

# 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 2840 Cities in 164 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.	MACHINE USAGE BASED ON PRODUCT MIX IN MANUFACTURING CLASSIFICATIONS <i>DR. SURESH TULSHIRAM SALUNKE &amp; SHWETA SURESH TULSHIRAM SALUNKE</i>	1
2.	A STUDY ON THE CHALLENGES FACED BY TIRUPUR GARMENT EXPORTERS <i>DR. S. SARANANAN &amp; S. MOHANRAJ</i>	5
3.	HEALTHCARE AND MEDICAL TOURISM: RETROSPECT AND PROSPECT <i>R. VEERAPPAN, J. SASIGANTH, FR. ANGELO JOSEPH &amp; A. JOE ROBINSON</i>	8
4.	TRADE BETWEEN INDIA AND ASEAN COUNTRIES FOR AGRICULTURAL AND MINERAL PRODUCTS: EXPLORING COMPATIBILITY THROUGH REVEALED COMPARATIVE ADVANTAGE <i>DR. B. P. SARATH CHANDRAN</i>	11
5.	RELEVANCE OF ISLAMIC BANKING TO INDIAN ECONOMY <i>S. NAYAMATH BASHA &amp; DR. BADIUDDIN AHMED</i>	17
6.	AXIOMATIZATION OF THE PREFERENCE CORE IN MULTICRITERIA COOPERATIVE GAMES <i>A. SUGUMARAN &amp; P. VISHNU PRAKASH</i>	21
7.	CORPORATE GOVERNANCE & INFORMATION SECURITY: AN ANALYTICAL STUDY <i>DR. BADIUDDIN AHMED, SYED HAMID MOHIUDDIN QUADRI &amp; IRFANUDDIN</i>	25
8.	RUPEE FALLING: DOLLAR IS ON HORSE RIDE <i>M. RAMU, M. S. K. VARMA &amp; S.SUDHEER</i>	28
9.	AN ANALYSIS OF INDIAN AUTOMOBILE INDUSTRY: SLOWDOWN AS AN OPPORTUNITY FOR NEW DEVELOPMENT <i>DR. ANKUR KUMAR RASTOGI &amp; NITIN GOPAL GUPTA</i>	36
10.	A PROPOSED THEORY OF NEURAL NETWORKS IN KNOWLEDGE MANAGEMENT FOR AN EXPERT SYSTEM <i>V. SUMALATHA</i>	41
11.	THE INFORMATION MANAGEMENT PRACTICES OF BHIRDAR UNIVERSITY <i>DR. MATEBE TAFERE</i>	45
12.	VEBLENIAN SOCIO-PSYCHOLOGICAL MODEL: AN ETHNOGRAPHIC STUDY <i>DR. K. ABRAHAM &amp; DR. M. RAJASEKHAR</i>	51
13.	INNOVATIVE TEACHING AND LEARNING TO ENHANCE CRITICAL THINKING AND REFLECTIVE PRACTICE, FOR QUALITY AND RELEVANCE OF HEALTH EDUCATION <i>DR. BIRHANU MOGES ALEMU</i>	56
14.	A STATISTICAL ANALYSIS OF PHYSICALLY DISABLED POPULATION: DEVELOPMENT IN REHABILITATION SCHEMES <i>DR. CHINNA ASHAPPA</i>	68
15.	USE OF E-JOURNALS IN THE DISCIPLINES OF LIFE SCIENCE IN K.U.K: AN ANALYTICAL STUDY <i>ANIL KUMAR</i>	72
16.	ISLAMIC MICROFINANCE-FINANCING THE POOREST OF THE POOR <i>DILAWAR AHMAD BHAT</i>	79
17.	USE OF CLOUD COMPUTING IN MANUFACTURING COMPANIES <i>SHEETAL MAHENDHER &amp; SUBASHREE</i>	83
18.	CLIMATE CHANGE AND VECTOR BORNE DISEASES: THE ROLE OF GIS & REMOTE SENSING <i>DIVYA GEORGE &amp; DR. R. RAJKUMAR</i>	88
19.	FEASIBILITY STUDY FOR IMPLEMENTATION OF AN ACTIVITY- BASED COSTING SYSTEM (ABCS) IN ALLOY STEEL INDUSTRIES (ASI) <i>MAJID NILI AHMADABADI &amp; ALI SOLEIMANI</i>	96
20.	AN IMPACT OF SERVICE QUALITY ON LOYAL CUSTOMER AND ITS SATISFACTION: A STUDY OF PRIVATE BANKS IN KANPUR CITY (INDIA) <i>RAVINDRA KUMAR KUSHWAHA, GURPREET SINGH, NEERAJ JOSHI &amp; NEHA PUSHPAK</i>	101
21.	A STUDY ON EMPLOYEE PERFORMANCE APPRAISAL IN CEMENT INDUSTRY IN TAMILNADU <i>DR. M. RAGURAMAN, R. VEERAPPAN, S. ALBERT, M. SUGANYA &amp; S. HEMAVATHY</i>	107
22.	DETERMINANTS OF MOBILE BANKING TECHNOLOGY ADOPTION OF COMMERCIAL BANKS IN ETHIOPIA <i>ZEMENU AYNADIS, TESFAYE ABATE &amp; ABEBE TILAHUN</i>	110
23.	EVALUATION OF LIC'S EFFICIENCY IN GENERATING CAPITAL FUNDS UNDER ULIP'S SCHEMES <i>MANJUSHREE S</i>	117
24.	EVALUATION OF COST MANAGEMENT TOOLS: A STUDY ON MULTINATIONAL PHARMACEUTICAL COMPANIES OF BANGLADESH <i>TAHMINA AHMED</i>	120
25.	AN EVALUATION OF NEW ZEALAND'S EXPORT COMPETITIVENESS USING SHIFT-SHARE ANALYSIS <i>DR. SATYA GONUGUNTALA</i>	126
26.	INCREASING INTERNATIONAL COLLABORATIONS IN SCIENCE AND TECHNOLOGY AROUND THE WORLD, AND ITS PATTERNS IN INDIA WITH SPECIAL REFERENCE TO INDO-GERMAN COLLABORATION <i>MUNEEB HUSSAIN GATTOO &amp; MUJEEB HUSSAIN GATTOO</i>	131
27.	A STUDY ON THE ETHICAL INVESTMENT DECISION MAKING IN INDIAN RELIGIOUS ORGANISATIONS <i>BINCY BABURAJ KALUVILLA</i>	135
28.	GREEN MARKETING MIX: A STRATEGY FOR SUSTAINABLE DEVELOPMENT <i>L. NANDA GOPAL</i>	138
29.	CONSIDERING RELATIONSHIP BETWEEN CASH WITH CAPITAL COST AND FINANCIAL FLEXIBILITY <i>AHMAD GHASEMI &amp; DR. ROYA DARABI</i>	140
30.	UNDERSTANDING THE GREEKS AND THEIR USE TO MEASURE RISK <i>SANJANA JUNEJA</i>	146
	REQUEST FOR FEEDBACK	150

