

**Abstracts of Papers  
Presented at the  
3rd International Conference on Innovation  
and Entrepreneurship  
ICIE-2015**

**Co-hosted by  
The University of KwaZulu Natal  
Durban  
and the  
EtheKwini Municipality  
Durban, South Africa**

**19-20 March 2015**

**Edited by  
Professor Deresh Ramjugernath  
University of KwaZulu Natal  
Durban, South Africa**

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## Preface

These proceedings represent the work of researchers participating in the 3rd International Conference on Innovation and Entrepreneurship – ICIE 2015, which is being co-hosted by The University of KwaZulu Natal, Durban and the Ethekwini Municipality, Durban, South Africa on the 19-20 March 2015.

The ICIE Conference constitutes a valuable platform for individuals to present their research findings, display their work in progress and discuss conceptual advances in many different branches of innovation and entrepreneurship in business and management. At the same time, it provides an important opportunity for researchers and managers to come together with peers, share knowledge and exchange ideas. ICIE builds on the now well established European Conference on Innovation and Entrepreneurship, and allows universities outside the European Boundaries the opportunity to host an academic conference on these important topics.

In addition to the presentations of research the conference will feature a knowledge cafe, led by Dr Shawren Singh looking at this topic How can academics focus research efforts to better serve the business and public sector communities?. The second day will open with a panel discussion looking at Smart cities: Opportunities for Entrepreneurship and Economic growth.

Following an initial submission of 85 abstracts that have undergone a double blind peer review process, 26 research papers, 3 PhD research papers, 2 work-in-progress papers are published in these Conference Proceedings, representing research results from the Czech Republic, Denmark, Italy, Kazakhstan, Kenya, Lithuania, Nigeria, Poland, Saudi Arabia, South Africa, Sweden, The Netherlands, UK, USA and Zambia.

We hope that you have an enjoyable conference.

Programme chair  
Deresh Ramjugernath  
University of KwaZulu Natal  
Durban, South Africa  
March 2015

# Conference Committee

## Conference Executive

**Professor Deresh Ramjugernath**, University of KwaZulu-Natal, Durban, South Africa

**Dr Anita Ramsuran**, Technology Innovation Agency, South Africa

**Dr Anneline Chetty**, Ethekwini Municipality, Durban, South Africa

## Mini track chairs

**Dr Aneta Ptak-Chmielewska**, Institute of Statistics and Demography, Warsaw School of Economics, Poland

## Committee Members

The 2015 conference programme committee consists of key people in the innovation and entrepreneurship community, both from the Europe and around the world. The following people have confirmed their participation:

Dr. Kamarulzaman Ab. Aziz (Multimedia University, Malaysia); Dr. Saber Abd-Allah (Beni-Suef University, Egypt); Dr. Ghassan E. Abuyaghi (The Hashemite University, Amman,, Jordan); Prof. Dr. Zafer Acar (Okan University, Istanbul, Turkey); Dr. Bulent Acma (Anadolu University, Turkey); Dr. Mo'taz Amin Al Sa'eed (Al - Balqa' Applied University, Amman, Jordan); Mohammad Aladwan (The Hashemite university, Jordan); Dr. Husam Aldeen Al-Khadash (The Hashemite University, Amman,, Jordan); Prof. Refat Al-Faouri (The Arab Administrative Development Organization (ARADO), Cairo,, Egypt); Saleh Al-Jufout (Tafila Technical University, Jordan); Dr. Mohammad Sadegh Allahyari (Islamic Azad University, Rasht Branch, Iran); Dr. Maher Al-Mahrouq (The Jordanian Chamber of Industry (JCI) , Jordan); Ibrahim Al-oqily (University of Ottawa, Canada); Dr. Hussein Al-Yaseen (Al-Ahliyya Amman University, Jordan, Jordan); Dr. Khitim Alzughoul (Hashemite University, Jordan); Dr. Talah Arabiat (The German Jordanian University, Jordan); Omid Askarzadeh (Polad Saab Shargh, Tehran, Iran); Prof. Alina Badulescu (University of Oradea, Romania); Dr. Daniel Badulescu (University of Oradea, Romania); Dr. Afshaneh Bagheri (University Putra Malaysia, Malaysia); Dr. Vibha Bhandari (College of Applied Sciences, Ministry of Higher Education, Oman, Oman); Prof Shahida Cassim (University of KwaZulu-Natal, South Africa); Eduardo Castro (National University de la Plata, Argentina); Shi-Jay Chen (National United University, Taiwan); Dr. Toly Chen (Feng Chia University, Taichung, Taiwan); Dr Anneline Chetty (Ethekwini Municipality, South Africa); Prof. Chuang-Chun Chiou (Dayeh University, Changhua, Taiwan); Ms Tan Christine Nya-Ling (Multimedia University, Malaysia); Prof. Costas N. Costa (Cyprus University of Technology, Lemesos, Cyprus); Dr.

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# Biographies

## Conference Chair



**Professor Deresh Ramjugernath** is the Pro Vice-Chancellor: Innovation, Commercialization and Entrepreneurship at the University of KwaZulu-Natal. He is also the DST/NRF South African Research Chair for Fluorine Process Engineering and Separation Technology, and the Director of the Thermodynamics Research Unit. Prof. Ramjugernath leads a large team of post graduate students and researchers - arguably one of the leading research groups in its field globally - which undertakes cutting-edge research contributing towards chemical process development and optimization in South Africa and abroad. He and his team have won numerous institutional and national awards for research and innovation. Prof. Ramjugernath is actively involved in a number of initiatives in innovation, commercialization and entrepreneurship nationally

## Programme Chair

**Dr Aneline Chetty** is a Senior Manager: Policy and Innovation of the Economic Development Unit at EtheKwini Municipality. She is responsible for coordinating economic policy and research projects as well as the Chairperson of Innovate Durban within the EtheKwini Municipality. She has extensive experience in the Public sector, and has a passion for both Innovation and Entrepreneurship.



## Mini Track Chairs



**Aneta Ptak-Chmielewska** is an Associate Professor at the Institute of Statistics and Demography at Warsaw School of Economics. Her main research fields include applied statistics, event history methods and models, multivariate statistics and advanced statistics application in economy and life sciences, entrepreneurship. She has been a member of the Network of Excellence RECOWE project. She has published in high-quality national and international journals.

## **PhD Colloquium**

**Professor Dan Remenyi** After completing an MBA Dan Remenyi spent 15 years in business as an ICT consultant before undertaking a PhD. Since obtaining his doctorate he has held a variety of visiting professorships in the United Kingdom, the Republic of Ireland and South Africa. He originally researched and taught in the ICT management field, but for the past decade he has increasingly focussed on research methodology and the sociology of research. He has had some 30 text books published. Some of his books have been translated into Chinese, Japanese and Romanian. He holds a B Soc Sc, MBA and PhD. Other research titles authored or co-authored:-Case Study Research, Field Methods for Academic Research, Writing up your research, An Introduction to Statistics, Research Protocols and Research Ethics, Committees, Research Supervision for Supervisors and their Students, Grounded Theory Reader.



## **Knowledge Café leader**



**Dr Shawren Singh** is a senior lecturer in the School of Computing at the University of South Africa, and has spent more than 15 years teaching and researching in the Information Systems space. His research has focused on e-Government, with particular interest in the design and development of these applications. His research has been published internationally and he has presented papers at several conferences.

## Biographies of Presenting Authors

**Indira Aitbay** is a fundraising specialist at Almaty University, Kazakhstan. Indira received her Master's in Management from University of Bath (UK). She has implemented projects on entrepreneurship training within the state program of support, competition in social entrepreneurship for youth. She teaches courses and is co-author of the Entrepreneurship curriculum. Her research topics are entrepreneurship education and social entrepreneurship.

**Faith Ojonugwa Akor** is a lecturer with the Department of History, Benue State University, Makurdi-Nigeria. She has contributed several articles and chapters to numerous journals and books on Economic History and development. Her areas of research interest include gender and entrepreneurship as well as development and labour relations.

**Emmanuel I.Archibong** is a lecturer in the department of philosophy, university of uyo Nigeria who specializes in epistemology and philosophy of science. He has published extensively in these areas both locally and internationally.

**Anisha Baghudana** is pursuing a Master's degree in International Business at The Fletcher School at Tufts University, Boston, USA. Before beginning graduate studies, she managed healthcare and beauty brands at Procter and Gamble across Greater China, India, ASEAN and Australasia. She has also taught business at the Meltwater Entrepreneurial School of Technology, Ghana, and done e-commerce research with MasterCard Worldwide in Kenya.

**Rajiv Vaid Basaiawmoit** is currently the Head of Open Innovation at the Aarhus University Centre for Entrepreneurship & Innovation, Denmark. He has a Ph.D. in Biophysics and an MBA in Sustainability. He is an Entrepreneurship educator and has taken part in several entrepreneurship challenges both as a former student and as an alumnus and mentor.

