

INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE & 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., Google Scholar,

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

The American Economic Association's electronic bibliography, EconLit, U.S.A.,

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 4945 Cities in 183 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.	HIGHER EDUCATION INSTITUTIONS PERSPECTIVES ON LINKAGES WITH THE INDUSTRY IN NIGERIA <i>DR. MILINDO CHAKRABARTI, DR. HARI SHANKAR SHYAM & MBONU CHIKWELU MADUABUCHI</i>	1
2.	PRIORITIZING CRITICAL FACTORS IN DELIVERING QUALITY SERVICES TO PATIENTS <i>SUGANDHA SIROHI & RAJENDRA SINGH</i>	8
3.	EDUCATION & WOMEN EMPOWERMENT ARE INTER RELATED: AN OVERVIEW <i>DR. RADHA GUPTA</i>	11
4.	IMPACT OF GLOBAL OIL EQUILIBRIUM ON INDIAN ECONOMY <i>DR. M. SELVARAJ</i>	13
5.	THE IMPACT DEGREE OF SOCIAL CAUSES OF POVERTY ON THE TRENDS OF CITIZENS OF AL-MAFRAQ GOVERNORATE, JORDAN <i>SALEH GNEAAN ALMASAEED & TORKI M. AL-FAWWAZ</i>	15
6.	THE DETERMINANTS OF PROFITABILITY: AN EMPIRICAL INVESTIGATION ON SUN PHARMA <i>P. SATHYA & DR. A. VIJAYAKUMAR</i>	20
7.	SERVICE QUALITY OF PUBLIC SECTOR BANKS: A CASE OF DOMESTIC MIGRANT LABOR IN KERALA <i>AHAMED RIAZ K & DR. T. C. SIMON</i>	24
8.	ANALYSIS OF SOCIO-ECONOMIC BENEFIT OF ELECTRIFICATION THROUGH CREDA IN CHHATTISGARH STATE <i>SUMONA BHATTACHARYA & DR. R. P. AGARWAL</i>	29
9.	EFFECTIVENESS OF DISTRIBUTION CHANNELS: INTERNET IN SERVICE DELIVERY WITH REFERENCES TO INDIA <i>ANUBHAV SINGH & ADITI PANDEY</i>	34
10.	LEARNING ORGANIZATION AND ITS IMPACT ON ORGANIZATIONAL EFFECTIVENESS: A LITERATURE REVIEW <i>ESHA SINGH</i>	37
11.	IPO PROCESS IN INDIA <i>NARENDRASINH B. RAJ</i>	40
12.	IMPACT ASSESSMENT OF FRINGE BENEFITS IN JOB SATISFACTION AND EMPLOYEES' ATTITUDE <i>R. SARANYA.</i>	43
13.	INTERNET SHOPPING: FACTORS INFLUENCING STUDENTS BUYING INTENTION ONLINE <i>ANUPAMA SUNDAR D</i>	47
14.	ROLE OF PRODUCT AND SERVICES ON SATISFACTION OF CUSTOMERS: A CASE STUDY OF ASIAN PAINTS <i>PARINDA V. DOSHI</i>	55
15.	A LITERATURE REVIEW ON CORPORATE SOCIAL RESPONSIBILITY: SOCIAL IMPACT OF BUSINESS <i>DR. TARUNLATA</i>	58
16.	TREND OF INTERNAL FINANCING IN INDIAN CORPORATE SECTOR: A STUDY OF CEMENT AND CEMENT PRODUCT INDUSTRY <i>SANKAR PAUL</i>	60
17.	ANALYZING THE WEAK FORM MARKET EFFICIENCY AND PERFORMANCE OF SELECTED INDIAN IT STOCKS <i>DR. RAJNI SOFAT</i>	64
18.	A STUDY ON WORK LIFE BALANCE OF MARRIED WOMEN IN BANKING SECTOR IN MUMBAI <i>PRAJAKTA DHURU</i>	69
19.	TARGET ORIENTED COMPETITIVE INTELLIGENCE PRACTICE AND PERFORMANCE OF FIRMS LISTED ON THE NAIROBI SECURITIES EXCHANGE, KENYA <i>PAUL WAITHAKA, HANNAH BULA & LINDA KIMENCU</i>	75
20.	A BRIEF REVIEW OF EMPLOYEE ENGAGEMENT: DEFINITION, ANTECEDENTS AND APPROACHES <i>SWATI MEGHA</i>	79
	REQUEST FOR FEEDBACK & DISCLAIMER	89

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

FORMER CO-ORDINATOR

DR. S. GARG

Faculty, Shree Ram Institute of Business & Management, Urjani

ADVISORS

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 Engineering & Technology, 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 I.T., Amity School of Engineering & Technology, Amity University, Noida

PROF. V. SELVAM

SSL, VIT University, Vellore

PROF. N. SUNDARAM

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

DR. JASVEEN KAUR

Asst. Professor, University Business School, Guru Nanak Dev University, Amritsar

FORMER 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 the 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 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/Mkt./HRM/General Mgt./Engineering/Economics/Computer/IT/ Education/Psychology/Law/Math/other, please specify)

DEAR SIR/MADAM

Please find my submission of manuscript titled ' _____ ' for likely publication in one of your journals.

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

I affirm that all the co-authors of this manuscript have seen the submitted version of the manuscript and have agreed to inclusion of their names as co-authors.

Also, if my/our manuscript is accepted, I agree to comply with the formalities as given on the website of the journal. The Journal has discretion to publish our contribution in any of its journals.

NAME OF CORRESPONDING AUTHOR :

Designation/Post* :

Institution/College/University with full address & Pin Code :

Residential address with Pin Code :

Mobile Number (s) with country ISD code :

Is WhatsApp or Viber active on your above noted Mobile Number (Yes/No) :

Landline Number (s) with country ISD code :

E-mail Address :

Alternate E-mail Address :

Nationality :

* i.e. Alumnus (Male Alumni), Alumna (Female Alumni), Student, Research Scholar (M. Phil), Research Scholar (Ph. D.), JRF, Research Assistant, Assistant Lecturer, Lecturer, Senior Lecturer, Junior Assistant Professor, Assistant Professor, Senior Assistant Professor, Co-ordinator, Reader, Associate Professor, Professor, Head, Vice-Principal, Dy. Director, Principal, Director, Dean, President, Vice Chancellor, Industry Designation **etc.** **The qualification of author is not acceptable for the purpose.**

NOTES:

- a) The whole manuscript has to be in **ONE MS WORD FILE** only, which will start from the covering letter, inside the manuscript. **pdf. version is liable to be rejected without any consideration.**
 - b) The sender is required to mention the following in the **SUBJECT COLUMN of the mail:**
New Manuscript for Review in the area of (e.g. Finance/Marketing/HRM/General Mgt./Engineering/Economics/Computer/IT/ Education/Psychology/Law/Math/other, please specify)
 - c) There is no need to give any text in the body of the 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 expected to be below **1000 KB**.
 - e) Only the **Abstract 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 within twenty-four hours** and in case of non-receipt of acknowledgment from the journal, w.r.t. the submission of the manuscript, within two days of its submission, the corresponding author is required to demand for the same by sending a separate mail to the journal.
 - g) The author (s) name or details should not appear anywhere on the body of the manuscript, except on the covering letter and the cover page of the manuscript, in the manner as mentioned in the guidelines.
2. **MANUSCRIPT TITLE:** The title of the paper should be typed in **bold letters, centered and fully capitalised**.
 3. **AUTHOR NAME (S) & AFFILIATIONS:** Author (s) **name, designation, affiliation (s), address, mobile/landline number (s), and email/alternate email address** should be given underneath the title.
 4. **ACKNOWLEDGMENTS:** Acknowledgements can be given to reviewers, guides, funding institutions, etc., if any.
 5. **ABSTRACT:** Abstract should be in **fully Italic printing**, ranging between **150 to 300 words**. The abstract must be informative and elucidating the background, aims, methods, results & conclusion in a **SINGLE PARA**. **Abbreviations must be mentioned in full**.
 6. **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 stop at the end. All words of the keywords, including the first one should be in small letters, except special words e.g. name of the Countries, abbreviations etc.
 7. **JEL CODE:** Provide the appropriate Journal of Economic Literature Classification System code (s). JEL codes are available at www.aea-web.org/econlit/jelCodes.php. However, mentioning of JEL Code is not mandatory.
 8. **MANUSCRIPT:** Manuscript must be in **BRITISH ENGLISH** prepared on a standard A4 size **PORTRAIT SETTING PAPER**. **It should be free from any errors i.e. grammatical, spelling or punctuation. It must be thoroughly edited at your end.**
 9. **HEADINGS:** All the headings must be bold-faced, aligned left and fully capitalised. Leave a blank line before each heading.
 10. **SUB-HEADINGS:** All the sub-headings must be bold-faced, aligned left and fully capitalised.
 11. **MAIN TEXT:**

THE MAIN TEXT SHOULD FOLLOW THE FOLLOWING SEQUENCE:**INTRODUCTION****REVIEW OF LITERATURE****NEED/IMPORTANCE OF THE STUDY****STATEMENT OF THE PROBLEM****OBJECTIVES****HYPOTHESIS (ES)****RESEARCH METHODOLOGY****RESULTS & DISCUSSION****FINDINGS****RECOMMENDATIONS/SUGGESTIONS****CONCLUSIONS****LIMITATIONS****SCOPE FOR FURTHER RESEARCH****REFERENCES****APPENDIX/ANNEXURE****The manuscript should preferably be in 2000 to 5000 WORDS, But the limits can vary depending on the nature of the manuscript.**

12. **FIGURES & TABLES:** These should be simple, crystal **CLEAR, centered, separately numbered** & self-explained, and the **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.**
13. **EQUATIONS/FORMULAE:** These should be consecutively numbered in parenthesis, left aligned with equation/formulae number placed at the right. The equation editor provided with standard versions of Microsoft Word may be utilised. If any other equation editor is utilised, author must confirm that these equations may be viewed and edited in versions of Microsoft Office that does not have the editor.
14. **ACRONYMS:** These should not be used in the abstract. The use of acronyms is elsewhere is acceptable. Acronyms should be defined on its first use in each section e.g. Reserve Bank of India (RBI). Acronyms should be redefined on first use in subsequent sections.
15. **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 may follow Harvard Style of Referencing. **Also check to ensure that everything that you are including in the reference section is duly cited in the paper.** 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 italic printing. 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 parenthesis.
 - **Headers, footers, endnotes and footnotes should not be used in the document.** However, **you can mention short notes to elucidate some specific point**, which may be placed in number orders before the references.

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, 19–23

UNPUBLISHED DISSERTATIONS

- 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 Gas Policy, Political Weekly, Viewed on January 01, 2012 <http://epw.in/user/viewabstract.jsp>

HIGHER EDUCATION INSTITUTIONS PERSPECTIVES ON LINKAGES WITH THE INDUSTRY IN NIGERIA

DR. MILINDO CHAKRABARTI
PROFESSOR & HEAD
DEPARTMENT OF ECONOMICS
SHARDA UNIVERSITY
GREATER NOIDA

DR. HARI SHANKAR SHYAM
HEAD
DEPARTMENT OF MARKETING
SHARDA UNIVERSITY
GREATER NOIDA

MBONU CHIKWELU MADUABUCHI
RESEARCH SCHOLAR
SCHOOL OF BUSINESS
SHARDA UNIVERSITY
GREATER NOIDA

ABSTRACT

This paper seeks to assess the state and capacity of higher education institutions (HEIs) for industries linkages in Anambra State, Nigeria, identifying fostering and inhibiting factors and supports needed to building linkages between HEIs and the industry. Questionnaire and unstructured interview were administered on knowledgeable experts chosen from individuals in the higher education institutions. Excel and SPSS software will be used to analyzed the data. The study reveals that Higher education institutions and industry linkages in Nigeria in general and Anambra State in particular are at nascent stage. Quality of tertiary education, non-relevance of courses, inadequate infrastructure among others have contributed in impeding linkage between the industry and the higher education institutions. There is urgent need for HEIs in Anambra state to develop competences and skills that align with industry, national and regional demand, focusing on the establishment of industrial parks, Centers of Excellence and Small Medium Enterprises (SMEs) projects as engine of growth. On its part, Government needs to associate more with the Organized private sector in finding lasting solutions to the: low funding of Nigerian tertiary institutions as this affects the quality of facilities provided for effective teaching, learning and research activities with adverse impact on student performances. The Government needs to enact legislations to encourage entrepreneurs to seek linkage with the HEIs such as tax rebates.

KEYWORDS

higher education institutions, industry, linkages.