## CHIEF PATRON

**PROF. K. K. AGGARWAL**

Chairman, Malaviya National Institute of Technology, Jaipur

*(An institute of National Importance & fully funded by Ministry of Human Resource Development, Government of India)*

Chancellor, K. R. Mangalam University, Gurgaon

Chancellor, Lingaya's University, Faridabad

Founder Vice-Chancellor (1998-2008), 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, Chinar 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, Shree Ram Institute of Business & Management, Urjani

## 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

***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, Shree Ram Institute of Business & Management, Urjani

**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 M. S., Mohali

***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 areas of Computer Science & Applications; Commerce; Business; Finance; Marketing; Human Resource Management; General Management; Banking; Economics; Tourism Administration & Management; Education; Law; Library & Information Science; Defence & Strategic Studies; Electronic Science; Corporate Governance; Industrial Relations; and emerging paradigms in allied subjects like Accounting; 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; Rural Economics; Co-operation; Demography; Development Planning; Development Studies; Applied Economics; Development Economics; Business Economics; Monetary Policy; Public Policy Economics; Real Estate; Regional Economics; Political Science; Continuing Education; Labour Welfare; Philosophy; Psychology; Sociology; Tax Accounting; Advertising & Promotion Management; Management Information Systems (MIS); Business Law; Public Responsibility & Ethics; Communication; Direct Marketing; E-Commerce; Global Business; Health Care Administration; Labour 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; International Relations; Human Rights & Duties; Public Administration; Population Studies; Purchasing/Materials Management; Retailing; Sales/Selling; Services; Small Business Entrepreneurship; Strategic Management Policy; Technology/Innovation; Tourism & Hospitality; Transportation Distribution; Algorithms; Artificial Intelligence; Compilers & Translation; Computer Aided Design (CAD); Computer Aided Manufacturing; Computer Graphics; Computer Organization & Architecture; Database Structures & Systems; Discrete Structures; Internet; Management Information Systems; Modeling & Simulation; Neural Systems/Neural Networks; Numerical Analysis/Scientific Computing; Object Oriented Programming; Operating Systems; Programming Languages; Robotics; Symbolic & Formal Logic; Web Design and emerging paradigms in allied subjects.