**Jurate Cerneviute** is PhD, Head of the Department of Creative Entrepreneurship and Communication of Creative Industries faculty (Vilnius Gediminas Technical University (VGTU)), Lithuania. She is professor, participant in creative industries projects, lecturer, and expert. Research interests include the adoption of culture and arts for added value creation; sociology of cultural production and creative industries. Jurate is a regular speaker at conferences and published numerous articles and books in the field of creative industries; production and consumption of culture.

**Moses Dlamini** holds an MSc, BSc Honours and BSc in Computer Science. His research work focuses on Information Security, Security, Internet of Things, Context-aware Authentication, Identity and Access Management, Conflict-aware Access Control, Digital Forensics, Economics and Psychology of Information Security. Moses has published in a number of international and national conferences where he presented his research.

**Richard Heslop** is a Masters student at the University of Cape Town. He holds a BBusSci (Hons) in Information Systems from the University of Cape Town. His professional background is in management and IT consulting, and he is presently a strategic advisor to two South African internet startups.

**Christian Oghenerukevwe Ikpesu** received his higher education at the Rivers State University of Science and Technology, Port Harcourt. He is currently teaching in the Department of Business Education in the same university and has published a number of scholarly articles in entrepreneurship and economic development in reputable journals

**Lawrence Mpele Lekhanya** is a Postdoctoral Fellow in the Department of Public Management and Economics at the Durban University of Technology, South Africa, from where he obtained his Doctor of Technology: Marketing degree. He supervises Masters and Doctoral students in a number of universities in South Africa and is currently working towards publishing a prescribed textbook on Entrepreneurial Marketing.

**Lester Lloyd-Reason** is Professor of International Enterprise Strategy, Director of the Centre for Enterprise Development and Research (CEDAR). He has more than 170 publications, has been Academic Advisor to the OECD and led many international projects. In the UK REF 2014 his research work was deemed to have 'World Leading' Impact.

**Maurizio Massaro**, Ph.D., is aggregate professor at Udine University since 2008, having worked as teacher at Udine University since 2001. He was visiting scholar at the FGCU, Florida, USA, in 2010 and Leicester, UK, 2013. His academic interests are primarily in the field of business performance, intangible assets and entrepreneurship.

**Juha Miettinen** is a Chief Technical Advisor and Team Leader of Southern Africa Innovation Support (SAIS) Programme. Before joining SAIS in 2011, as a COO in the one of the leading innovation and science park companies in Finland, Hermia Ltd, and as in his own daily management work, he has earned wide experience

and practical knowledge on Finnish and European innovation systems and methods. He has wide experience in project management and has also been member of supervisory and steering boards of tens of innovation and development initiatives, programmes and projects throughout his carrier.

**Mampolokeng Mary-Elizabeth Monyakane** lectures on the Law of Evidence at the University of South Africa. She has been an Advocate of the High Court of South Africa since 2004. Her research interest is International Economic Development Law and she is currently doing a Doctorate on Intellectual Property in Traditional Medicinal Knowledge.

**Molefi Motsoeneng** is a PhD student at University of Free State in the Centre of Higher Education. He is a co-ordinator of the research and also responsible with Incubation programme of SMEs at Central University of Technology, Free State. He holds a B.Com and Master in Business Administration degree. His research interests are in Entrepreneurship Education.

**Tomasz Norek** has a PhD. in Economics - Corporate Finance and Applied Informatics from the University of Szczecin, Poland. Since 1997 he has been a lecturer at the University of Szczecin, Faculty of Management and Economics of Services. His research and teaching fields include business innovation with particular emphasis on innovative behavior models for the SME sector.

**Mike Odey** is Professor of Economic History, Benue State University, Nigeria. He is a visiting Professor in UN, Nsukka, the editor of several books/journals, and has published 80 articles and 2 books. He is co-editing two volumes of Africa Conference Series with Professor Falola. He is currently researching African development issues, food security systems and entrepreneurship.

**Jane Queen Omwenga** holds a BSc. (General Agriculture and Human Ecology Extension) from Egerton University, MSc. Entrepreneurship and PhD Entrepreneurship from Jomo Kenyatta University of Agriculture and Technology. She is a Lecturer of Entrepreneurship at College of Human Resource Development of Jomo Kenyatta University of Agriculture and Technology in Kenya. She has published in Entrepreneurship.

**Aneta Ptak-Chmielewska** is Associate Professor at the Institute of Statistics and Demography at Warsaw School of Economy. Her main research fields include applied statistics, event history methods and models, multivariate statistics and advanced statistics application in economy and life sciences. She is teaching advanced statistical methods in master and post diploma studies.

**Colin Reddy** teaches at the University of Johannesburg's Department of Business Management. He has a PhD from the University of Cape Town and his research interests are in social innovation and social responsibility. Colin has about 20 years of professional experience and he has been at UJ for five years now.

**Jonas Rundquist** is an Associate Professor in Innovation Sciences at Halmstad University, Sweden. His current research interests include knowledge management in new product development (NPD), implementation of NPD processes, and knowledge transfer in emerging markets. He has published in journals such as Journal of Product Innovation Management, European Journal of International Management, and International Journal of Innovation Management.

**Deycy Janeth Sánchez Preciado** is a PhD Student in Innovation Sciences at Halmstad University, Sweden, and member of the Research Group Regional Models for Competitiveness at the University of Cauca and Productivity and Innovation Regional Centre CREPIC (Colombia). She is a lecturer and researcher in Management of Technology at the University of Cauca.

**Dr Navjot Sandhu** has written refereed journal articles, conference papers and is a peer reviewer for a number of International Journals and an assistant editor of the Journal of Small Business and Enterprise Development. She won the Birmingham City University Business School Best Research Paper Award 2012, Outstanding Reviewer Award on Emerald Literati Network 2013.

**Zdenek Smutny** graduated from applied informatics and media studies. Currently, he is internal PhD student at the Faculty of Informatics and Statistics, University of Economics in Prague where he deals with the problems of social informatics.

**Hein Spingies** is currently also the deputy chairperson of the SA Records Management Forum. He started his career at the SABC in 1991 at a freelance archivist and later as the supervisor for the Reference library. He is an active member of the Coordinating Committee of the National Information Officers Forum, hosted by the SA Human Rights Commission and is well known within the South African Knowledge Management community.

**Rolandas Strazdas** is Professor in the Department of Creative Business and Communications of Vilnius Gediminas Technical University, Lithuania. He has more than 15 years' experience in teaching and innovation project management and has developed tools and models for innovation process management. He has worked on many projects for national and regional development agencies and for the European Commission.

**Thiru Naidoo- Swettenham** is the Programme Coordinator for the Southern Africa Innovation Support Programme funded by the Ministry of Finland. She has over 8 years experience in science technology and innovation development and her research and work interests are innovation policy, incubation, entrepreneurship, knowledge partnerships, technology transfer, social innovation and entrepreneurship, and monitoring and evaluation.

**Gulnura Taikulakova** was born in the Republic of Kazakhstan. She has a first degree as engineer and a second in higher education as economist. She successfully defended a master's thesis on the subject: "Optimization of methods an economic assessment of efficiency of oil-extracting production". She is currently Associate Professor of "Economics and Logistics" at Almaty Management University, Kazakhstan.

**Boris Urban** is a Professor at the Graduate School of Business Administration, University of Witwatersrand, South Africa. He has more than 25 years' academic and professional experience in business, where he has practised, taught and researched strategy, organisational behaviour and entrepreneurship. Boris was the first appointed Chair in Entrepreneurship (Lamberti) at WBS and is a NRF rated researcher.

**Edwin Weesie** is co-ordinator and PhD researcher at the University of Applied Sciences Utrecht. He has worked for various companies in Europe dealing with Consultancy, Marketing and Sales, Mergers and Acquisitions. His research focuses on decision making processes in SME ownership transitions, looking at behavioural finance and coping strategies of entrepreneurs.