INTRODUCTION

The knowledge spill over theory of entrepreneurship suggests that knowledge spill overs serve as the source of knowledge creating the entrepreneurial opportunities for small and new firms. One of the ways small and new firms who spend negligible amount of investment into knowledge-generating inputs such as research and development (R & D) can generate innovative output is through exploiting knowledge created by expenditures on research on R & D in universities and large managerial firms (Audretsch, 2006:84). Knowledge capital is often defined as productive contributions by research and development and education (Nijkamp, 2011) and the primary mission of Higher education institutions is education. Education is viewed by virtually everyone as good, and perhaps because higher education institutions are among the most geographically stable entities in existence, rarely relocating to other localities, policy makers often look for ways to turn higher education institutions in their region into engine of economic development. Mechanisms to enhance technology transfer from higher education institutions, to reduce brain out of a region and policies to create linkages between higher education institutions and industry are among the many efforts chosen by policy makers to use higher education institutions to enhance regional development (Scott, 2005). The number of graduates that are turned out from higher education institutions (HEIs) in Nigeria are on the increase, from 514,214 in the year 2003 to 619,097 in the year 2005(ILO, 2010). The graduate turnout has been on the increased since then. There is the problem of high graduate unemployment in Nigeria which is reported at 40.3% at both rural and urban levels (ILO, 2010). One of the reasons given for such high graduate unemployment is mismatch between graduate employee skills and those skills required for performance in the work place (Akinoyemi et al, 2012). This is not only Nigeria problem as it had been observed that the skills, knowledge and training that students receive at many African universities do not prepare them adequately to meet the requirements of industry and the job market. This mismatch between what the students learn and what the industry needs- coupled with under- training in the critical skills of problem- solving, analytical thinking and communication is blamed, at least in part, for the emerging high graduate unemployment and underemployment many African countries are witnessing (Jegede, 2012). Proper linkage between the academia and the industry will both allow the students gain necessary skills required in the industry and encourage technology transfer thereby creating employment.

A Sectoral study conducted by African Institute of Technology, USA, on Science & Technology Innovation in Nigeria, revealed that Nigerian's economy has seen little innovation in information and communications technology, ICT. The reason according to the study was that a weak partnership exists between the companies, universities, and government laboratories and researchers in most clusters in Nigeria. The report evidenced its claim against the backdrop that when government labs or universities go on strike, it never immediately gives the companies any setbacks. <http://www.vanguardngr.com/2015/02/nigerias-ict-innovation-weak/> The report advised that such relationship should be structured in a way that schools must show more influence in local economies by working together to nurture innovation. Nigeria is currently facing economic challenges as a result of fall in crude oil price which is the main stay of her economy. Government efforts in economic diversification will be enhanced through regional economic growth through successful linkage between Higher education institutions and industry. There is therefore need to identify the state and capability of the HEIs for industry linkages and the inhibiting, facilitating and support factors for effective linkage with the industry in Nigeria.

LITERATURE REVIEW**ANTECEDENTS**

The locations of certain tertiary institutions, and indeed of firms in particular regions, have a bearing on the nature, scope and outcome of industry and HEIs linkages. The nexus of relationship is often a function of the state of the economy, the propensity of the firms to absorb knowledge from higher education institutions, and the capability of the tertiary institutions to meet the needs of the firms in the region (Mitra, 2012). Research intensive tertiary institutions play an important role as a source of fundamental and blue sky knowledge and, sometimes, relevant (for industry) technology in modern economies. The nature and value of higher education institutions and industry interaction and the institutions contribution to innovation in developed western economies, suggests a natural correlation with their industrialized status. In the context of this paper, higher education in Nigeria represents any form of education above secondary school level where students are taught specialized subjects, enabling them to become professionals in their chosen fields. Therefore, higher education institutions otherwise referred as post-secondary or tertiary institutions will include the Universities, Polytechnics, Colleges of Education, Technical Colleges and other institutions of higher learning (Owofemi, 2013).

The higher education institutions (HEIs) in Nigeria comprises mainly the universities and the polytechnics, however there are other HEIs such as the colleges of education/ monotronics which are mostly affiliated to universities if they are degree awarding. There are as at 2015, 46 federal owned, 40 state owned and 61 private universities giving a total of 147 universities (www.nuc.edu.ng);

25 federal owned, 40 state owned and 29 private owned polytechnics giving a total of 94 polytechnics;

23 federal owned, 2 state owned and 2 private owned monotronics giving a total of 27 monotronics (www.nbte.gov.ng);

83 colleges of education owned by federal, state governments and the private sector respectively (www.ncceonline.edu.ng).

Higher education- Industry relationship started several years ago. Pioneering industry-academic link started in the middle ages in Bologna and Paris. Then in Germany with the emergence of the Technische Hochschulen in the late nineteenth century, the industry-academic linkage in Germany enabled innovation in terms of new product development, new technology standards, new supply side measures (as in education and training, and the creation of new forms of intellectual and human capital which paved for German industrial growth (Shin, 1998; Mitra, 2012).

HEIs role in entrepreneurship in economic development is best understood in terms of the linkages they develop with firms in their region. This satisfy one of the key elements of the mission of universities which is serving the needs of the industry, commerce (Goddard et al, 1994) and the wider social community-the triple helix network and the generation of social capital. HEIs have long been recognized as sources of knowledge creation, innovation and technological advances in modern economies, universities and other HEIs are being positioned as strategic assets in innovation and economic competitiveness, and as problem-solvers for socio-economic issues affecting their countries.

Table 1 shows the development of certain models of HEIs research activity which impact on the development of national innovation systems.

TABLE 1: HEIs RESEARCH MODELS

S/N	Models	Source	Scope	Critiques
1.	The Linear Model	Vannevar Bush,(1945),Science: The Endless Frontier	Expanding public funding critical to innovation and economic growth: universities were most appropriate institutional locus for basic research; based on 'market failure' rationale for funding basic academic research developed by Nelson (1959) and Arrow (1962)	Critiques offered by Kline and Rosenberg (1999) pointing to curvilinear approach; reference to growth of industrial Japan and evidence of non-essential requirement of basic research; technology considered to be more useful than science for economic growth.
2.	Academic Research V. Industrial Research	Dasgupta and David (1987); David, Foray and Steinmueller(1999); Branscombe et al.	Cultural differences between academic and industrial research: academic research concerned with original insights, discoveries and critical methodologies plus prompt, refereed publication; industrial research dependent on sponsorship, secrecy, problem-solving issues.	Differences can be overstated- pharmaceutical research relies heavily on publications, for example; many academic researchers combine 'pure' and 'applied' work, which support each other, especially in new technology areas.
3.	Mode 2 Science	Gibbons et al (1994)	Holistic, interdisciplinary approach linked to networked institutions; different from past and associated with post-modern economic environment and scale and diversity of knowledge inputs required from various sources for modern forms of production.	Does not imply decline in value of HEIs in producing knowledge and in the contribution of such knowledge to economic growth.
4.	Triple Helix	Etzkowitz and Leydesdorff (1996); Etzkowitz et al. (1998)	As in Mode 2 above, emphasizing increased interaction among institutions, and quite importantly each institution taking on some of the roles of others (universities creating firms; firms taking on more academic research, etc.)	Emphasis on 'industrial' component of academic research obscures limited scope of such an approach; lack of sufficient empirical evidence.
5.	National System of Innovation(NIS)	Goransson and Brundenius, (2011); Edquist(2004)	Innovation is viewed as a collective process in which firms do not innovate in isolation but within a larger system involving firms, universities, research centres, government agencies and other actors. The NIS model considers all aspects of the economic and institutional structure of a country that influence development, diffusion and use of innovations.	

