

IJBED

ISSN 2051-848X (Print) ISSN 2051-8498 (Online)

International Journal of Business and Economic Development



Volume - 4

Number - 3

November - 2016

International Journal of Business & Economic Development is
an Open Access Journal of the Academy of Business & Retail Management (ABRM)

International Journal of Business & Economic Development

The Publisher

The Academy of Business & Retail Management pioneers in publishing new scholastic journals - in print and on line- in the areas of business, management and development. The current journal- IJBED- is presented to the readers to help promote application of acquired knowledge and understanding of the theoretical linkages between business and economic development so that less flawed and more pragmatic and sensible policies and strategies can be adopted by practitioners both at organisational as well as national levels. It is a peer reviewed journal and serves as a main research platform to uphold the philosophy the Academy stands for. ABRM, therefore, prides itself in ensuring that the high quality and professional standards expected of its journals are adhered to by pursuing a full double-blind refereeing process for all articles submitted to it for publication.

Copyright

Authors are requested to make sure that submitted article is neither published nor simultaneously submitted or accepted elsewhere for publication. IJBED only accepts and publishes articles for which authors have agreed to release under the terms of the Creative Commons Attribution Licence (CCAL) version "CC BY 3.0". Please note that authors retain ownership of the copyright for their article, but authors allow anyone to download, reuse, and reprint, modify, distribute, and/or copy articles in IJBED, so long as the original authors are source are cited. No permission is required from the authors or the publishers.

Subscriptions

The IJBED is published three times a year in March, July and November. Annual subscriptions are on offer for printed version of the journal to individual researchers, students and institutions and entitle them to issues of the journal once published.

Student and individual subscriptions:

UK/EU	£105 plus postal charges of £50
Rest of the World	£120 plus postal charges of £60

Institutional Subscriptions:

UK/EU	£150 plus postal charges of £50
Rest of the World	£180 plus postal charges of £60

Single issue price:

UK/EU	£50 plus postal charges of £20,
Rest of the world:	£60 plus postal charges of £25

ABRM may be contacted for dispatch prices for special or recorded delivery. All orders from outside the UK should be accompanied by subscription fees payable either by bank deposit into The Academy of Business and Retail Management, HSBC, Account: **71468979**; Sort code: **40-42-28**; cheque or banker's draft made payable to The Academy of Business & Retail Management.



International Journal of Business and Economic Development

Volume 4 Number 3 November 2016

The International Journal of Business and Economic Development (IJBED) is approved for listing in EBSCO Host, ProQuest, DOAJ and Cabell's Directory of Refereed Publication

www.ijbed.org

Mission Statement Academy of Business and Retail Management (ABRM)

The Academy of Business and Retail Management (ABRM) seeks to contribute to progress and prosperity through research and managerial excellence. It publishes prominent academic journals *each year*, as well as organizing international academic conferences and delivering high impact training. ABRM is committed to advancing research, education, theory and practice in the field of management. Its various journals provide a respected vehicle for theoretical insights and developments in the field of business, management and economic development. Articles published in these journals empirically examine theory-based knowledge. Its conferences are truly international and aspire to nurture young aspiring academics and well as to ensure interaction with some of the finest minds from academia. ABRM is committed to working to uphold the highest standards of probity and academic rigor in all that its endeavours.

Mission Statement International Journal of Business and Economic Development (IJBED) (Print) ISSN 2051-848X (Online) ISSN 2051-8498

The mission of this journal is to publish empirical research that tests, extends or builds business management and economic theory and contributes to business and economic development. All empirical methods including qualitative, quantitative, field, laboratory and combination methods are welcome. In order to be published in IJBED, a manuscript must make strong experiential and theoretical contributions and highlight the significance of those contributions to the business management and economic field. Thus, preference is given to submissions that test, extend or build strong theoretical frameworks while critically examining issues with high importance for business management and economic theory and practice. The IJBED is not tied to any particular discipline, level of analysis or national context. IJBED is committed to working to uphold the highest standards of probity and academic rigor in all that its endeavours.