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# The Impact of Research and Innovation on SMMEs in Gauteng Province South Africa

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**Abstract:** Small, Micro and Medium Enterprises (SMMEs) have always played a key role in the economies of major industrial societies in both Gross Domestic Product (GDP) and employment levels. Their survival and growth depended mainly on extensive research and innovation. As we enter the 22nd century, globalisation has become an influential force in world trade. It is important to view SMMEs as instruments capable of responding to globalization. While it is true that globalization creates opportunities for SMMEs to be effectively involved in global markets, it also poses numerous challenges and problems. While their flexibility and adaptability promise their success in global trade, SMMEs can only achieve this through effective research and innovation, hence making them competitive in terms of price, quality of goods and their ability to meet delivery requirements. Research and innovation is particularly important especially in the developing countries such as South Africa where SMMEs are important contributors to the economy. They provide employment opportunities and create economic wealth resulting in poverty reduction and increased employment. In order to succeed and prosper, SMMEs need to establish continuous research and innovation strategies in-order to allow them to evolve and adapt to the global stature. This paper therefore seeks to reveal a deeper understanding of the strategies being used to encourage SMMEs in the Gauteng Metropolitan area to invest in research and innovation. The study therefore aims to improve the level of research and innovation in Small, Micro and Medium enterprises in Gauteng province. The data used in the study was gathered by administering structured questionnaires to businesses within the Gauteng Metropolitan, selected randomly through probability sampling method. The analysis of the results was based on descriptive statistics arrived at through SPSS tools. The results indicated that most SMMEs in the Gauteng Metropolitan are not adequately involved in research and innovative activities due to various reasons including lack of skills and expertise. Recommendations were made for Business owners to have workshops and to share innovative ideas. A one stop shop centre for SMMEs to have access to new ideas and to learn more about the current trends in research and innovation was suggested. Finally policy matters were also considered and suggestions made to policy makers.

**Keywords:** SMMEs; Innovation; Research; Entrepreneurship Gauteng

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## **Social Entrepreneurship in Kazakhstan: Defining Trends and Prospects for Development**

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**Abstract:** Social entrepreneurship as an innovative way in addressing societal challenges is widely researched. It is argued in this paper that the context plays key role in the development of the practice and it is aimed at fulfilling the gap in understanding of the current state of social entrepreneurship in Kazakhstan. Several findings of the research are presented, which include survey and expert interview results, definitions and different countries analysis. Lack of business capacity and understanding of the concept among NGOs, existing barriers and possible drivers for social entrepreneurship development were identified among key findings of the research. In addition, the model for social enterprise analysis and definition to be used for Kazakhstan was introduced. The results can add value in further development of nonprofit and private sectors in Kazakhstan.

**Keywords:** social entrepreneurship, NGO sector, Central Asia, Kazakhstan

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## **Gender, Culture and Entrepreneurship Development in Central Nigeria Area**

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**Abstract:** The dimension of Africa's underdevelopment crises is becoming increasingly alarming. Indeed, it is generally believed that entrepreneurship constitute the top challenge facing the continent. However, it does not yet appear that there is a movement towards mitigation of the challenge because efforts aimed at ensuring the progress of entrepreneurship seem to come up against a sort of structural ceiling of which the height and contours seem to be closely related to the very effects of African culture on women entrepreneurship. The paper therefore examines the interaction between culture, gender and entrepreneurship in Central Nigeria Area with reference to Tiv and Idoma societies. It compares the cultural attributes of these societies and how it affects the entrepreneurial contributions of women in the area. The approach is to distinguish between cultural impacts on the one hand and institutional effects on the other by comparing entre-

preneurial propensities among two different ethnic groups in the common Nigerian environment. In this way gender discrimination (for instance) that has a national institutional basis may be controlled-in the sense that it is common to all ethnic groups. The main thrust of the paper is to analyze the entrepreneurial activities of Tiv and Idoma women by demonstrating the extent to which their contribution still remain largely unrecognized and unaccounted for in the official statistics of growth and development in Africa. The reason for this is not farfetched; cultural suggestions hold that men have stronger entrepreneurial intentions and seem to bear risk than women. The methodology of research used here is derived mainly from primary and secondary sources of historical data. Primary data for this study were obtained via the use of questionnaire. One hundred respondents from each group were used to arrive at conclusions reached in the paper. The paper concludes that the future of Africa's development depends more on women who constitute the disproportionate number of the target groups of the Human Development Index (HDI) within the African population.

**Keywords:** gender, women, culture, entrepreneurship, development, Central Nigeria

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## **The Prediction of Entrepreneurial Intentions Among Preparatory Year Saudi Students: Testing an Intent Model**

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**Abstract:** During last decade, Saudi universities have experienced changes in their curricula introducing several courses and workshops on entrepreneurship and entrepreneurial culture. However, Saudi Arabia TEA (Total entrepreneurial activity) is still low at 9,4% (Kelley & al., 2010) and the entrepreneurial intention of Saudi at 1%. This fact opens up debate on studying factors that may explain entrepreneurial intentions of young Saudi students. The aim of this paper is to understand the determinants of entrepreneurial intentions of Saudi students who are registered in the preparatory year at Al Imam Muhammad Bin Saud Islamic University in different academic paths. Through a literature review, we use an adapted theoretical model of intention (Ajzen, 1991) which is tested by Boissin et al., (2007a; 2007b), attempting to explain intention with three typical variables of the theory of planned behavior: attitudes toward the behavior, perceived social norms, and perceived self-efficacy. To test this model, a survey research was conducted in 2013 within a population of 655 male students who were attended an "entrepreneurial culture" day training. Only 196 questionnaires were valid for the research and concerned Saudi students in different disciplinary paths (different

sub-samples: Humanities = 63; Applied = 41; Sanitary = 31; Islamic and others = 30; Business = 31). The collected data were analyzed by using Structural Equation Modeling (SEM) through Partial Least Squares (PLS) technique and the XLSTAT 2014 software. The results were presented and discussed. They demonstrate that entrepreneurial intention of Saudi students was mainly determined by their perceived self-efficacy rather than by their attitude towards entrepreneurial behavior. Subjective norms are not seen as a real determinant of intention. Thereafter, some research and practical implications and recommendations are presented for the Saudi University World.

**Keywords:** entrepreneurial intention, attitude, subjective norms, self-efficacy, PLS-PM, preparatory year student, Saudi Arabia

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## **Comparative Analysis of Innovative Activity Determinants of SME Sector in Brazil and Poland**

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**Abstract:** The basic goal of this paper is an attempt to conduct comparative analysis of innovation determinants in companies of small and medium enterprises sector in Brazil and Poland. The comparison shall enable evaluation which determinants stimulate and which are barriers to innovativeness development in the SME sector in the researched countries. The authors put forward the following research hypothesis: H1: *The determinants forming the innovative potential are similar for Brazilian and Polish companies of SME sector.* In order to confirm or negate the hypothesis, the authors have conducted empirical researches of the innovative activities' determinants in the SME sector companies in Brazil and Poland (an Internet questionnaire has been used in the research). The received results have been subject to basic statistical comparative analysis and on this basis with the logical induction the authors have made conclusions on the determinants of innovative activity in researched companies. The applied research method is based on the analysis of the innovative processes taking place in companies - with a special consideration of the nature of innovative processes taking place in SME sector. The article includes the results of all the empirical researches conducted by the authors in the years 2009-2013. The obtained results enable the confirmation of the thesis put forward by the authors - determinants forming the innovative potential are similar for Brazilian and Polish companies of SME sector.

**Keywords:** innovation, innovative activity, SME sector

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# **Navigating Nairobi: A Case Study on Innovation and Entrepreneurship in Nairobi's Transport Sector**

**Anisha Baghudana and Julia Leis**

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**Abstract:** Nairobi, the capital of Kenya, faces critical transportation challenges today. Traffic-related congestion, high road fatality rates and an unregulated mass transit network have been issues for long in East Africa's most populous city. Barriers to mobility have increased with rapid urbanization, resulting in a highly inefficient and inequitable transport system. Despite the government's commitment to improve infrastructure, urban planning and regulation, progress has been slow. Corporate players too have introduced well-funded initiatives, but met with little success. On the other hand, the innovation ecosystem has produced several mobility services that show potential to alleviate pain points in urban transportation. In June-Aug 2014, we interviewed 65 key informants and completed 16 observations to understand the role of startup innovation in improving Nairobi's transport system. We came across 30 startups engaged in the transport and logistics space. Their innovations were all internet or mobile phone-based. Startups played a unique role vis-à-vis government and corporates by plugging information gaps inexpensively. The value of information they generated had varying degrees of impact, as discussed in the 'impact pyramid'. To develop high-impact innovations, startups had to overcome a large 'trust deficit' among Kenyans. Furthermore, startups faced serious supply-side challenges due to financial, operational, regulatory, technical and environmental factors. In summary, this paper shows that startups played a crucial role in improving Nairobi's transportation. However, they are limited by the symptomatic relief their solutions provide. To enable startups to create sustainable impact, recommendations are made to state and non-profit actors.