Anybody can submit the **soft copy** of unpublished novel; original; empirical and high quality **research work/manuscript anytime** in **M.S. Word format** after preparing the same as per our **GUIDELINES FOR SUBMISSION**; at our email address i.e. [infoijrcm@gmail.com](mailto:infoijrcm@gmail.com) or online by clicking the link **online submission** as given on our website ([FOR ONLINE SUBMISSION, CLICK HERE](#)).

## **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>

## AN ANALYSIS OF INDIAN AUTOMOBILE INDUSTRY: SLOWDOWN AS AN OPPORTUNITY FOR NEW DEVELOPMENT

**DR. ANKUR KUMAR RASTOGI**

**ASST. PROFESSOR**

**COLLEGE OF MANAGEMENT & ECONOMIC STUDIES**

**UNIVERSITY OF PETROLEUM & ENERGY STUDIES**

**DEHRADUN**

**NITIN GOPAL GUPTA**

**ASST. PROFESSOR**

**FACULTY OF MANAGEMENT STUDIES**

**MAHARISHI ARVIND INSTITUTE OF ENGINEERING & TECHNOLOGY**

**JAIPUR**

### ABSTRACT

*Automobile Industry is one of the largest markets in the world. Nowadays, automobiles have become the necessity for everyone. There is a huge scope for automobiles in India, but nowadays Indian automobile industry is facing a big problem, i.e., slowdown. The main purpose of this paper is to discuss the reasons for the slowdown in automobile industry. It analyses the changing scenario of automobile industry that influence the purchasing behaviour of consumers. It explains the sales analysis of various automobile companies in India. It also gives the scope for the future and highlights the solution with the help of new trends which should be adopted by the automobile companies to capture the market and increase the sales in future. It also throws the light on the new technologies for automobile sectors.*

### KEYWORDS

Consumer, Development, Industry, Market, Sales.

### INTRODUCTION

One could ever imagine of car before 1478, when Leonardo da Vinci first designed the "Self-Propelled Car", and today, none of us can imagine our world without that machine, i.e. the automobile. The history of automobile itself expresses about the development that it brought into the world along itself. The Indian Passenger vehicle market is the 7th largest market in Asia and 10th largest market in the world in terms of volume. As per SIAM, passenger vehicles held a 15.07% domestic market share in the year 2011-12. The automobile, as we know it was not discovered in a day or by any single maker. The pasts of the automobile replicate an achievement that took place around the globe. Automobile products are the second principal optional buying made by a consumer, after household acquisition, the affluences of the automobile industry are closely connected with that of the common progress of the economy, not reusable incomes and consumer sureness.

Around 80 years ago, the Indian Automobile Market was nothing because we did not have any automobile manufacturer in India. There were some imported cars in India. After the independence of India, government had started efforts to develop an automobile industry. In the beginning of automobile industry in India, the progress rate was very slow. But now, the situation is relatively different. We have very large market for automobile industry. Currently, India has amongst the lowest vehicle solidities globally at 11 cars per thousand persons and 32 two-wheelers per thousand persons. This is very low as compared to other comparable economies.

The globalization of the auto industry increasingly fosters the formation of new alliances and the entry of new manufacturers. In the context of the auto industry, globalization has never proceeded at a faster pace not only in terms of sourcing of complete products and components, but also in terms of markets. As a result, the cast of players in the world auto industry is ever increasing.

The Indian automobile industry is best segmented as follows:

- Medium and Heavy commercial vehicles (M/HCV)
- Light commercial vehicles (LCV)
- Light utility vehicles (LUV)
- Passenger cars
- Two-wheelers

India is one of the limited markets where small car section growth is as solid as the growth in the superior and luxury car segment. Even passenger car sales in rural areas have been growing while the share of urban areas has been declining.

There are lots of options for transport like motorcycles, cars, SUV, etc for everyone. There are many automobile manufacturers in two wheelers & four wheelers segments. Few major automobile companies are Bajaj, Hero MotoCorp, Maruti Suzuki, Mahindra & Mahindra, Hyundai, Tata Motors, TVS, and Chevrolet etc.

### OBJECTIVE OF THE STUDY

The objective of this study is to discuss about the slowdown in Indian automobile industry. It aims to study about the preferences of automobile consumers. The purpose of this study is also to find out the reasons of slowdown and further to discuss about the solutions.

### REVIEW OF LITERATURE

Pawan Kumar Goenka, President – Automotive & Farm Equipment Sectors (2013), "The industrial scenario in general and the auto industry in particular have been going through tough and troubled times. Today, the Indian auto industry is facing an extremely challenging situation in the form of a prolonged slowdown. Sales for medium and heavy commercial vehicles have declined for 16 consecutive months, while passenger car sales have declined for eight consecutive months, including the first quarter of FY14."