The International Journal of Business and Economic Development (IJBED), the editors, the Editorial Board are not responsible for authors' expressed opinions, views, and the contents of the published manuscripts in the IJBED. The originality, proofreading of manuscripts and errors are the sole responsibility of the individual authors. All manuscripts submitted for review and publication in the IJBED go under double-blind reviews for authenticity, ethical issues, and useful contributions. Decisions of the reviewers are the only tool for publication in the IJBED. Final decision, is, however, taken by the editorial team at IJBED

IJBED reserve the rights to add, amend, modify, or delete its rules, policies, and procedures affecting its relationship with contributors as deemed necessary by the administration. Any such amendment, modification, addition, or deletion shall not be Reconsidered a violation of the relationship between ABRM and contributors.

International Journal of Business & Economic Development (IJBED)

Editor and Editorial Board

Editor -in-Chief

Mark T Jones

Director, Centre for Innovative Leadership Navigation (CILN), UK

Editorial Board Members

Prof. Fabrizio Pezzani

Bocconi University, Italy

Prof. . Michael Wernerheim

Momorial University of Newfoundland,
Canada

Prof. Radhika Lobo

Birla College of Arts, Science and Commerce,
Kalyan, India

Dr Youngmey Bentley

University of Bedfordshire, UK

Prof. Rustem Nureev

Financial University under the Government of
RF, Moscow, Russia

Prof. Dr. R. Ganesan

Chairman & Presidium Chair: National
Foundation for Entrepreneurship
Development (NFED), India

Prof. Ahmed A

Department of Accounting and Finance
Technology, ATB University, Bauch, Nigeria

Prof. Ayman H. Metwally

Arab Academy for Science & Technology and
Maritime Transport (AASTMT), Alexandria,
Egypt

Prof. Deepraj Mukherjee

Kent State University, USA

Prof. Rukmani Gounder

School of Economics and Finance, Massey
University, New Zealand

Prof. Lothar Auchter

University of Applied Science, Kaiserslautern,
Germany

Prof. Anna Ianoszka

University of Windsor Chrysler Hall
Windsor, Ontario, Canada

Prof. Debjani Banerjee

Vivekanand Institute of Management Studies
and Research, Mumbai University, India

Prof. Belkacem Djamila

ENSSEA (ECOLE Nationale Supérieure de
Statistiques ET d'Economie Appliquée) -
Koléa, Algeria

Prof. Devaraja T S

University of Mysore, Hassan, Karnataka,
India

Prof. Mudrajad Kuncoro

Faculty of Economics and Business, Gadjah
Mada University, Indonesia

Volume 4 Number 3 November 2016

(Print) ISSN 2051-848X**(Online) ISSN 2051-8498****Statement of Editorial Policy**

The IJBED is a scholarly and refereed journal that provides an authoritative source of information for scholars, academicians, and professionals in the fields of business and economic development. The journal promotes the advancement, understanding, and practice of business & retail management. Manuscripts offering theoretical, conceptual, and practical contributions are encouraged.

Aims and Objectives

IJBED is a peer reviewed journal and is a research publication platform for international scholars. Their research can be in any aspect of business and economic development covering the interests of developed and emerging countries alike. The Journal seeks to reach a worldwide readership through electronic media. The main aims of the Journal are:

- Publish high quality and scholarly empirical based research papers, case studies, reviews in all aspect of business, management and commerce with theoretical underpinnings.
- Offer academics, practitioners and researchers the possibility of having in depth knowledge and understanding of the nature of business and management practices and.
- Create a forum for the advancement of business and economic development research.

Readership

The readership for this journal includes academics, researchers, professionals, executives engaged in business and economic development, policy makers, government officials, central, private and public banks and financial institutions, NGOs, micro-financial institutions, and any one has interest in business and economic development.

A statement about open access

IJBED is an open access journal which means that all content is freely available without charge to the user or his/her institution. Users are allowed to read, download, copy, distribute, print, search, or link to the full texts of the articles in this journal without asking prior permission from the publisher or the author. IJBED is committed to publish all full text articles online for immediate open access to readers and there is no charge to download articles and editorial comments for their own scholarly use.