**Keywords:** Nairobi, Africa, transport, digital innovation, frugal or *Jugaad* innovation, innovation ecosystems in emerging markets

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## **An Auto-Ethnographic Perspective of Social Entrepreneurship Focused Student Case-Competitions**

**Rajiv Vaid Basaiawmoit and Kathleen Wagner**

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**Abstract:** Competition or competitiveness is arguably an innate human trait that drives many individuals, businesses and organizations, right from the Olympics to searching a cure for AIDS. It is probably also what makes us excel or reach out for

more, even though the yardstick of success that we use is relative to the performance of “our competitors”. It is, thus, not surprising that over the past decade or more, there has been an exponential increase in student case-competitions around the world in almost every sphere of education, especially in the areas of business and entrepreneurship. Coupling this to the current trends and increased interest in social entrepreneurship, we are starting to see an increase in crowdsourcing of generally intractable social problems via case-competitions for both students and non-students. The competitions provide a framework for the participants to combine their skills, to network and to contribute with ideas for the existing social problems. Entrepreneurship education now employs diverse teaching methods and interventions to enhance students’ entrepreneurial skills. Case-competitions are often not included in academic reviews, as they are extra-curricular and depend on students’ voluntary participation. Yet, we can see a great learning benefit in the form of out-of-the-box thinking, resource acquisition, networking and team work. Our paper explores the rise of social entrepreneurship based case-competitions through an in-depth analysis of a case competition that has attracted a multitude of students and that the authors themselves have participated in. We present here, an understanding of the nature and the context of these competitions that allows for unique insights into the way competitions are run, into the interactions, and the learning with the other participants. The methodology employed is a single case-study combined with auto-ethnography (critical assessment and reflection) and secondary data-analysis. We report on the entrepreneurial learning of the participants, and reflect on the process and the engagement levels at different stages of participation. We finally extrapolate our findings in context of other competitions and discuss how this translates into a proposed intervention or factor that can be applied to entrepreneurship education in general. We thus set a stage for more empirical studies in this emerging area.

**Keywords:** entrepreneurship education, crowdsourcing, social entrepreneurship, case competition, student

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## **Innovation and Creativity: An Innovation Trek for the Ethekwini Municipality**

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**Abstract:** Innovation is not always born in a sterile lab or is not always about applications and technology. Innovative solutions to community challenges can be borne out of the creativity of community members. This was proven by Professor Anil Gupta who for more than two decades scoured rural India for its hidden in-

novations motivated by the belief that the most powerful ideas for fighting poverty and hardship will not come from corporate research labs, but from ordinary people struggling to survive. The Ethekwini Municipality is a city in South Africa which adopted a similar approach, recognising the innovativeness of youth (students and school pupils) in its area. The intention was to make the youth a part of the solution to challenges faced by the Municipality. In this regard five areas were selected and five groups of students were identified. Each group was sent into the community to identify challenges and engage with community leaders as well as members. Each group was tasked to come with solutions to these challenges which were to be presented at an Innovation Summit. The presented solutions were judged and the winning solution would be implemented by the Municipality. This paper documents the experience of the students as well as the kinds of solutions that were presented. The purpose is to highlight the importance of using the ingenious minds and creativity of youth and channel their energy into becoming part of society's solutions as opposed to being the problem.

**Keywords:** innovation, indigenous, entrepreneurship, community

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## **An Innovative Risk-Based Authentication Mechanism for Closing the new Banking Vault**

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**Abstract:** Technology breakthroughs such as online, mobile banking and e-wallet services have empowered today's clients with a full self-service banking platform to access their accounts and transact from anywhere, at any time and using any device. Such innovations have caused a paradigm shift that has seen the new front door of financial banking shifts from physical access branch doors to online banking logical doors. Consequently, this has created a new banking vault which must be secured by strong authentication measures. As banks innovate on their products, the information security community must also innovate around security systems to protect the bank's new services and help prevent unauthorized access. This paper has employed a design thinking methodology to help innovate around authentication measures. The end result is a risk-based multi-factor authentication architecture that enforces strong passwords and provides several other factors such as the variable SurePhrase, geo-location, SIM card serial number, PC

serial number etc to authenticate users based on their risk levels. A proof-of-concept is used to demonstrate the actual features of the proposed architecture.

**Keywords:** banking, innovation, security, risk-based authentication

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## **Socio-Cultural Differences and Formation of Entrepreneurial Mindsets Amongst Students in Universities**

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**Abstract:** The study investigated the socio-cultural differences and its relevance in the formation of entrepreneurial mindsets amongst students in three public universities in Rivers State. A multi-disciplinary and multi-cultural sample of 400 undergraduate students was selected in four ethnic groups and the measuring instrument was pretest in Rivers State College of Arts and Science (RIVCAS) to determine the reliability content and Cronbatch coefficient Alpha of .78 percent was obtained. The 5-point scale christened Socio-cultural indices and Students Entrepreneurial Mindsets Questionnaire (SOCUISEMQ) was developed to measure the extent independent variable affects formation of entrepreneurial mindsets amongst students. Quantitative data generated were analyzed with mean while hypotheses were tested at .05 level of significance using chi-square. Final analyses of quantitative data and testing of hypotheses were based on 260 student-respondents who successfully returned the instrument. The proposed hypotheses tested with chi-square revealed no visible significant differences between socio-cultural orientations, sociological indicators in the formation of entrepreneurial mindsets in public universities. This implies therefore that socio-cultural background and orientation of diverse ethnic nationalities of students is not totally responsible for the formation of entrepreneurial mindsets but its strength of influence is determined by certain sociological indicators in Rivers State. Some sociological indicators that have strong impacts in the formation of entrepreneurial mindsets amongst students in Rivers State were social blockages, ethnic subordination, dissatisfaction with life, self-determination, material accomplishment, and personal achievement orientation as the nexus for national entrepreneurship development.

**Keyword:** culture, socio-cultural, entrepreneurial mindsets, social blockage, personal achievement orientation

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# **Public Perceptions of Leadership and Corporate Governance of Small and Medium Enterprises (SMEs) in South Africa**

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**Abstract:** In recent years, the importance of leadership and corporate governance cannot be ignored in the business environment. The survival and growth of small and medium – sized enterprise (SMEs) depend on their good business leadership and corporate governance and ability to lead, manage and take full advantage of the resources available. Prior researches on SMEs have acknowledged that leadership and good corporate governance play critical role in the success of a business. The purpose of this paper is to report on the public perceptions of leadership and corporate governance of Small and Medium Enterprises (SMEs), with specific reference to South Africa. The study aimed to analyse and evaluate the public perceptions of leadership and corporate governance towards SMEs owner/managers in South Africa and the implications they have on the survival and growth of the SMEs. Primary data was collected from nine provinces of South Africa. Mix of qualitative and quantitative techniques were used to collect data from individual participants. The sample consisted of 180 participants where 20 questionnaires were distributed in each province. Questionnaires were emailed to each respondent and follow-ups were made via telephone calls. Findings of the research indicate that most respondents believed that the SMEs do not survive and grow due to the lack of business leadership and poor corporate governance. It further revealed that the SMEs owners/managers do not have leadership qualities or skills but rather they are just ordinary entrepreneurs and most respondents believed that corporate governance does not exist in many SMEs particularly in South Africa. The paper will benefit the SMEs owners/managers, policy makers and financial agencies for SMEs. Further researches with large sample sizes in various townships, are more recommendable.

**Keywords:** corporate governance; public perceptions; small and medium enterprises; leadership; South Africa

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## Entrepreneurship Education: The Role of Universities

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**Abstract:** In a report recently produced by the National Council for Graduate Entrepreneurship (NCGE), the National Endowment for Science, Technology and the Arts (NESTA) and the Council for Industry and Higher Education (CIHE) concluded that 'Entrepreneurship education is currently taught primarily through modules in business school courses and extra-curricular activities. HEIs need to enhance the perception and relevance of entrepreneurship education, so students and staff recognise the value of its combination of innovation, creativity, collaboration and risk-taking skills to a wide range of disciplines'. In this paper we focus on a ground breaking programme specifically designed to address these criticisms of the way in which enterprise and entrepreneurship is taught in universities. There are a huge number of programmes on offer across within European Higher Education with the words 'enterprise' and 'entrepreneurship' in the title, but what makes the BA (Hons) Enterprise and Entrepreneurial Management unique is the close involvement of entrepreneurs right from the outset, including course design, module content and delivery. This is achieved through an 'entrepreneur in residence' network, with Walter Herriot, Managing Director of St John's Innovation Centre, Cambridge, one of the world's leading incubation centres, as Director. This paper will firstly explore the key issues raised by the policy community and others calling into question the appropriateness of the way in which enterprise and entrepreneurship is taught. It will then look at the way in which universities are responding to these comments. The paper will call for a change in the way universities around the globe respond to the challenges of the 21<sup>st</sup> century in terms of entrepreneurship education and will conclude with a number of examples of both pedagogical and projects delivered by academics and entrepreneurs by way of an example of best practice.