SOURCE: Adapted from Mitra (2012)

HEIs-INDUSTRY LINKAGES (AFRICAN PERSPECTIVE)

Universities and other HEIs hold three overlapping missions or mandates: teaching, research and outreach. The third mandate involves integrating or connecting universities activities to society and the economy. However, many African universities have not actively or comprehensively pursued this third mission and consequently have been criticized as ivory towers (Fourie, 2003).

Many countries in Africa lack an enabling environment for reorienting and aligning universities and other HEIs towards a more entrepreneurial role. Apart from perhaps the Maghreb region and South Africa, most of sub-Saharan Africa lack high tech industries and a true technology culture (Barry and Sawyer, 2008). Many Africa's industries are often small to medium-scale firms producing for local markets, while the relatively larger ones are subsidiaries of transnational companies which draw upon the in-house R&D capabilities of the parent company (Munyoki et al, 2011). Others are lack of awareness of the existing results and new technologies by industry; the absence of strong involvement of the users in defining the research agenda; and the irrelevance of some university research (Dhesi and Chadha, 1995).

Many African universities are not in a position to conduct research and technology development. Long years of neglect in financing higher education in Africa have left many universities with weak research infrastructure (Atuahene, 2011) and reliant on donor financing for research (Mouton et al, 2008). Under the present era of higher education in Africa, research activities among academic staff frequently take a back seat to fulfilling ever growing teaching demands (Mohamedbhai, 2008). Despite growing student numbers, enrollment in science and engineering in many countries is low (Boerrsmas and Gibbons, 2008), with less than 10% of students enrolled in these disciplines in some universities (Goransson and Brunenius, 2011). Meanwhile, the migration of many talented academics to wealthier parts of the world compounded by low salaries and search for greener pastures by some academic staff, have left many universities with few qualified researchers to conduct local research (Barry and Sawyer, 2008). As a result, many African countries produce negligible research output (Mouton et al, 2008).

Many African countries do not invest significantly in R&D with gross expenditure on research and development (GERD) falling well below the standard 1% of GDP set for developing countries (Mouton et al, 2008). Similarly, many African countries lack relevant Science and Technology strategies, up-to-date policies on intellectual property rights (IPR) protection, and other such policies needed for direction and governance (Mouton et al, 2008). The lack of relevant strategies is also evident at the university level (Belete, 2009).

Despite the challenges inherent in establishing linkages with the productive sector in Africa, numerous African universities are responding to these new roles and expectations.

BURKINA FASO

The International Institute for Water Engineering in the country has 27 formal partnerships with companies, has established a technology incubator to help students launch their own innovative business, and over 90% of its graduates find employment six months of completing their studies (www.2ie-edu.org).

UGANDA

The Gatsby Fund at Makerere University has established a business park and other services to help support small and medium-sized enterprises (SMEs) involved in manufacturing and industrial services in the small city of Mbarara (<http://gatsbyuganda.com>).

AFRICA KNOWLEDGE TRANSFER PARTNERSHIP

The British council launched the partnership in November, 2007 to help scale up linkages between the academia and the industry in five African countries of Ghana, Nigeria, Kenya, Uganda and South Africa. This effort has yielded positive results, for example Zoomlion Ghana Limited and Kwame Nkrumah University of Science and Technology, Faculty of Engineering are partnering in adding value to waste recycling and analyzing data from composite. Biodiesel 1 Ghana Limited and University of Ghana are partnering in production of Biofuel (British Council, 2010).

KENYA

Commission for Higher Education (CHE) and Kenyan Universities have surveyed the different models used in Europe, and Africa for sustainable university-industry linkages- www.siteresources.worldbank.org. The task force has developed the strategic goals, objectives, strategies for the linkages and partnerships. The strategies support seven types of linkages and partnership, namely: i. University-Industry, ii. University-University, iii. University- Research Institute, iv. University- Middle Level Colleges, v. University-International Organization, vi. University-Community, vii. University-Relevant Professional Bodies. These strategies have helped scale up partnership between the industry and the universities.

SOUTH AFRICA

South Africa universities have established university-industry linkages and partnerships at two main levels:

- i. Direct university-industry links. For example, Telkom South Africa has established Centres of Excellence in selected departments of engineering in South African universities. These Centres of Excellence conduct joint research. The mining companies have also established links with mining engineering departments.
- ii. National research partnership- established through the National Research Foundation of South Africa. For example, the Hartebeesthoek Radio Astronomy Observatory (Hart RAO) will be an international project that will be an international facility that will allow South African Universities to collaborate in research in radio astronomy, space geodesy and satellite ranging.

NIGERIA

The Federal Government agency, National Board for Technology Incubation (NBTI) is partnering with higher education institutions in Nigeria on establishment of incubators in some of the HEIs. Some universities in Nigeria are partnering with the industry, for example Nnamdi Azikiwe University, Awka, is partnering with Juhel Pharmaceutical limited in the state on drug development and manufacturing.

These examples highlight the potential of HEIs-industry linkages in Africa although, to date, many such engagements have been ad hoc, dependent on a few interested individuals at their particular institutions. It is now increasingly recognized that an institutional approach is crucial for the facilitation of HEIs-Industry linkages (Hernes and Martin, 2000).

METHODOLOGY

SAMPLE POPULATION

The survey targeted higher education institutions in Anambra State who are members in good standing of Association of African Universities (AAU) and participated in the survey sponsored by the 'Association of Universities and Colleges of Canada (AUCC) on 'Strengthening University-Industry Linkages in Africa'. One federal government owned Polytechnic (Poly), one federal government owned university (Univ.1) and one state government owned university (Univ. 2), one private owned university (Univ. 3) and one federal owned college of education (Colleduc) were selected by judgmental sampling. The AAU is in fore front of research on university and industry linkages. (www.aau.org/membersingoodstanding).

Questionnaires and unstructured interview were administered to respondents such as Vice Chancellor, Rector, Provost, Deputy Vice Chancellor, Deputy Rector, Deputy Provost, Directors, Deans, Heads of departments, Professors, Coordinators, Directors and Lecturers of these five institutions. The questionnaire comprised of close ended questions which were administered to the knowledgeable staff of relevant departments of HEIs in Anambra State. One hundred and thirty respondents returned their questionnaire out of one hundred and sixty that was administered. The one hundred and thirty respondents comprise of 40 from university 1 (HEI 1), 30 from university 2 (HEI 2), 25 from the Polytechnic (HEI 3), 15 from the university 3 (HEI 4), and 10 from the college of education (HEI 5).