International Journal of Business & Economic Development (IJBED) Volume 4 Number 3 November 2016

Editorial Comments

"Economic development" is a phrase rich with associations, not all of them positive. Vast disparities in opportunity and wealth mean that for many any supposed trickle down is either infrequent or non-existent. There are many instances where there is clear evidence of the propensity that mankind has to not only to fail to learn from mistakes, but to repeat them with alarming regularity. To some it appears that the concerns raised in such seminal works as Rachel Carson's *Silent Spring* and E.F. Schumacher's *Small is Beautiful: Economics As If People Mattered* have gone unheeded. We can all benefit from visiting or re-visiting such books, for in so doing we may come to appreciate the degree of our own fallibility.

This edition of the *International Journal of Business & Economic Development (IJBED)* contains eight scholarly articles conforming to the principal objective of the journal, namely the dissemination of both applied and theoretical knowledge. The papers provide a stimulating insight into a range of issues, both with local and global significance, and afford us an opportunity to appreciate the way in which various sectors and economies are wrestling with various challenges. The findings of a number of these papers are significant not only for academicians, but also for professionals, policy makers and those responsible for local, regional and national strategy. It is evident that whilst there is clear evidence of mankind's ingenuity in a range of circumstances, there is also a wealth of evidence presented herein of a lack of foresight in a variety of sectors and areas of human endeavour. Short-termism continues to blight lives and impoverish entire nations and the world as a whole. As ever the Editorial Board is grateful to the contributors for making IJBED the platform by which they have chosen to put their research into the public arena, and trust that they will use their good offices to ensure that others do the same.

The first paper of this edition is by B. Kuch and is entitled: The impact of operational closure and reflection on juncture system. Reassuringly this paper anchors itself firmly in relevant theory, whilst aspiring from the outset to develop an appropriate model that explains and improves the managerial process. Central to the research is the contribution played by reflection, an activity that for all its benefits requires honesty, time and space. Herein lies one of the greatest challenges, how does an organisation help shape the optimal conditions for meaningful reflection? For many, what might be desirable for an ideal world often appears utterly impractical for a reality that sees the pressures of quarterly targets, periodic organisational restructuring and day to day firefighting in order to survive another day. Some organisations appear permanently frenetic, whilst others are enveloped in a sense of *ennui*. The human dimension provides that permanent variable that is the *je ne sais quoi* that has a habit of knocking theories and models off kilter.

Kuch is quite right to emphasise the role of communication, yet even here working patterns are changing so rapidly that it is difficult to anticipate where things will be in five years' time let alone by 2050. That said, we must endeavour to make the most of the here and now, and a clearer understanding of operation dynamics and the role of operational closure has to be a good thing. Considerable play is made of various synergies, yet maybe we all would benefit from reflecting upon the symbiotic relationships that exist both within and without an organisation. The workplace is often replete with examples of mutualism and commensalism, and if we are honest there is usually some evidence of parasitism. Our ability (or not) to take an holistic approach to viewing an organisation surely will inform both our capacity for meaningful

reflection, but also the ideas and solutions that we contribute to the daily discourse in respect of taking matters forward.

There is a tendency in academia to reach for the low hanging fruit, a fact that results in seemingly endless research and case studies that focus on major multinationals. Thus our second paper is all the more refreshing as it endeavours to elucidate the informal economy. **Informal economy in emerging economies: not a substitute but a complement! - Deepraj Mukherjee** offers the reader some fascinating insights into the reasons for the existence of the informal economy, both in developed and developing nations. Whilst there is a growing body of research into this 'sector', it is multifaceted and as such requires a nuanced and careful handling. What was once dubbed 'the Black Economy' is more often than not a series of various shades of grey. Context is king, especially in societies where judicial redress is near non-existent. Mukherjee in his attempt "to fill the lacuna that exists" in this regard uses his extensive literature review and cogent analysis to explain that matters are not only more complex than they might at first seem, but also more worthy of our attention. The section on "Existence" and "Persistence" deserve particular attention.

Whilst there is some mention made of carers, maybe there was scope to acknowledge the immense economic contribution that they make. In 2015 a joint report by Carers UK and the University of Sheffield entitled *Valuing Carers 2015 - the rising value of carers' support* claimed that carers saved the UK £132 billion a year. Similarly the Office for National Statistics have calculated that the value of unpaid work in the UK is £1.01 trillion.