**Keywords:** entrepreneurship education, enterprise education, embedding entrepreneurs, innovation in higher education

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## **The Effect of Entrepreneurial Intention on new Service Development**

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**Abstract:** This article examines the role of product relatedness on entrepreneurial intention to develop new services. In order to better understand the interaction between personal and organizational forces, our study aims to identify and analyze which variables improve entrepreneur's perception of opportunities and consequently their exploitation. Utilizing a sample of 750 Small and Medium Accounting Practices (SMAPs) in Northeast Italy, our findings indicate that diversification relatedness calls different causes. The role of desirability, feasibility as well as age, education, and prior diversification experience all impact entrepreneurial intention but their impact depends on the level of relatedness.

**Keywords:** diversification, entrepreneurial intention, relatedness, small and medium accounting practices

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## **The Implied Denial of Innovation in Traditional Medicinal Knowledge by South African Intellectual Property law and its Effects**

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**Abstract:** This article argues that the Intellectual Property Laws Amendment Act 28 of 2013 (Act) differentiates on innovative values of immaterial property based on “plants and animals”. Traditional medicinal knowledge (TMK) and drugs founded on this knowledge have a different treatment under the Act. While this law is direct on the protection of Drugs innovated by multikorporations it classifies TMK as “prior art” because generally the adopted intellectual property system based on TRIPS considers TMK a public domain material. This state leaves traditional medicine of a lesser value than multikorporations drugs. This causes economic inequality because TMK holders are compromised in negotiating the worth of their knowledge with multikorporations whose businesses survive on it. In turn, TMK holders get rewarded trivially. In this way TMK is amenable to extensive unfair exploitation by multikorporations because its commercialisation renders minimal financial returns, even in circumstances where these multikorporations drugs are extensively founded on TMK. This causes massive economic inequali-

ties. The object of this research is to highlight these inequalities and to show their causes. It further, argues that in order to reduce the inequality gap, the intellectual property rights protections be extended to TMK in compliance with our constitutional objectives of creating fairness and equality in our social dealings. This is a mixed methods study where qualitative research is used to analyse literature on the effects of the law on affected society. A case study on this society is used to animate the findings.

**Keywords:** innovation; inequality; poverty; TMK; intellectual property law, traditional medicinal holders; multcorporations; Koi/San; South Africa

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## **Entrepreneurship Education for Further Education and Training College lecturers**

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**Abstract:** The study aims to develop a framework for capacitation of Entrepreneurship Education (EE) for Further Education and Training (FET) College lecturers. The study is couched in the Critical Emancipatory Research paradigm whose criteria for quality are determined on the basis of advancing the agenda for equity, social justice, freedom peace and hope. The study interrogates EE literature both locally and internationally to understand the challenges confronting EE lecturers and strategies they have employed to overcome them. The composition of participants includes among other EE lecturer, civil society, business organisations and organs of state. Using participatory action research (PAR) the participants are engaged in a series of stakeholder's forum discussion. Data is generated from these series of workshops. The findings reveal that FET College lecturer's lack of pedagogical content knowledge (PCK) could be developed more effectively when done collaboratively with the lecturers themselves as well as other stakeholders in participatory action research approach paper relevance: The paper responds to real life challenges of capacity to teach entrepreneurship education at a Technical Vocational Education and Training (TVET) college. If problems of unemployment, inequality and poverty are to be address in South Africa and the world over, we need to strengthen TVET colleges especially in terms of the lecturers' capacity and competency to teach and deliver curriculum effectively. This paper responds to that challenge.

**Keywords:** entrepreneurship education, further education and training, critical emancipatory research, content knowledge, pedagogical knowledge, participatory action research

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## **Perspectives on the Growth of Small Scale Commodity Trade in Central Nigeria up to the 1970s**

**Mike Odey**

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**Abstract:** In developing economies, the role of small business enterprises is imperative in economic growth. However, the dominant literatures on micro-entrepreneurship in Africa are still very scanty and beclouded with racial prejudice and gender biases against Africa and women. Furthermore, they are surrounded by the notion of subsistence economy, apathy and indolence. Some have argued that African entrepreneurship was non-existent and that small business enterprises can hardly flourish under the informal sector. Unfortunately, women entrepreneurship in Africa is yet to be systematically interrogated to correct such misconceptions. However, it is impossible to fully appreciate African economic history and her development trajectory without a clear understanding of the involvement of women in micro-entrepreneurial commercial activities. Against this background, the paper seeks to provide an alternative explanation on the development of African micro-entrepreneurship with emphasis on women productive activities and commodity trade in Central Nigeria up to the 1970s. Furthermore, the paper explains the limits of the debate regarding the African subsistence economy, set against the emergence of market economy within the informal setting as an example of the uniqueness of women small scale businesses in economic growth. The argument of the essay is linked to broader issues of the relevance of family business initiatives and national growth in central Nigeria and is organized in four parts: the background; a review of perspectives on the nature of African entrepreneurship; the dynamics of women micro-entrepreneurship in commodity production/trade in Central Nigeria, and a conclusion, highlighting four major contributions to knowledge.

**Keywords:** women, micro-entrepreneurship; economic growth, commodity production/trade, Central Nigeria

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## **Promoting a Better Entrepreneurial Culture among Women Entrepreneurs in Nairobi City County, Kenya**

**Jane Queen Omwenga and Elegwa Mukulu**

**Jomo Kenyatta University of Agriculture and Technology, Kenya**

**Abstract:** Women entrepreneurship has attracted increasing attention in recent years in light of concrete evidence of the importance of new business creation for economic growth and development. Not only does women entrepreneurship con-

tribute to economic growth and employment creation, but it is increasingly recognized to also enhance the diversity of entrepreneurship in any economic system and to provide avenues for women expression and potential fulfilment. Entrepreneurship is becoming an increasingly important source of employment for women in many developed and developing countries. Political and socio-economic changes following the inauguration of the new constitution in Kenya (2010) and the country's vision 2030 strategy have seen more women assuming greater roles in enterprise creation and economic development. Nevertheless, there are only a few studies examining the performance of women owned businesses in Kenya. This study therefore, investigated how entrepreneurial culture influences the performance of small and medium women owned businesses in Nairobi City County. Questionnaires were administered to 158 women entrepreneurs sampled from a population of 1580 women. To develop further insight, we conducted follow up, in-depth face to face interviews to assess the relationship between the participant's educational level and entrepreneurial culture. One objective guided this study: (1) Does entrepreneurial culture influence the performance of women-owned enterprises in Nairobi City County, Kenya? Descriptive statistics, Pearson correlation, multiple regression and ANOVA analysis techniques were used to examine relationship between entrepreneurial culture and performance of women-owned enterprises. Our results showed that entrepreneurial culture ( $p=0.000$ ) was highly related to enterprise performance. The fact that majority of the respondents were graduates may have impacted on this result. Entrepreneurial culture and the direct creation of business were significantly correlated to educational level and performance. These findings imply that to perform well, Nairobi women entrepreneurs have to develop the culture of entrepreneurship. Further research is necessary to investigate how government policies and organizational strategies influence performance of women entrepreneurs in Kenya so as to give policy recommendations.

**Keywords:** Women entrepreneurs, Entrepreneurial Culture, performance, Small and Medium Enterprises, Nairobi, Kenya

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## **Entrepreneurship: Do Demand and Supply Barriers Matter?**

**Aneta Ptak-Chmielewska**

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**Abstract:** In this paper we analyse the basic characteristics of entrepreneurship in Poland. The support of entrepreneurship needs research such as firm survival in the context of business demography. This information type is crucial for developing a good policy supporting the enterprise survival. Simultaneously, the supply of

such information is insufficient. Recently the interest in firm survival in Poland has increased significantly. To cover the need for more detailed data a panel database was used. The survey covers the five-year history of enterprises' activity and the sample covers only enterprises employing initially fewer than 50 workers. In this paper the sample of only 1518 enterprises established in 2004 was selected and it was limited only to entrepreneurs (self-employed, not employing additional workers). The Gamma model with variables on enterprise and entrepreneurship level was applied. With regard to demographic characteristics of the main owner, a conclusion may be drawn that an enterprise with a highly educated owner who had managerial experience demonstrates a lower liquidation risk and increases the survival chances. Managerial abilities confirm the ability to convince a bank to grant a loan. Acquiring the loan to start the business makes the future success more probable. Investments in assets made during the first year of activity are also important, the survival chances are increased and this effect accelerates with time. The first year was the most important because at that time the main drive for being on the market was observed. With regard to supply barriers in the first year of activity, this effect is positive. It means liquidation chances are increased if the enterprise reports barriers, but the acceleration with time is in opposite direction. The supply barriers matter but rather at the beginning, their effect is not so important in the subsequent years.