According to Mr. Jawahar Lal Wadhwa, Independent Automotive Professional (2013), "Within next 5 years, the automotive scene would begin to change to alternative sources of energy, especially to electric systems, hydrogen cells and hybrid usage. USA is currently leading the research and lots of prototype vehicles are already under trials. This may bring in revival of American car industry, which is under distress. China is faster than any economy to absorb or copy this technology."

PC Magazine observed that "a 2012 car could have a system originally designed in 2006 and put into production in 2008 when that model first hit the streets."

In 2012, Tata Motors announced it will invest around \$6 billion on developing Futuristic Infantry Combat Vehicles in collaboration with DRDO.

By 2012 market share reports, Maruti holds 37 percent of the Indian passenger car market. The Brand Trust Report published by Trust Research Advisory has ranked Maruti Suzuki in the seventh position in 2011 and the sixth position in 2012 among the most searched brands in India.

According to 'Republic of India', production wise, M&M is one of the largest vehicle manufacturers in India. It is a subsidiary of Indian conglomerate Mahindra Group. Mahindra & Mahindra was ranked 68th in 2011 and 66th in 2012 among Most Trusted Brands among 17000 brands as per the Brand Trust Report. Blue bytes News rated Mahindra & Mahindra as India's second Most Reputed Car Company conducted for the Auto (Cars) Sector launched in April 2012.

According to Mr. Gaurav Pareek, Finance Expert (2013), "As we all know that we have the money to spend in bulk but if we spend it on daily basis it is easily recognized. So companies should provide the petrol services with fixed liter for the years as like as free service and they may adjust the cost of this in insurance or on the cost of vehicle etc. or through any other means".

Mr. Ashish Jain, Sales Professional (2013) said, "Automobile companies should focus on uncovered area (Such as Rural Area bcz of increasing disposable income) and to do New R&D in Engine development which give more millage, which is the need of consumer. By doing this, they can reduce their promotional expense and increase production and they can also control on cost and offer good pricing of their product and attract more consumers"

"The Indian automobile industry which is growing rapidly, is in need of candidates with sound knowledge of physics, systems, tools and the ability to apply themselves to real-life applications", said Dr. Vijayakanthan Damodaran, Engineering Group Manager (Vehicle Performance), General Motors Technical Centre, Bangalore (2012).

"Diwali did not light up sales and most OEMs saw fewer sales as the slowdown begins to bite and consumers stay away from showrooms", Amit Panday reports (2012).

"New potential car buyers are sitting on the fence due to rising diesel prices," said H.V. Kumar, Director at financial advisory firm Crestar Capital.

According to Arun Aravindam, ACG (2013), "A total of 2,968,201 vehicles were sold in India during the first two months of the financial year 2013-14, thus registering a feeble decrease of 0.64% as against same period of 2012-13. The sales stood at 2,987,438 in April-May for 2012."

Planning Commission constituted a Working Group on Automotive Sector for the 12th Five Year Plan (2012-2017) under the chairmanship of Secretary, Department of Heavy Industry. As per the 12<sup>th</sup> five year plan by the government study make determined efforts to achieve the projected capacity and production of the automobile sector for the 12th plan period 2012-17 which is given as in Table 1.

TABLE 1: PROJECTED CAPACITY AND PRODUCTION BY 2016-17

Segment	Capacity (in no.)	Production (in no.)
Passenger vehicles	9,372,838	6,909,797
Commercial vehicles	2,397,257	1,741,122
Three wheelers	1,746,596	1,416,457
Two wheelers	31,483,904	25,019,509

Source: Report of the Working Group on Automotive Sector for the 12th Five Year Plan (2012-2017)

## SALES ANALYSIS OF INDIAN AUTOMOBILE INDUSTRY

At present, there are 19 manufacturers of passenger cars & multi utility vehicles, 14 manufacturers of commercial vehicles, 16 of 2/3 wheelers and 12 of tractors besides 5 manufacturers of engines in India. This includes virtually all the major global Original Equipment Manufacturers (OEMs) and also home grown companies. Today, it is the largest manufacturer of tractors, second largest manufacturer of two wheelers, 5th largest manufacturer of commercial vehicles and the 4th largest passenger car market in Asia. During 2000-11, India exported 2.35 million vehicles to more than 40 countries which included 0.45 million passenger cars and 1.54 million two wheelers. Today, the automobile industry provides direct and indirect employment to 13.1 million people. Table 2 throws the light on sales record of automobile industry for the period of 2005-2013.