SURVEY QUESTIONNAIRE

The questionnaire for higher education institutions in Anambra State was designed using the questionnaire used in 'Strengthening University-Industry Linkages in Africa' (AAU-AUCC, 2012) as a guide as it adequately covered the objectives of study. The questionnaire comprised of close ended questions and was shaped around the following sections:

A. CAPABILITY

- Percentage of doctorate degree holders
- Institutional arrangements and interface structures
- Institutional policies on external engagement and intellectual property rights

B. STATUS

- Type of engagement with the productive sector
- Academic staff and curriculum
- Funding

C. CHALLENGES AND NEEDS OF RESPONDING INSTITUTIONS.

- Factors fostering industry linkages
- Factors inhibiting industry linkages
- Support services needed for industry linkages

D. DEMOGRAPHIC PROFILE OF RESPONDENTS

The questionnaire contained categorical questions requiring binary answers (yes/ no) and were coded 1 and 0. Other questions were close ended five point Likert scale and were coded as follows: strongly agree (SA) - 5, agree (A) -4, undecided (UD) - 3, disagree (D) - 2, strongly disagree (SD) -1 and No - 0. Each respondent from the HEIs was asked to provide answers to a set of questions developed around the subsections mentioned above. Giving the embryonic state of HEIs and industry linkages in Nigeria, the research focus is to identify the current capability and status of HEIs in Anambra State linkages with the industry and the fostering, inhibiting and support factors.

FINDINGS AND INTERPRETATIONS: HIGHER EDUCATION INSTITUTIONS(HEIs)

TABLE 2: SUMMARY OF RESULTS

A. CAPACITY VARIABLES

S/N	VARIABLES	HEIs					MEAN
		UNIV. HEI 1	UNIV. HEI 2	POLY. HEI 3	UNIV. HEI 4	COLLEDUC HEI 5	
2	SAMPsize	40	30	25	20	15	
3	DERMODOCP	3	2	1	1	1	1.6
4	INSTADVCL	1	0	1	0	0	0.4
5	INTSAIRC	1	1	1	1	1	1
6	INSTAOLI	1	0	1	0	0	0.4
7	RESPINDNEP	3.83	0	3.6	2	0	1.89
8	RESPINDCN	0	0	0	0	0	0
9	RESPINDMCBE	5	0	4	3	4	3.2
10	RESPINDSP	0	0	0	0	0	0
11	RESPINDEIP	0	0	0	0	0	0
12	RESPINDBO	1.45	0.77	0	0	0	0.44
13	ISTPOCI	2	1.67	3	0	0	1.33
14	INSTPOSOIP	0	0	0	0	0	0
15	INSTPOSRP	5	1.77	4	0	0	2.15
16	INSTPOEPAI	3	2.8	3	0	0	1.76
	GROUP MEAN (CAPACITY)	1.88	0.71	1.54	0.5	0.43	

B. STATUS VARIABLES

S/N	VARIABLES	HEIs					MEAN
		UNIV. HEI 1	UNIV. HEI 2	POLY. HEI 3	UNIV. HEI 4	COLLEDUC HEI 5	
1	COLAAGB	1	3.83	5	1	3	2.77
2	COLACEIT	3	1.63	2	2	1	1.93
3	COLABANA	3	2.53	4	3	1	2.71
4	COLABPHARM	5	0	0	1	0	1.2
5	COLABBEV	0	0.33	5	2	0	1.47
6	COLABCEEM	2.25	2.43	0	5	0	1.94
7	ACTSSCIP	3	3.83	3	4	1	2.97
8	ACTSCSE	2	2.3	2	2	4	2.46
9	ACTSSP	0	0	0	0	0	0
10	ACADIS	4	3.4	5	3	4	3.88
11	ACADICD	4	3.53	4	3	4	3.71
12	ACADRSSES	1	0	0	0	0	0.2
13	FUNDINC	2	1	1	0	0	0.8
14	FUNDLEB	4	3.67	4	4	4	3.93
15	FUNDRTD	2	1	2	2	0	1.4
16	FUNDSS	3	2	3	4	3	3
17	FUNDGSR	1	0	0	2	1	0.8
	GROUP MEAN (STATUS)	2.37	1.85	2.35	2.24	1.53	

C. BENEFITS OF INDUSTRY LINKAGES

S/N	VARIABLES	HEIs					MEAN
		UNIV. HEI 1	UNIV. HEI 2	POLY. HEI 3	UNIV. HEI 4	COLLEDUC HEI 5	
1	BENEINDLAB	4	3.83	4	4	4	3.97
2	BENETIND	5	3.7	4	4	4	4.14
3	BENEJOPUB	5	4	5	5	5	4.8
4	BENESCO	0	0	0	0	0	0
5	BENELIP	0	0	0	0	0	0

D. FACTORS FOSTERING INDUSTRY LINKAGES

S/N	VARIABLES	HEIs					MEAN
		UNIV. HEI 1	UNIV. HEI 2	POLY. HEI 3	UNIV. HEI 4	COLLEDUC HEI 5	
1	FOSTLSP	4	4	4	4	4	4
2	FOSTLP	3.23	3	3	3	3	3.05
3	FOSTRCS	3.23	2.8	2.72	2.73	3	2.90
4	FOSTGP	5	5	5	5	5	5
5	FOSTSGC	4	4	4	4	4	4
6	FOSTAPEE	3	3	3	3	3	3

E. FACTORS INHIBITING INDUSTRY LINKAGES

S/N	VARIABLES	HEIs					MEAN
		UNIV. HEI 1	UNIV. HEI 2	POLY. HEI 3	UNIV. HEI 4	COLLEDC HEI 5	
1	INHIBMRD	4.28	5	5	5	5	4.86
2	INHIBRC	4	4	4	4	4	4
3	INHIBIPL	3.8	3.7	3.76	3.8	4	3.81
4	INHIBNI	3.98	4	4	4	4	4
5	INHIBFS	3	3	3	3	3	3
6	INHIBESK	2	2	2	2	3	2.2

F. SUPPORT NEEDED FROM GOVERNMENT AND OTHER STAKE HOLDERS

S/N	VARIABLES	UNIV. HEI 1	UNIV. HEI 2	POLY. HEI 3	UNIV. HEI 4	COLLEDC HEI 5	MEAN
1	SUPISP	5	5	5	5	5	5
2	SUPTICS	4	4	4	4	4	4
3	SUPTAES	2.73	2.6	3	3	3	2.87
4	SUPCRO	2	2	3.76	4	4	3.15

G. DEMOGRAPHIC PROFILE OF RESPONDENTS

S/N	VARIABLES	UNIV. HEI 1	UNIV. HEI 2	POLY. HEI 3	UNIV. HEI 4	COLLEDC HEI 5	MEAN
1	SEX	1.25	1.2	1.12	1.13	1.2	1.18
2	AGE	2.9	2.87	2.96	2.73	3.15	2.92
3	EDUC	2.98	2.87	2.84	2.73	2.4	2.76
4	RANK	2.65	2.73	2.52	3	2.55	2.69
5	LOS	2.8	2.57	2.84	2.73	3	2.79

