988). "Forward integration into distribution: an empirical test of transaction cost analysis", *Journal of Law, Economics and Organization*, Vol. 4, 121-39
- Kuria, N (March 8th 2010), article in Kenyan Daily Nation.
- Mahul, O. & Skees, J.R (2006). "Piloting Index-based Livestock Insurance in Mongolia." Access Finance: A Newsletter Published by the Financial Sector Vice Presidency, The World Bank Group, Issue No. 10, March.
- Mukisira, E (2010), Director, Agricultural Research Institute.
- Ng'aru, I (April 26th 2010), "Insurance talk" Kenyan Daily Nation.
- Riungu, C (2010). "Kenya Livestock Finance Trust", Daily Nation.
- Sharma, A (2009)."Insurance and Risk Management", ([www.docstoc.com/.../Centre-for-Insurance-and-Risk-management](http://www.docstoc.com/.../Centre-for-Insurance-and-Risk-management))
- Skees, J.R & Enkh-Amgalan, A (2002). 'Examining the feasibility of livestock insurance in Mongolia' World Bank Policy Research Work Paper No. 2886. Washington sept 2002

## **REQUEST FOR FEEDBACK**

**Dear Readers**

At the very outset, International Journal of Research in Commerce, IT and Management (IJRCM) acknowledges & appreciates your efforts in showing interest in our present issue under your kind perusal.

I would like to request you to supply your critical comments and suggestions about the material published in this issue as well as on the journal as a whole, on our E-mail i.e. **infoijrcm@gmail.com** for further improvements in the interest of research.

If you have any queries please feel free to contact us on our E-mail [infoijrcm@gmail.com](mailto:infoijrcm@gmail.com).

I am sure that your feedback and deliberations would make future issues better – a result of our joint effort.

Looking forward an appropriate consideration.

With sincere regards

Thanking you profoundly

**Academically yours**

Sd/-

**Co-ordinator**

## ABOUT THE JOURNAL

In this age of Commerce, Economics, Computer, I.T. & Management and cut throat competition, a group of intellectuals felt the need to have some platform, where young and budding managers and academicians could express their views and discuss the problems among their peers. This journal was conceived with this noble intention in view. This journal has been introduced to give an opportunity for expressing refined and innovative ideas in this field. It is our humble endeavour to provide a springboard to the upcoming specialists and give a chance to know about the latest in the sphere of research and knowledge. We have taken a small step and we hope that with the active co-operation of like-minded scholars, we shall be able to serve the society with our humble efforts.

### *Our Other Journals*