TABLE 2: SALES RECORD OF AUTOMOBILE INDUSTRY (2005-13)

Category/ F.Y.	Passenger Vehicles	Commercial Vehicles	Three Wheelers	Two Wheelers	Grand Total
2005-06	1,143,076	351,041	359,920	7,052,391	8,906,428
2006-07	1,379,979	467,765	403,910	7,872,334	10,123,988
2007-08	1,549,882	490,494	364,781	7,249,278	9,654,435
2008-09	1,552,703	384,194	349,727	7,437,619	9,724,243
2009-10	1,951,333	532,721	440,392	9,370,951	12,295,397
2010-11	2,501,542	684,905	526,024	11,768,910	15,481,381
2011-12	2,618,072	809,532	513,251	13,435,769	17,376,624
2012-13	2,428,523	743,798	501,035	13,325,596	16,998,952

Source: Society of Indian Automobile Manufacturers

India sold 2.6mm passenger vehicles in the domestic market and exported 0.5mm passenger vehicles in the year 2011-12 and grew at a 7 year CAGR of 14%.

TABLE 3: SALES TREND OF INDIAN AUTOMOBILE COMPANIES DURING 2011-12 &amp; 2012-13

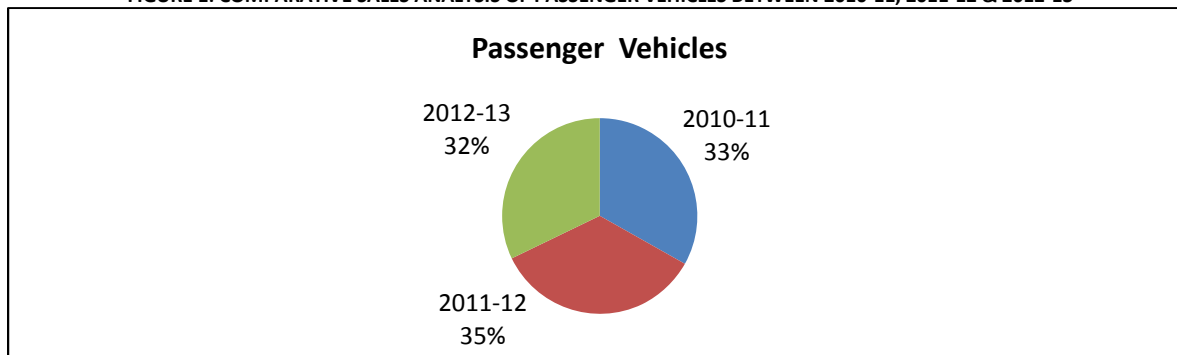
Passenger vehicle segment	Domestic Sales		Growth		Market Share	
	FY 2011-12	FY 2012-13	FY 2011-12	FY 2012-13	FY 2011-12	FY 2012-13
Maruti Suzuki	1,006,316	1,051,046	4.44%		38.27%	39.12%
Hyundai	388,779	383,611	-1.33%		14.78%	14.28%
Tata	371,350	314,464	-15.32%		14.12%	11.71%
M&M	245,700	310,707	26.46%		9.34%	11.57%
Toyota	160,203	165,504	3.31%		6.09%	6.16%
General Motors	110,050	88,150	-19.90%		4.18%	3.28%
Ford	92,665	77,225	-16.66%		3.52%	2.87%
Honda Cars	54,420	73,483	35.03%		2.07%	2.74%
Volkswagen	78,271	65,465	-16.36%		2.98%	2.44%
Renault	3,666	52,463	1331.07%		0.14%	1.95%
Nissan	33,261	36,955	11.11%		1.26%	1.38%
Skoda	34,089	29,067	-14.73%		1.30%	1.08%
BMW*	9,593	7,221	-24.73%		0.36%	0.27%
Audi*	6,547	6,901	5.41%		0.25%	0.26%
Fiat	16,074	6,933	-56.87%		0.61%	0.26%
Mercedes-Benz*	7,419	5,006	-32.52%		0.28%	0.19%
Hindustan Motors	4,923	5,589	13.53%		0.19%	0.21%
Force Motors	5,234	4,562	-12.84%		0.20%	0.17%
Tata-JLR*	796	1,597	100.63%		0.03%	0.06%
International Cars & Motors	483	260	-46.17%		0.02%	0.01%
Porsche	0	220	21900.00%		0.00%	0.01%
Total	2,629,839	2,686,429	2.15%			