ININTERPRETATIONS

SECTION A: CAPABILITY VARIABLES

The five HEIs surveyed show that HEI 1 has the highest number of PhD holders (DERMODOCP) with mean of 3 followed by HEI 2 with mean of 2 and the rest of the HEIs were at par in mean values of 1. Only two HEIs, HEIs 1 and 3 have a deputy vice chancellor in charge of industry linkages (INSTADVCL) and office dedicated to promoting and facilitating industry linkages (INSTAOLI). The five HEIs have a representative from the industry in their governing council (INSAIRC)- 1. The most common responsibilities of industry liaison office are managing cooperatives business entrepreneurs (RESPINDMCBE) – 3.2, networking and seeking out external partners (RESPINDNEP) – 1.89 and having annual budget less than USD 10,000 (RESPINDBO) for the industry liaison office – 0.87 from HEIs 1 and 3 that have industry liaison office. The five HEIs have zero scores in responsibilities such as contract negotiation (RESPINDCN), managing science parks (RESPINDSP), employment of contract/ intellectual property expert (RESPINDEIP). Three institutions, HEIs 1, 2, 3 have industry linkages plan containing the following: guidelines for sharing of profits and royalties from linkages with external actors (INSTPOSRP) – 2.15, environmental policies governing on activities undertaken with the industry (INSTPOEPAI) – 1.76, policy on conflict of interest (INSTPOCI) – 1.33. Two HEIs, 4 and 5 have no policy plan on industry linkages as they have zero values on all the indices and the five HEIs have no policy on the sharing and ownership of intellectual property (INSTPOSOIP). The cumulative mean for capability variables for the five HEIs are as follows: HEI 1 – 2.02, HEI 3 – 1.62, HEI 2- 0.66, HEI 4 – 0.5 and HEI 5 – 0.43

Doctorate degree holders by virtue of their training and educational attainments, are typically responsible for initiating and undertaking research, graduate student supervision, and holding senior management positions. The two Federal owned HEIs have performed better in capacity variables than others but below average. The survey revealed that almost all the indices are at low level which shows that the HEIs/ research institutions and industry linkages are at nascent stage in Anambra State. The HEIs and industry linkages in the institutions are still done at departmental level and are yet to be institutionalized with only HEIs 1 and 3 having offices in charge of industry linkages. The linkages in the institutions are funded on departmental/ faculty/ school level or donor financing as there are no institutional budget except in HEIs 1 and 3 but the figure is insignificant. It is unfortunate that there is no formal linkage between the research institutions and the HEIs thereby showing a ‘standalone’ relationship. There are no incubators or parks in the HEIs but there is an incubator facility in a research institution but since there is no formal linkage between the HEIs and the research institution the HEIs cannot utilize the facility. The reason for not having policies on conflict of interest, sharing and ownership of intellectual property and others are obvious as the institutions have little formal institutional linkages with the industry. The institutions should take over the various linkages existing in the departments/faculties/schools in order to build the institutions research capacity. The strategic plan of the institutions should reflect their actual capacity and a realistic vision of its future direction and avoid irrelevant policies (Mouton et al, 2008). In order to have effective governance of HEIs/research institutions and industry linkages, the institutions should put up policies governing time spent on external activities, costing of consultancy services, IP sharing, royalties, environmental concerns and conflict of interest. HEIs in Anambra State have opportunity in helping to upgrading or adapting existing technology of local firms. There is therefore need for HEIs in the state to appraise their research capacity and field of specialization in order to market their expertise to the right constituents. These institutions need to identify their different research capacity, expertise, location and other distinguishing features that will affect their ability to attract external research or problem-solving contracts. This will go a long way of attracting funding and quality staff to these institutions.

SECTION B: STATUS VARIABLES

The HEIs linkages and activities with the industry in Anambra State are in the following areas: agriculture and agribusiness (COLAAGB) – 2.77 with HEI 3 leading - 5, banking and accounting- 2.71 with HEI 3 leading-4, engineering and environmental management (COLABCEEM) – 1.94 with HEI 4 leading, computer engineering and ICT (COLACEIT) – 1.93 with HEI 1 leading – 3, beverages and food technology (COLABBEV) – 1.47 with HEI 3 leading -5, pharmaceutical and medical sectors (COLAPHARM) – 1.2 with HEI 1 leading – 5. The activities carried out with the industry are in the following areas: conducted short courses for industry personnel (ACTSSCIP) – 2.97 with HEI 4 leading -4, provided consultancy services for enterprises (ACTSCSE) – 2.46 with HEI 5 leading -4 and none of the HEIs are involved in activities of supporting science parks (ACTSSP) -0. The status of the HEIs in respect of academic staff and curriculum are as follows: offer internship/ student attachment (ACADIS) – 3.88 with HEI 3 leading, engage industry professionals for curricula development (ACADICD) – 3.71 and almost all the five HEIs do not have resources dedicated to supporting entrepreneurial activities of academic staff (ACADRSES) – 0.2. The status of fund from industry linkages are as follows: investment in HEIs laboratories, equipment and buildings (FUNDLEB) – 3.93, student scholarships (FUNDSS) – 3, industry commissioned research and / or technology development (FUNDRTD) – 1.4, income generated in the last 5 years from activities undertaken with the industry (FUNDINC) – 0.8 and graduate student research (FUNDGSR) – 0.8.

The survey revealed that the HEIs have specialized in particular sectors of the industry linkage and it is advisable for the HEIs to focus where they have comparative advantage. In terms of activities undertaken, the most common activities include conducting short courses for industry personnel, provision of consultancy services to enterprises. The institutions are not engaged in supporting science parks, technology incubators and surveying the skill needs of the industry. African countries are marked by a small high-tech sector with low level processing of natural resources (Barry and Sawyer, 2008). The collaborations in the manufacturing sector entail mainly training and consultancy as the industry is filled with manufacturing products already patented abroad. A number of factors have made cost of manufacturing to be uneconomical thereby making entrepreneurs to outsource overseas. The HEIs should focus on the agricultural sector, local entrepreneurs, and development-oriented technology transfer as they have been noted to be major contributors to most African economies. They should also work towards establishment of science parks and technology incubators which serve as formal structures to develop, mature, and showcase novel technology and solutions; they can help legitimize, formalize, and publicize the entrepreneurial role of HEIs.

The survey revealed that the HEIs have good record of offering students' internship. The polytechnic demand one-year compulsory internship with the industry as part of its graduate academic training while it may not be required in the universities or where it is required it is less than six months. This is one of the reasons why university graduates are criticized as being less practical oriented than polytechnic graduates in Nigeria. The student attachment should be evaluated as to the quality of training and supervision to ensure that students, host organization, and HEIs gain maximum benefits from these placements.

In respect to improving the relevance of curricula to the industry, more than average number of the respondents in the HEIs indicate that industry professionals are engaged in their curricula development. However, curricula are developed centrally by the regulatory bodies. Regulations have not enabled the institutions to engage qualified professionals from the industry as part-time or full-time lecturers. There are lots of improvement to be made in industry input in curricular development.