**Keywords:** entrepreneurship, SME and microfirms, enterprises survival

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## **Cross-Country Entrepreneurial Growth Aspirations**

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**Abstract:** How do growth-aspiring entrepreneurs respond to their national contexts? Socio-cultural norms, income per capita and government regulations seem to underlie such responses. We associate the effect of the entrepreneurial responses, *growth responsive post-materialist, situated-optimism* and *resource-constrained* with these aspirations. An analysis of Global Entrepreneurship Monitor data from 2001 to 2010 found that low levels of regulatory support, socio-cultural norms do not affect a nation's entrepreneurial growth aspirations when income per capita increases. However, when there are high levels of regulatory support the opposite is true. We provide a nuanced perspective of how government regulations, societal norms and resource availability influence entrepreneurial growth aspirations. Policymakers who wish to target growth-aspiring entrepreneurs must ensure that they design regulations with short response times for permit and license applications, a light tax burden, increased predictability and regulations with which the entrepreneur can adequately cope. If these factors are

not evident, entrepreneurial growth aspirations will not be evident, even when socio-cultural norms are supportive and resources are readily available.

**Keywords:** entrepreneurship, growth, aspirations, institutions, regulations, norms

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## **Developing a Design Process for Mobile Applications for Logistics in the Construction Industry**

**Jonas Rundquist and Bengt Hjort**

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**Abstract:** Construction material suppliers have access to various types of information, such as construction data, price, production planning and logistics data. This information could be of great use for the different roles involved in a construction project if the right information is presented to the right role and through a user interface designed for best understanding by each role. This situation is not unique for the construction industry, but the specific context with temporary organizations (construction projects) that have to communicate with permanent organizations (construction material suppliers) combined with the fact that, at least, six roles (categories) of employees are involved in a construction project places challenges on the industry to achieve effectiveness. In this paper a process to develop a information interface between construction projects and construction material producers will be presented. Using an interventionist research approach with interaction designers involved, the process aim to guide the development of an application for exchange of information between the actors in the construction projects..

**Keywords:** design process, construction industry

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## **Effects of University-Industry-Government Collaboration on National Capacity of Innovation**

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**Abstract:** From an innovation perspective, collaboration between the different actors in a national innovation system (NIS) is imperative. Our concern is whether the Triple Helix idea of collaboration between universities, industry and government as conditional for innovation capacities is possible to estimate on the basis

of data. The present paper therefore uses the Global Innovation Index 2013 and the Global Competitiveness Index 2013 for that purpose. The included variables relate to the characteristics of universities, industries, government and innovation. Using these data for 128 countries, this paper suggests a model that demonstrates, by the use of linear regressions, that there are significant statistical effects of university, industry and governmental variables on University-Industry-Government collaboration (UIG). Likewise, results indicate effects of the UIG collaboration on the capacity of innovation. Our results thus confirm most, but not all, implications of the Triple Helix hypothesis in national innovation systems.

**Keywords:** national innovation system, university, industry, government collaboration, capacity of innovation, triple helix

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## **Financing Constraints and Growth of SMEs in Indian Punjab**

**Navjot Sandhu<sup>1</sup>, Javed Hussain<sup>1</sup> and Harry Matlay<sup>2</sup>**

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**Abstract:** This paper reports the preliminary results of an empirical investigation into access to finance and the financing preferences decisions of small and medium sized enterprises from Indian Punjab. This exploratory study examines data gathered through in-depth, face to face interviews, using semi-structured questionnaires amongst 122 matched SMEs located in Indian Punjab. Findings suggest the capital structure of SMEs in Indian Punjab is primarily influenced by aversion to external control and propensity to take risk. We also found that owners/managers showed a preference for more user friendly financing options, which operated on the element of trust and allowed them to remain in full control of their businesses. However with better networking ties generally SMEs owner/managers can access adequate external resources through informal channels. The financing preferences of owner/managers in the sample have been influenced by their perception of the relative strength and weaknesses of domestic finance infrastructures. The results of this research study are indicative of SME owner/managers' financing needs, attitudes and perceptions. Nevertheless this paper fulfils an identified need for studying how SMEs in emerging economies make the financing decisions necessary to expand and grow. Economies which provide sufficient financing support to SMEs generally enjoy a higher standard of living than the societies which don't. Thus the policymakers should be aware of how financing preferences and decisions made by SME owner/managers impact on the development of SMEs when developing mechanisms to support them.

**Keywords:** credit, borrowing, finance, entrepreneurs, small and medium-sized enterprises, collateral, India, financing preferences

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## **Innovation Through Conversation: The use of Knowledge Café in the Public Sector**

**Shawren Singh**

**University of South Africa, Florida, South Africa**

**Abstract:** It is an on-going challenge for large organisations to ensure that their key stakeholders effectively share knowledge because without this knowledge sharing it is hard for the organization and the stakeholders to realise their potential. One of the ways in which knowledge can be shared is through constructive and correctly directed conversations. Such conversations don't just happen. They need to be instigated and one of the most effective ways of doing this is through the Knowledge Café. A Knowledge Café is a gathering of individuals with a common interest who are prepared to explore ideas surrounding a topic through conversation in order to obtain a better understanding of the issues involved. This paper reports on a Knowledge Café that was conducted with public sector participants and other stakeholders. There were 28 participants from senior management who engaged in the two hour free Knowledge Café event. The following issues were highlighted from the discussions: gaps in management; challenges regarding e-Government systems; gaps in citizen centric systems; challenges within the civil service; and challenges within government. Participants found that the knowledge sharing experience was a useful way to develop a better understanding of the issues that affect the public sector.

**Keywords:** innovation, knowledge café, e-government, structured conversation, public sector

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## **A Systems Approach for Improvement of Innovation Development in Creative Industries**

**Rolandas Strazdas and Jurate Cernevičiute**

**Vilnius Gediminas Technical University, Vilnius, Lithuania**

**Abstract:** The increasing significance of innovation has resulted in the focusing of a considerable amount of attention and resources on innovation development. The process of innovation development is becoming much more sophisticated. The development of the creative industry sector has shifted the understanding of innovation and increased the importance of the creator and creativity. This article examines how the innovation development process can be improved in order to

increase efficiency and ensure the economic success of innovations developed in the creative industries. The article analyses different process improvement methods such as PDCA, DMAIC, DMADV and TOC. The strengths and weaknesses of these methods for improvement of the innovation development process are identified. Based on the analysis of existing improvement methods and the identified features of system innovation development, an innovation development improvement model was developed. An important feature of the model is the system approach, which requires a broader view of innovation development. Usually, it requires multiple skills and knowledge and can be accomplished only by a team of experts or even by multiple teams. The innovation development improvement model is presented in the article.

**Keywords:** innovation development improvement, system innovation approach, innovation efficiency, economic sustainability of innovation, open innovation, creative industries

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## **Strategies Employed to Support Regional Innovation and Entrepreneurship in Southern Africa**

**Thiru Naidoo-Swettenham and Juha Miettinen**

**Southern Africa Innovation Support Programme, Windhoek, Namibia**

**Abstract:** Entrepreneurship and incubation are pillars upon which a strong innovation environment can be built nationally. Entrepreneurship is at the heart of sustainable, organic growth for most developed, as well as transitioning and developing economies. Incubation programmes can help bridge knowledge, digital, socio-political and even cultural divides and help increase the availability, awareness, accessibility and affordability of financial, human, intellectual, and even social capital, the key ingredients of entrepreneurial success. Business incubators have often served as catalysts and even accelerators of entrepreneurial cluster formation and growth in many developed economies. Incubation is widely accepted as a successful model for start-up facilitation, providing the entrepreneur with the business planning, financial, legal, marketing and mentoring support that the emerging entrepreneur requires. The Southern Africa Innovation Support (SAIS) Programme which has been operational since 2011-2014, identified a critical need in the Southern Africa Development Community (SADC) region to address this shortcoming and focuses some of their work on incubation and entrepreneurship in supporting and developing a value chain across the entire incubation spectrum. SAIS aim is to support and enhance the capability of existing and new incubation intermediaries directly, something which seems to be neglected in some economies, thus enabling the incubation intermediaries to provide their incubatees with skills, facilitation, know how, technical advice and support in or-

der to create and maintain successful businesses. This paper reviews the incubation landscape in Botswana, Mozambique, Namibia and Zambia, looking for common challenges and problems and possible mechanisms for facilitation of support. We then highlight a few case studies on specific public and privately funded incubator intermediaries, the enabling environment they create across a variety of sectors, and strategies they deploy in their operations. Other facilitation mechanisms adopted by SAIS in supporting and enhancing the function of incubator intermediaries and the strategies deployed to improve their role in the incubation and entrepreneurship domain is also presented.