\* Figures from March - December 2012



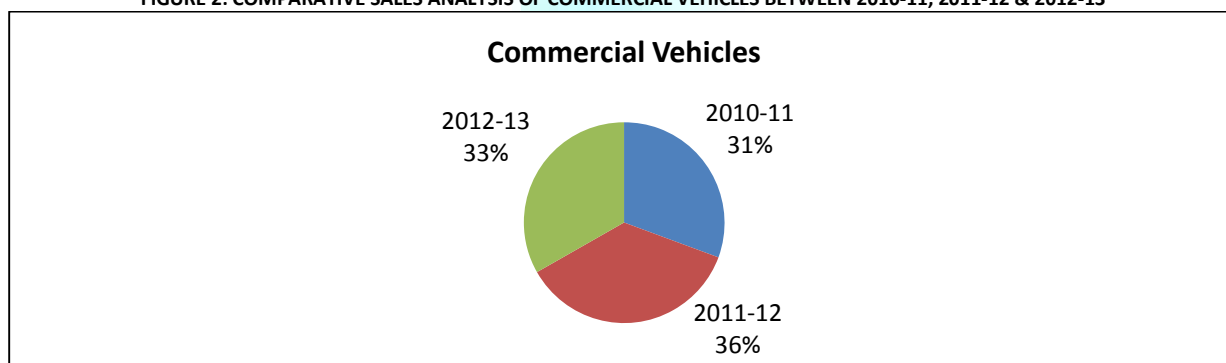
As per the Table 3, Most of the companies are facing the problem of sales slowdown in latest financial year. Out of 21 companies mentioned above, more than 12 companies registered downfall in the year 2012-2013.

**FIGURE 1: COMPARATIVE SALES ANALYSIS OF PASSENGER VEHICLES BETWEEN 2010-11, 2011-12 & 2012-13**



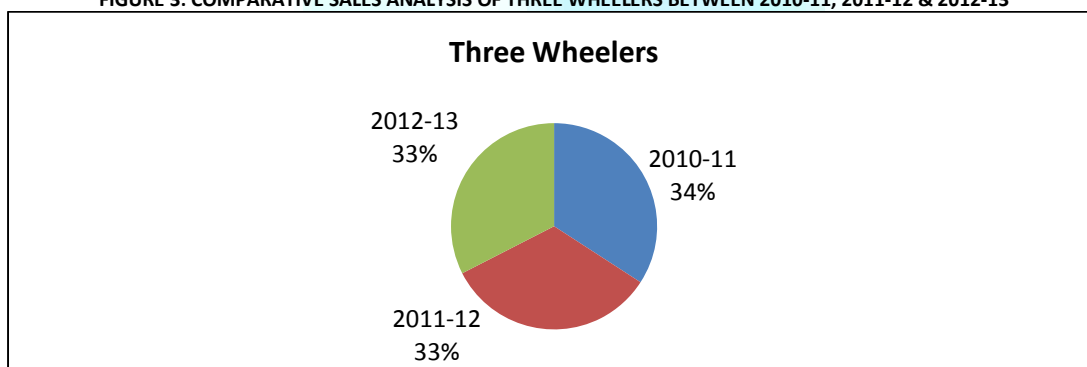
According to the Figure 1, the sales of Passenger Vehicles came down by 3% in the financial year 2012-13.

**FIGURE 2: COMPARATIVE SALES ANALYSIS OF COMMERCIAL VEHICLES BETWEEN 2010-11, 2011-12 & 2012-13**



As per Figure 2, commercial vehicles' sales are also declined by around 3% in the financial year 2012-13.

**FIGURE 3: COMPARATIVE SALES ANALYSIS OF THREE WHEELERS BETWEEN 2010-11, 2011-12 & 2012-13**



**FIGURE 4: COMPARATIVE SALES ANALYSIS OF TWO WHEELERS BETWEEN 2010-11, 2011-12 & 2012-13**

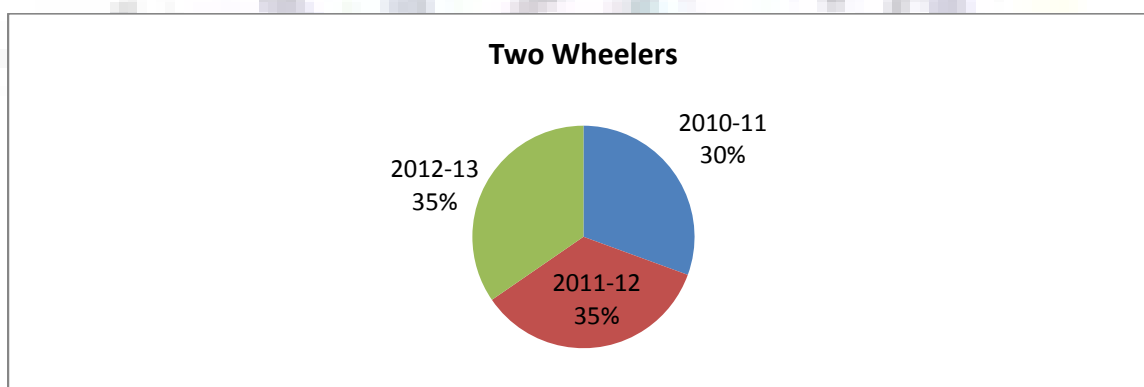


Figure 3 & 4 shows that the three wheelers and two wheelers segments are also not at the growth path.