The survey revealed that no resource is specifically dedicated to supporting entrepreneurial activities of academic staff. One of the reasons for poor resource is lack of interest among academic staff. A shift away from promotion based exclusively on publications towards a promotion scale that includes recognition for contributions to industry and entrepreneurial activities could perhaps improve the participation of academic staff in these areas.

The result of the survey shows indicate that the institutions have received funding for industry linkages from the industry but the amount have been lean. The amount has been applied mainly in provision of equipment, laboratory and buildings (3.93), industry-commissioned research (1.4), and student scholarships (3). However, the information on how much that has been generated from joint research with the industry is lean (0.8) or none at all. This is attributable to lack of institutional organizational framework as the HEIs-industry linkages are operated on department/faculty/school level. The ranking of the status variable of the HEIs is as follows: HEIs 1 – 2.37, HEIs 3 – 2.35, HEIs 4 – 2.24, HEIs 2 – 1.85 and HEIs 5 – 1.53

SECTION C: BENEFITS OF INDUSTRY LINKAGES

The survey revealed that benefits of industry sector-oriented research/collaboration are as follows: journal publications (4.8), networking and access to industry partners (4.14), access to industry laboratories and equipment (3.97). There are no benefits in respect of creation of spin-off/ start-up firms (BENESCO) and ownership of licenses or patents (BENELIP). These institutions seem to be teaching universities as they are yet to institutionalize HEIs-industry linkages hence little or no revenue accruing from industry linkages (Research Info source Inc, 2010). These HEIs are contributing minimally to the economic growth of the state.

SECTION D: FACTORS FOSTERING INDUSTRY LINKAGES

Respondents from the following factors fosters industry linkages in the following order: government policies promoting linkages (FOSTGP) - 5, promoting linkages in the strategic plan (FOSTLSP) - 4, expressed support by the board of governors/ governing council (FOSTSGC) -4, senior leadership position promoting linkages (FOSTLP) – 3.05, presence of academic staff and / or professional staff with entrepreneurial experience (FOSTAPEE) – 3 and revenue from consultancy services (FOSTRCS) – 2.90.

The HEIs have to build on these variables to foster industry linkages in their institutions.

SECTION E: FACTORS INHIBITING INDUSTRY LINKAGES

The respondents from the five HEIs agreed that the most inhibiting factors to industry linkages are as follows: multinational R & D/ globalization factors (INHIBMRD) – 4.86, inadequate research capacity (INHIBRC) – 4, lack of established network with the industry (INHIBNI) – 4, absence of institutional IP policies and laws (INHIBIPL) – 3.81, lack of financial support for research and other activities relevant to the productive sector (INHIBBFS) – 3 and lack of entrepreneurial skills/ knowledge among academic staff (INHIBESK) – 2.2.

These inhibiting factors should be tackled by the HEIs and government/ stake holders in order to boost industry linkages.

F. SUPPORT NEEDED FROM GOVERNMENT AND OTHER STAKE HOLDERS

The respondents from the five HEIs agreed that the most support services needed from government and other stakeholders to help enhance institutional capacity to link with the industry are as follows: developing the institutional strategic plan with private sector focus (SUPISP) – 5, support for establishing technology incubators/ science parks (SUPTICS) – 4, fund to commercialize research output (SUPCRO) – 3.15 and training of academic staff in entrepreneurial skills (SUPTAES) – 2.87.

Although HEIs-industry linkages require pro-activity on the part of both sides, the need for internal capacity-building (skill development, strategic planning, leadership etc) rather than on non-conducive external conditions (lack of national policies, industry weakness, etc) should be pursued by the institutions taking responsibility and action for strengthening their own internal capacity to work with the industry.

CONCLUSIONS

Nigeria in an effort to diversify the economy through entrepreneurship, has embraced knowledge base economy as contained in the vision 202020 document (www.Nationalplanning.gov.ng/index.php/national-plans/nv20-2020). Collaboration between the industry and the higher education institutions in Anambra State will greatly boost the state economy. Higher education institutions are seen as valuable institutions for economic development and as citadel of learning are best positioned in the knowledge based economy in diffusion of knowledge. Partnership between the industry and the higher education institutions in Anambra State will greatly boost the state economy. It will enable firms gain access to students and a window on emerging technologies on one hand and equip students with the necessary skills needed in the industry. The partnership programmes foster a higher and more rapid rate of technological innovations (Feller, 2005). The linkage programme may result in higher education institutions aggressively seeking industrial sponsorship of faculty research, to invest in research / innovation parks, and increasingly to enter into equity relationship with startup firms (Feldman et al, 2002).

The paper concludes as follows:

- HEIs in Anambra State need to appraise their research and fields of specialization in order to help in upgrading or adapting existing technology of local firms and producers and build linkages with the informal and agriculture sectors which may not rely so heavily on patentable products and processes. This will help increase the institutions funding and quality of staff.
 - The HEIs in Anambra State should strengthen their research governance and management through establishment of intellectual property units. Science and mathematics education and graduate training at doctorate level should be given emphasis.
 - Government both at state and federal levels should put up legislations and policies to promote linkages between the HEIs, the research institutes and industry in the state to boost the economy. Policies should be put in place to discourage the activities of entrepreneurs whose activities are detrimental to the uptake of higher education institutions research and innovation.
 - The HEIs should include building linkages with the industry in their strategic plan which should reflect their actual capacity and avoid irrelevant policies.
- The industry on the other hand should include building linkages with HEIs in their vision statement and learn to look inwards for solution to their challenges which the HEIs in the state can provide.
- The HEIs should be given autonomy to enable interaction with the local industry in development of curriculum and in hiring of qualified industry professionals as part-time or full-time lecturers. Promotion scale based on contributions to industry and entrepreneurial activities should be used for appraisal of academic staff to increase the entrepreneurial activities of lecturers.

The industry assessment criteria should be based on their linkage programme with the HEIs, for example through tax rebate.

- Government should provide the necessary infrastructure and enabling environment for industry to thrive in the state. Lack of infrastructure like electricity has made cost of production to be uneconomical thereby making entrepreneurs to relocate to where there is cheaper cost of production.
- Government should enact legislations to streamline the research institutes whose vision and mission statement seem to be duplicating the roles of HEIs in research uptake. This has relegated the relevance of HEIs and made such research institutes to be limited in capacity and operations. This can be done by merging the HEIs and the research institutes.
- Government should put up legislations and policies to promote linkages between the HEIs and the industry in their locality to boost the state economy. The institutions need to strengthen IP management since patents and copyrights are often considered the measure of innovation. They should also build linkages with the informal sector which may not rely so heavily on patentable products and processes.