**Keywords:** innovation, incubation, capacity building, SMMEs, entrepreneurship

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## **Revolutionary Transformation of the Credit System in Education**

**Gulnura Taikulakova and Gulfira Lipich**

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**Abstract:** The scientific article is devoted to a radical change in the system of higher education. Currently in Kazakhstan are trained on credit technology, as our country has become a member of the Bologna process, adopting a declaration on a single educational space. But time dictates the conditions which will require innovative technologies that are based on business ideas, entrepreneurial projects. This requires radically revolutionary and even involves changes in the education system, growing future businessmen and entrepreneurs, instead of the existing academic bachelor's degree. The age of innovation dictates the rules designed to be implemented everywhere, as in industry, the service sector, and the educational system (Kotler and Murphy, 1981). An innovative model of higher education implies a fundamental change in the system of higher education, which completely eliminated qualification of specialists (Machado and Taylor, 2010). The four-year period of studies in undergraduate programs includes the traditional set of half-year semesters and the number of calendar weeks. Taking into account the need in business education, HEIs have to preserve economic specialization with several sectoral directions, after studying which graduates receive degree BSc in business entrepreneurship. The education system in the sector of higher and post-secondary education has undergone dramatic changes since the collapse of the Soviet Union. Linear technology was replaced by the credit four-year technology. Following international community, the Republic of Kazakhstan has actively integrated into the world educational space (Telegina and Schwengel, 2012). Institution of higher education of the new format should be oriented on creating entrepreneurial universities with the presence of business incubators - idea genera-

tors, a target for brainstorming, real culmination of a dream of the future entrepreneurs, where business projects should be gradually incrementally implemented stage by stage (Donohue, 2012). We have to highlight that economic analysis may be applied throughout society, as in business, finance, accounting, and government. It may also be applied to such diverse subjects as education, law, marketing, social institution, and science, by considering the economic aspects of these subjects (Chaffee, 1985, Aghion, 2008). Based on the significant role of economics for student, we encourage to leave the qualification of economist during transaction period from higher educational institute to the entrepreneurial university. The main objective of this paper is the approximation theory with practice, which involves a set of mechanisms to meet the demand for skilled labor. To achieve this goal requires radical transformation of higher education, which would ensure close cooperation between universities and the business community. For the successful employment of graduates, it is necessary to develop training programs that are best adapted to the needs of employers.

**Keywords:** higher education, credit system, innovation model

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# **PHD Research Papers**



# Women Entrepreneurship Development in Benue State: A Comparative Study of Tiv and Idoma Women, 1960-2012

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**Abstract:** The study on women entrepreneurship development in Benue State is emerging as evidence challenging the report that poverty has a female face in Africa by portraying the African-Nigerian woman as a key actor and major player in the economic arena whose role is rather unacknowledged and unaccounted for in official statistics of growth and development. The scarcity of statistics not only down plays the significance of women entrepreneurship especially in the informal sector but also poses a problem in quantifying with any precision the economic contribution of these activities to developing economies, particularly Nigeria. The study argues that the omission of small/informal businesses from economic accounting estimates significantly underestimates Gross Domestic Product and overestimates the share of population living below the national poverty line. The roles of micro, small and medium scale enterprises (SMEs) is considered as one of the major engine driving national economic growth and women's involvement in these contribute more than 97% of all enterprises, 60% of the nation's GDP and 94% of the total share of the employment. Women entrepreneurs have been known to be inclined towards business where they have most experience and knowledge. Women entrepreneurs have built their businesses through the twists and turns of economic, political, and military unrests. In Benue State for instance, the role of women as farmers, food processors and traders, fashion designers, soap makers, pottery makers, bead makers, hair-dressers, managers and proprietors of schools are increasingly being appreciated. These activities have generally been shown to be critical for income generation, employment, as well as economic growth and sustainability. Though, women are continuously presented as the deprived, marginalized and dependent population with no meaningful contribution to national/economic development. Given this background, the study focuses on women entrepreneurial activities in Tiv and Idoma areas of Benue state, beginning with how these has improved the lot of women in the area. The central argument of the study is that although women may not have come up very far in economic ladder, but they are certainly taking giant strides. It concludes that women entrepreneurship in Nigeria therefore, is the hidden natural resource that may present greater opportunities than oil or minerals in the long run. The methodology for this study is derived mainly from primary and secondary of historical data.

**Keywords:** women, entrepreneurship, informal/small enterprises, economic development

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## **Good Performing Enterprise (Co-Operative) With Social Venturing and Co-Operative Entrepreneurship Business Model (SVCE-bm) in Zambia**

**Moulen Siame and Gert van Dijk**

**Nyenrode Business University, Breukelen, The Netherlands**

**Abstract:** Social Venturing Economics (SVE) school of thought is new and still evolving. The proponents of SVE advocate social venturing and co-operative entrepreneurship business model (SVCE-bm) as the most appropriate tool for socio-economic development in developing nations with inadequate institutional framework to support the New Generation Co-operatives business model (NGC-bm). The SVCE-bm is a theoretical business model under development and is simply defined as multi-actor business architecture for value creation, delivery and capture. This paper attempts to investigate the existence of good firms in Zambia using SVCE-bm. The theoretical concepts underpinning SVCE-bm is new institutional economics and its branches - transaction cost economics, agency theory, and property rights. A case study design to investigate the existence of good SVCE-bm in Zambian firms using in-depth interviews was used. The desk research study method was used to compliment the case study also. The study has established that there is none completely similar to SVCE-bm but there exists SV-bm that are almost similar. The major departure is on exit strategy and ownership. In SV-bm enterprise, smallholder producers, co-operatives or MSMEs are contracted to supply agricultural commodities and there is no plan for them to assume ownership and running of value adding firms. The SV-bm enterprise promotes dependency syndrome such that if the enterprise were to close, the contracted stakeholder's economics and social prospects would come to zero. The SVCE-bm requires supportive environment and has potential for sustainable social economic development for developing economies especially in supporting smallholder producers, co-operatives, MSMEs to own value adding enterprise. The SVCE-bm has potential for replication in local government and ministry of agriculture in the development of co-operatives.

**Keywords:** social venturing and co-operative business model, new generation co-operative business model, investor owned firm business model, social venturing economics, transaction cost economics, new institutional economics, traditional co-operative business model. sustainable development, inclusive business

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# **A Methodology Concept of Online Marketing Management With a Knowledge Base of Interactions From Internet-Based Services**

**Zdenek Smutny and Stanislav Vojir**

**Faculty of Informatics and Statistics, University of Economics, Prague, Czech Republic**

**Abstract:** An effective management of a company's marketing activities in the online environment is very difficult to achieve. This is mainly due to the complexity of the environment and the interactions of human and artificial actors across internet-based services (e.g. social networks, forums). This article presents a methodological concept which would support the management of marketing activities in the environment of services on the Internet, taking these issues into account, as well as the socio-economic impact of the Internet as a current phenomenon. The methodology, suited particularly for small and medium enterprises, is based on three pillars: the theory of complex networks, online interactions modelling and genetic algorithms. From a methodological point of view, the presented concept is an artefact of the research design type, which is complemented by a practical application in the form of a web-based knowledge system. This tool presents interactions in the form of organized mind maps and there is also an option of a continuous evaluation of campaigns with the use of time difference. The proposed concept is a no-cost alternative to more expensive approaches based on data mining or big data, which also makes it useful for smaller companies.

**Keywords:** marketing, management, internet, knowledge base, interaction

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# **Work In Progress Papers**



# **Institutional Forces and the Written Business Plan: The Case of Technology Startups in South Africa**

**Richard Heslop and Kevin Johnston**

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**Abstract:** The written business plan has long featured as a keystone of entrepreneurship education and practice. As early as 1988, the writing of a business plan was regarded by leading educators as the most important feature of entrepreneurship courses. Outside academia, business plans are widely endorsed by government support agencies, angel investors, venture capitalists, and institutional lenders. Ostensibly in support of the practicing entrepreneur, an entire industry of advisory resources has emerged in the form of books, websites, courses, consultancies, and even business plan competitions. For the rational entrepreneur, the investment in the creation of a business plan should lead to some economic advantage in terms of measurable business value. Conversely, we expect a lack of planning to lead to poor performance of the young enterprise. Given the ubiquity of business plans, the de facto accepted hypothesis holds that among a sample of entrepreneurs, those with business plans should outperform (e.g. survival, profit, sales, growth etc.) those without. Yet, empirical attempts to confirm the assumed relational causality in the direction from pre-startup planning to performance have yielded findings that are mixed, inconclusive, fragmented and contradictory. Researchers are discussing the value of the business plan in creating new ventures. In the absence of clear evidence to substantiate the economic rationale for pre-startup planning, researchers have argued the need to better understand why entrepreneurs choose to write business plans. The theory of institutionalisation has been proposed as an alternative to economic rational in understanding how written business plans attain ‘taken for granted’ status. This research aims to explore how institutional pressures lead towards the written business plan in the specific case of the South African technology entrepreneur.