**REASONS OF DOWNFALL IN INDIAN AUTOMOBILE INDUSTRY****VEHICLE DEMAND**

As we have seen through above analysis, the Indian automobile industry is facing slowdown in sales. Market Shares of India's top automobile companies have fallen 10% to 16% over the past few months tracking weak vehicle demand, and analysts expect the trend to continue for some more time.

**HIGH FUEL PRICES**

India's automobile market, which has appealed venture from worldwide companies seeing for growth in developing markets, has vanished some of its shine as high fuel prices and increasing interest rates as well as worries of job losses in a slowing economy have kept customers away. The weak economy has also injured demand for commercial vehicles. In modern times, the prices of fuel have been rising suddenly, making it challenging for a lot of buyers to sustain the use of an automobile vehicle. It is unidentified fact that a high proportion of the Indian buyers belong to the lower and middle class income groups. These customers are continuously on the searching for substitutes for fuels, which has resulted in the rise for CNG and LPG vehicles.

**MOTOR FINANCE**

Since most Indians buy vehicles with loaned out money, high interest rates have been a major factor hurting sales. The Reserve Bank of India increased interest rates 13 times. On the basis of a report given by ACG, 2013, passenger Car sector dropped by 11.33%, while van segment decays by 10.88%. The Indian passenger vehicle industry, which is in front of the toughest times, saw three consecutive month of sequential decline in April to June of this financial year. While a minority of companies tried to attract customers to their outlets by proposing discounts to lift their sales in the last month of FY 2013, low economic sentiment, high interest rate, late purchases and fluctuating fuel prices had their impact on total market demand. Fuel hikes, poor buyer sentiment hit June 2013 sales.

**USED CAR SALES**

The trend, it seems, is not a blip or limited to a particular market. The economic slowdown and the steep fall in the value of the Indian rupee have erased the dividing line between those who scouted for a new car and those willing to settle for a well maintained used car. The depreciation of the rupee, among others, has also meant an increase in input costs, leading to prices of cars being raised even as demand was falling. As a result, for the first time in the history of the Indian automobile market, the used car segment has witnessed a 22-25 per cent rise in sales during April-July 2013 as against a 9.7 per cent decline in new car sales in the same period, industry experts said.

**SWOT ANALYSIS OF INDIAN AUTOMOBILE INDUSTRY****STRENGTHS**

- Investments by global manufacturers
- Indian market is very large
- Low labour cost
- Government assistance in production
- Increasing demand for international quality
- Rise in the working and middle class income

**WEAKNESS**

- Government taxes increase the cost of manufacturing
- Lack of Research & Development
- Lack of appropriate manufacturing units
- Production costs are generally higher than some other countries like China etc.
- High interest rates
- Labour Productivity is low
- Local demand is still towards low cost vehicles, due to low income levels

**OPPORTUNITIES**

- Rising rural markets
- Increase in Population
- Reduced excise duty
- Growth in living standard
- Constant increase in salaries/incomes
- Auto vehicle (car etc.) as status symbol
- Demand of better and latest technology

**THREATS**

- High rate of interest
- Lack of technological setup for Indian companies
- Tough competition with Chinese manufacturers
- Costly raw material
- Less skilled labour
- Congestion on the urban roads

**ACTION PLAN FOR THE FUTURE GROWTH**

As we have already discussed that automobile industry is facing the problem of slowdown. Companies should try to increase their market with various ways. Companies have to be prepared with new dealers and models to drive growth of automobile market. Companies will have to focus on the core values, as Technology, Quality, Performance and Uniqueness.