POLICY IMPLICATIONS

The study shows that the state of HEIs and industry linkages is at embryonic stage in Anambra State. The management of the HEIs should pursue policies to improve upon the status and capacity indices identified in this study in order to make the institutions contribute on the economic growth of the state. The government should put in place policies to encourage linkage programmes between the HEIs and the industry in the state as the Mechanisms to enhance technology transfer from tertiary institutions, to reduce brain drain out of a region, and policies to create linkages between higher education institutions and industry are among many efforts chosen by policy makers to use tertiary institutions to enhance regional economic development (Scott, 2005).

SCOPE FOR FURTHER RESEARCH

This study should be replicated on a national level assessing the status and capacity of the HEIs in the six geo-political zones of Nigeria for industry linkages. This will boost the country's efforts in national innovation system.

REFERENCES

1. Akinyemi, S et al (2012) 'Graduate Turnout and Graduate Employment in Nigeria' in international journal of Humanities and Social Science, vol.2 No. 14, July(ed.)
2. Anthea, V. Z. (2009) 'University and Industry- driving knowledge transfer' Pretoria: Essays Innovate, no.3,
3. Arrow, K. (1962) 'Economic welfare and the allocation of resources for intervention', in R. R. Nelson(ed.), The rate and direction of innovative activity, Princeton: Princeton University: Princeton University Press, pp. 609- 26
4. Atuahene, F. (2011) 'Re-thinking the mission of higher education: An anatomy of research challenge of African Universities in Journal of Asian and African Studies, vol. 46 (4), 321-341.
5. Barry, B. and A. Sawyer (2008) 'African Higher Education and Industry: what linkages? Paper presented at the Annual bank conference on development economics (ABCD), Cape Town, South Africa, June 8-11
6. Belete, W. (2009) 'The patent system and innovation performance in Ethiopia' presentation by the Ethiopian intellectual property office on the regional forum on the role of patents and patent cooperation treaty(PCT) in research in developing countries, hosted by the world intellectual property office(WIPO), Nairobi, March 30- April 1
7. Blumentritt, R. and R. Johnson (1999) 'Towards a strategy for knowledge management', technology analysis and strategic management, 11(3) 287-300
8. British Council (2010) 'Scaling up the partnership and linkages between the companies and the academia, Accra: Oracle multimedia.
9. Cummins, J.L. and B.S. Teng (2003) Transferring R&D knowledge: the key factors affecting knowledge transfer success, Journal of Engineering and Technology Management, 20, 30- 68
10. Dhesi, A. S. and V. Chadha (1995) 'Factors influencing technology transfer from R&D institutions to manufacturing, empirical evidence from India', in Science Technology & Development, vol.2, 225- 237.
11. Edquist, C. (2004) 'System of Innovation: prospectives and challenges', in Fagerberg,J., Mowery, D. Nelson, R.(eds.), the oxford hand book of innovation, Oxford University Press, Oxford, p. 181-208
12. Etzkowitz, H., A. Webster and P. Healey (eds.) (1998) Capitalizing knowledge: University intersections of industry and academia, Albany: State University of New York Press.
13. Feldman, M., I. Feller, J. Barcovitz and R. Burton (2002) Equity and technology transfer strategies of American research universities; Management Science, 48, 105- 21
14. Feller, I. (2005) 'An historical perspective on government-university partnerships to enhance entrepreneurship and economic development, Chaltenham: Edward Elgar Publishing Ltd.
15. Fourie, M. (2003) 'Beyond the ivory tower: service learning for sustainable community development' in South African Journal of Higher Education, vol.7(1), 31-38
16. Gibbons, M., C. Limoges, H. Nowotny, S. Schwartzman, P. Scott and M. Trow (1994) The new production of knowledge, London: Sage.
17. Goddard, J., D. Charles, A. Pike, G. Potts and D. Bradley (1994) 'Universities and Communities' Committee of Vice Chancellors and Principals, London
18. Goransson, B. and C. Brundenuis(eds.) (2011) Universities in transition: the changing role and challenges of academic institutions, New York: Springer
19. International Labour Organization (2010) Report on Nigerian on Nigerian Education, ILO: Nigeria
20. Jegede, O. (2012) Strengthening University- industry linkages in Africa- A case study on institutional capacities and gaps, Accra: Association of African Universities
21. Leydesdorff, L. and H. Etzkowitz, (1996) 'Emergence of triple helix of university- government relations', Science and Public Policy 23151: 279- 86.
22. Mitra. J. (2012) Entrepreneurship, Innovation and Regional Development- An introduction, Oxford: Routledge Taylor Francis Group
23. Mohamedbhai, G. (2008) The effect of massification on higher education in Africa, Accra: Association of African Universities.
24. Mouton, J. et al. (2008) Science and Technology and higher education in the SADC region, Wits: South Africa Regional Universities Association (SARUA)
25. Munyoki, J., Kibera. F. and M. Ogutu (2011) 'Extent to which university- industry linkage exists in Kenya: A study of medium and large manufacturing firms in selected industries in Kenya', in Business Administration and Management, vol.1 (4), 163- 169
26. Nelson, R. R. (1959) 'The simple economics of basic scientific research', Journal of Political Economy, 67: 297- 306
27. Owofemi, D. (2013) 'Higher education and industry: critical perspectives', www.ngrguardiannews.com/focus/135712, October 19, Wed.
28. Research Info source inc. (2010) Canada's top 50 research universities, www.researchinfosource.com
29. Scott, S. (2005) Economic development through entrepreneurship, Cheltenham: Edward Elgar Publishing Ltd.
30. Shin, T. (1998) 'The impact of research and education on industry: A comparative analysis of the relationship of education and research systems to industrial progress in six countries', Industry and higher education journal, October, 270- 89.
31. Society for innovation and entrepreneurship (2004) Policy and Procedure for Business Incubator, Mumbai: Indian Institute of Technology

REQUEST FOR FEEDBACK

Dear Readers

At the very outset, International Journal of Research in Commerce & 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 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.

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

Looking forward to an appropriate consideration.

With sincere regards

Thanking you profoundly

Academically yours

Sd/-

Co-ordinator

DISCLAIMER

The information and opinions presented in the Journal reflect the views of the authors and not of the Journal or its Editorial Board or the Publishers/Editors. Publication does not constitute endorsement by the journal. Neither the Journal nor its publishers/Editors/Editorial Board nor anyone else involved in creating, producing or delivering the journal or the materials contained therein, assumes any liability or responsibility for the accuracy, completeness, or usefulness of any information provided in the journal, nor shall they be liable for any direct, indirect, incidental, special, consequential or punitive damages arising out of the use of information/material contained in the journal. The journal, neither its publishers/Editors/ Editorial Board, nor any other party involved in the preparation of material contained in the journal represents or warrants that the information contained herein is in every respect accurate or complete, and they are not responsible for any errors or omissions or for the results obtained from the use of such material. Readers are encouraged to confirm the information contained herein with other sources. The responsibility of the contents and the opinions expressed in this journal are exclusively of the author (s) concerned.

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