**Keywords:** entrepreneurship, business plans, technology-based ventures, theory of institutionalisation

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## **Exploring Coping Strategies of Entrepreneurship: The Issue of Business Transfer - a Pilot Study**

**Edwin Weesie and Lex van Teeffelen**

**HU Business School Utrecht, Utrecht, The Netherlands**

**Abstract:** This paper explores 14 traditional coping strategies by Carver et al. (1989) in an entrepreneurial setting of 880 business owners. Findings indicate that business owners in the process of selling their business may cope differently with stress than business owners that are not. They specifically seem to cope more by restraint & religious coping and active coping in the form of mental disengagement.

**Keywords:** coping strategies, business transfers, entrepreneurs

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# **Abstracts Only**



# Profile of the Successful Entrepreneur - Similarities and Differences Across Three Continents

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**Abstract:** Entrepreneurship appears to be the engine of economic growth across the globe. This study looks at across three continents to determine similarities and difference in entrepreneurial profiles and support across Africa (South Africa, Europe (Poland) and Asia (India). (The basic questions, we want to answer in this paper: are following (i) What is the profile of the successful entrepreneur and are there any similarities or differences across three continents? (ii) Which policies and national actions support the success of the start-up entrepreneurs? We start with definitions of SME and present some data and figures about SME comparing to all enterprises, and survival of SME comparing to all enterprises. As a background we present comparison based on macroeconomic database and figures with short comment on that. Next we describe programs supporting small and micro enterprises setting up and developing businesses barriers reported. In the last step we describe the profile of the entrepreneur: gender and race differences - in the context of programs and policies. All our analysis are based on data available for three countries: South Africa, Poland and India. Those countries represent three different continents which is the most attractive and innovative part of our study. In our paper we conclude with the answer for basic questions raised at the beginning of the paper.

**Keywords:** entrepreneurship; gender inequalities, policies supporting entrepreneurship

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## Long Term Effects Human Capital on the Performance of High Technology New Ventures

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**Abstract:** Since Adam Smith (1776) argued that the acquired and useful abilities of individuals provided a source of revenue and profit, it has been acknowledged that individuals possess a stock of skills, knowledge and experiences that can benefit organizations (Ployhart & Moliterno, 2011). Building on the seminal work of Becker (1964), theorists have suggested that human capital embodied in the aggregate experience, education and skills of employees can be a firm's source of competitive advantage. Much of the research in the economics literature focused

on the aggregate human capital of the entire labor force of the firm. Strategic management scholars, however, have emphasized the importance of the human capital of the top management team and/or the board of directors. Upper echelons theory (Hambrick and Mason, 1984) argues that characteristics of the management team have a profound influence on the performance of companies. Characteristics such as education and functional expertise are conjectured to be determinants of performance because they influence decision making. Strategy theorists have also noted the importance of the knowledge and skills of board members to firm performance, but their human capital has received little attention in corporate governance literature, which has focused more on board structure and agency issues. Few studies have simultaneously examined the performance effects of the human capital of the CEO, management team and board. My objective was to empirically examine the nature of the relationships between human capital and long term firm performance. Empirical analyses were based on a unique dataset for a sample of 198 publicly traded, technology-based new ventures. These are defined as firms that were less than 6 years old and involved in industries defined by the National Science Foundation as high-technology sectors. New ventures were a particularly good sample for studying the phenomena of interest in this study because their simple structures, lack of diversification and smaller management teams helped reduce confounding effects that might be found within a sample of large, complex, established firms. Management team and board data were collected from IPO prospectuses. Industry data, included as controls, were collected entirely from archival sources. Growth data were collected from COMPUSTAT. Survival data were collected from SEC filings in the Edgar database and confirmed using various other public sources. OLS regression, logistic regression and hierarchical regression were used to examine relationships between human capital and performance. In this study, bankruptcy could not be predicted. Models discriminated between bankrupt, acquired and active firms but those results appear likely tautological and warrant additional examination. Human capital of the founding CEO and early team had long term effects on firm performance. Board capital had little impact. Education and marketing experience were the most important forms of human capital while industry, technical, finance and prior startup experience were also significant. This study extends understanding of human capital in two important ways. It examines the long term effects of human capital on firm performance. Secondly, it examines the relative impact of the human capital of the CEO, early management team and early board of directors.

**Keywords:** Human capital, Long-term performance, High-technology new ventures

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# RAF on the Road - Innovative Service Delivery to the Public

**Hein Spingies**

**Road Accident Fund, South Africa**

**Abstract:** For many years it was perceived that victims of road accidents could only launch a claim against the Road Accident Fund (RAF) through lawyers. RAF has never been a 'lawyers only' business and in addressing the challenge RAF had to break this perception. Finding a way of increasing access to the RAF's services, especially for the poor, explaining the advantages of coming directly to the Fund, increased regional visibility and exposure with the objective to cut out the middle-man and ensuring more money in the claimants pockets lead to the solution (innovation): RAF on the Road. Driven by the principles of service delivery and excellence, the main objective of RAF on the Road is to reach and assist as many claimants countrywide as possible. This required the organisation to not only be at the forefront of service delivery, but also to be innovative, visible, accessible at all times and within the reach of all the claimants in far-flung communities. The goal was to re-write the legacy of the RAF and present ourselves to our stakeholders as an Institution of Excellence by taking RAF s service offering to the people. 'RAF on the Road' is ultimately about reaching the people who would otherwise not have had the opportunity to reach us. Based on this premise, various poor communities throughout the country are targeted. The project 'RAF on the Road' received the 1st runner up award from the CPSI for public service deliver as well as the National Batho Pele Excellence awards for best implemented project 2013/14. Currently it is being considered for the UN Public Service Awards 2015 having been selected for the first round of evaluations.

**Keywords:** innovation, service delivery, road accident fund, people, crash victims, claims

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# **Knowledge Café**



## **Knowledge Café at the ICIE conference 2015**

Innovation and Entrepreneurship: How can academics focus research efforts to better serve the business and public sector communities?

### **Focus of the Knowledge Café**

For innovation and entrepreneurship to thrive, the economic environment has to be sufficiently stable. However, with challenges such as the South African energy crisis, there is a need for creative solutions to mitigate and manage these challenges and this also provides an opportunity for academics to refocus their research.

This interactive Knowledge Café will facilitate a knowledge network of academics, practitioners and government officials with the aim of seeking creative ways of refocusing academic research to better serve the business and public sector communities. The Knowledge Café will address the following question:

How can academics focus research efforts to better serve the business and public sector communities?

### **Background to a Knowledge Café**

One of the ways of sharing knowledge is through constructive and correctly directed conversations. Such conversations don't just happen. They need to be instigated and one of the most effective ways of doing this is through a Knowledge Café. A Knowledge Café may be defined as a gathering of individuals with a common interest who are prepared to explore ideas surrounding a topic through conversation in order to obtain a more complete understanding of the issues involved.

In effect a Knowledge Café can be seen as a networking opportunity for a group of people who have a common interest and who will be able to benefit from talking and listening to each other. The individuals who will benefit from a knowledge café need to have an open mindset, have a common objective and have similar shared values and be people who like to collaborate in their working relationships.

A Knowledge Café is conducted by dividing a group of people into smaller groups and allowing them to converse openly about a topic. There are a few rules about how they converse which are related to the fact that they are encouraged to listen to others before expressing their point of view. A Knowledge Café facilitator will get the event going and after a timed period, normally between 60 to 90 minutes the groups are called back together and their insights are shared. The group then creates a summary statement as to what they have learnt from the shared conversations.

### **Why is this interesting for Innovation and Entrepreneurship?**

Currently there appears to be little alignment with academic research initiatives and business and public sector expectations. Furthermore the business and public sector communities are weary to actively engage with academic research because the process is shrouded in mystery. A Knowledge café can open up people's horizons and develop a better understanding of each other's expectations and needs. It can also produce levels of cooperation between academe, business and public sector that has not been seen before. These new levels of understanding can lead to new innovative initiatives and entrepreneurial opportunities.

### **Knowledge café organiser:**

Dr. Shawren Singh, University of South Africa

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# Extra Pages



# The importance of paper citations and Google Scholar

As an academic researcher you will know the importance of having access to the work of other researchers in your field as well as making your own work available to others. In the area of academic publishing this is achieved through citation indexing. There are a number of bodies that undertake this task including Thompson ISI, Elsevier Scopus and Google Scholar – to name just a few.

At ACPI we do all we can to ensure that the conference proceedings and the journals that we publish are made available to the major citation bodies and you can see a list relevant to this conference on the home page of the conference website.

However, it is also important for you, the author, to make sure that you have made your work available for citation – particularly with organizations such as Google Scholar. We are providing you here with the simple steps you need to take to do this and we would ask you to take the time to upload your paper as soon as you can.

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# Research Jotter

Research ideas can happen at any time –  
catch them in writing when they first occur