It is not surprising that the high growth rates witnessed in the Indian automobile industry for the past few years have coincided with similar high GDP growth rates recorded by the country along with growth in incomes. The increasing purchasing power of rural India, accelerated development of roads and highways are factors that will help fuel further demand for mobility and vehicles. Though personal taste and lifestyles of customers are changing, companies should develop new designs for the vehicles which may fulfill the demand of current consumers. As per the analysis done by Industry experts, electric vehicles may be the alternative for Indian buyers of automobile vehicles. These vehicles are more environment friendly than normal vehicles. Currently, Mahindra & Mahindra has launched the only electric vehicle (Reva car) in the country. Apart from the Reva, Toyota Prius is a hybrid vehicle which has been seen in the Indian market. Given all the drawbacks, industry experts still feel that electric cars will gain prominence in the Indian car market in coming years. In the 2013 Union Budget, the Indian government claimed that it will provide funds to support production of hybrid and electric models. OEMs should concentrate on filling the gaps in their respective portfolios as well as designing and developing value-for-money products. Companies should have the top preference for R&D activities to think of ways to achieve higher fuel efficiency. There should be nonstop development of current and new resources and procedures in order to produce the components that are price effective and biodegradable. Today, it is the prime responsibility of the top management of every automobile company to share their knowledge and expertise to take initiative for new phase of vehicles. There should be new innovation in Indian automobile industry to solve the problem of slowdown.

**CONCLUSION**

It can be concluded from the above study that the demand for vehicles is also reliant upon various elements such as convenience and cost of finance, vehicle density, demographic shape of the marketplace and the earning capability. Thus, there is a huge potential market for automobiles that is yet to be tapped through the developments with the use of new technology. Obviously, slowdown is the opportunity for the marketers for new developments. They have the scope for new innovations by conducting research. Automobile companies will have to produce such types of vehicles which may give the motivation to the customers for purchasing of the automobiles. So companies should take the slowdown period as an innovation era. It may lead to satisfaction of the customers and increase in the sales.

**REFERENCES**

1. Achterholt Uwe (2009), "Global Dealership Survey –The future of automobile Retail", KPMG
2. Auto Component Industry in India: Growing Capabilities & Strengths, [http://acma.in/pdf/Status\\_Indian\\_Auto\\_Industry.pdf](http://acma.in/pdf/Status_Indian_Auto_Industry.pdf)
3. Bhaktavatsala Rao C. (1994), "Structural analysis of the Indian Automobile Industry," Decision
4. Clement Sudhakar J. & Venkatapathy R. (2009), "A Study on Automobile Purchase – Peer Influence in Decision Making", Indian Journal of Marketing, Vol.35, No.6, pp.16
5. Engel James F., Blackwell R.D. & Miniard P.W. (1995), "Consumer Behaviour", Harcourt Publishers Group
6. Gene V. Glass & Kenneth D. Hopkins (1996), "Statistical methods in education and psychology", Allyn and Bacon
7. Indian Passenger Vehicle Market Analysis FY 2012-13, <http://www.slideshare.net/autobei/indian-passenger-vehicle-market-analysis-fy-201213-acg>
8. Kotler P., Keller K. L., Koshy A & Jha M. (2009), "Marketing Management : A south Asian Perspective", Pearson Education
9. Malhotra Gunjan & Sinharay Soumyadeep (2013), "Maruti Suzuki – Reigning Emperor of Indian Automobile Industry", Journal of Case Research, Vol. 4, Issue 1, pp. 1-38
10. Menon Balakrishnan & P. Jagathy Raj V. (2012), "Consumer Purchase Behavioural Model on Passenger Cars", AIMS International Journal of Management, Vol. 6, No. 1, , pp. 41-58
11. Mukherjee Avinandan & Sastry Trilochan (1996), "Recent Developments and Future Prospects in the Indian Automotive Industry", Indian Institute of Management, Ahmedabad, India
12. Nag Biswajit, Banerjee Saikat, Chatterjee Rittwik (2007), "Changing Features of the Automobile Industry in Asia: Comparison of Production, Trade and Market Structure in Selected Countries", Asia-Pacific Research and Training Network on Trade Working Paper Series
13. Panda Tapan, "A Case Study On The Indian Small Car Industry", <http://www.tapanpanda.com>
14. Report of the Working Group on Automotive Sector for the 12th Five Year Plan (2012-2017) Department of Heavy Industry, <http://dhi.nic.in/Auto%20report%20final.pdf>
15. Schiffman, Leon G., Kanuk Leslie Lazar (1997), "Consumer Behavior", Prentice Hall
16. Singh Amarjit, Gupta Vinod, "Indian Automobile Industry: A Review" International Journal of Research in Mechanical Engineering & Technology, Vol. 2, Issue 2, May - Oct 2012, pp. 22-24
17. Sudhir K. (2001), "Competitive Pricing Behavior in the US Auto Market: A Structural Analysis", Yale School of Management
18. Wengel Jurgen, Warnke Philine (2003), "Case Study: Automotive Industry - Personal Cars", Fraunhofer Institute for Systems and Innovation Research, Karlsruhe

## **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](mailto: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*