When it comes to informal work there is a general assumption that this is largely illegal, yet this research clearly demonstrates that the picture is much more complicated than this. Add in issues such as bureaucracy and corruption and it is evident that the topic has dimensions that warrant a concerted effort to avoid simplistic conclusions. Those that operate in the informal economy are not necessarily on the margins, and all need to be mindful of the actions and edicts of those in authority. Recent actions in relations to 100 bolivar notes in Venezuela and demonitising of certain denominations of Indian rupee notes underscores the perils that exist.

Mukherjee makes clear that there is a symbiotic relation between the formal and informal economy. In many respects the informal economy is in rude help, and he concludes with conviction that in some respects it has the potential to outperform and outgrow the formal economy. With that in mind maybe we all need to take the sector far more seriously.

The ability to develop and perfect existing structures, systems and mechanism is something that speaks volumes of man's capacity for progress. In various fields of endeavour there is a constant quest to reduce risk and optimise the means by which informed decisions can be made that results in a competitive advantage, and potentially greater profit. The third paper of this edition fit neatly into such an ambition. **An enhanced artificial neural network for stock price predictions - Ma, Huang & Kwok.** The design and use of an information processing paradigm offers a means by which modelling can be deployed as a means of stock price prediction. Process enhancement and product fine tuning tells us as much about human ingenuity, as it does about the factors that have the capacity to throw calculations out of kilter. In 2016 we have plenty of examples of experts being confounded at nearly every turn, thus any means that can drill down on available data and enable reason extrapolations, has to be of value. As for what makes up "reasonable extrapolations" that is another avenue for research altogether.

Rwanda has in the minds of many become synonymous with inter-ethnic hatred and genocide. For all that has gone before the country has made extraordinary progress in a number of areas of endeavour, and is certainly worthy of a number of case studies. It might surprise many to hear that Rwanda has the highest percentage of women legislators of any country in the world, although serious gender imbalances still persist. Thus the next paper is especially

pertinent: **Promoting gender equality in access to microcredit through flexible lending approaches of female targeting MFIs. Evidence from Duterimbere MFI of Rwanda - Mukamana, Sengendo&Okiria.** This paper highlights a number of challenges faced by women when it comes to accessing micro finance, more often than not these results come about due to gender stereotyping and the fact that male designed business models and services take insufficient note of the reasons why women may wish to access finance in the first place. The point about rural women being excluded, marginalised or overlooked is well made, and whilst Rwanda generally has a better record than most in regards to gender, processes still need to be further streamlined. The issue about collateral is an interesting one, as is the fact that all too often women are offered very small loans, a fact that in some cases would not happen to men. In patriarchal societies men still have a hold and the issue of forms requiring a signature by a spouse is very telling.

The company studied here demonstrates a willingness to adapt, whilst this is heartening, it must be remembered that is often the exception and not the rule. Rural communities remain significantly disadvantaged, a point further underlined in the Rwanda Financial Sector Strategy (http://www.minecofin.gov.rw/fileadmin/templates/documents/sector_strategic_plan/Financial_Sector_Strategic_Plan_June2013.pdf). Whilst progress is being made, institutions clearly need to be far more pragmatic and responsive to the needs of various stakeholders. That said, it would have been interesting to have any available data on how the loans being sought by women are being used, then again, maybe that it is somewhat outside the scope of this particular research.

For the next paper we move to the issue of procurement, a topic that can be a thorny one, not least because theoretically things should be straightforward, and yet the situation in reality never seems to be quite as clear cut as it might be. **How does procurement capacity maturity affect e-Procurement adoption and leverage purchasing in supply chain - Pongpanga Pongsuwan** is a paper that underscores the centrality of procurement in business operations. Whilst great play is made of the importance of e-procurement, we would all too well to remember that the lion's share of purchasing is still paper-based. Problems concerning the compatibility of systems are widespread, as is the challenge of the fact that not all enterprises can afford to upgrade ageing or obsolete systems. E-procurement is essentially involves deploying a comprehensive integrated IT network, and as such the challenges should be evident. Such systems and processes are replete with security and data protection issues, and are often dogged by the use of different systems. Furthermore efficiency and effectiveness is highly dependent upon personnel competency. This paper highlights the role of investment, for the size of spend would appear to yield significant returns. Such investment is often spasmodic in nature, and here in lies the danger of disconnect and misalignment. Convincing those in leadership roles to sustain and where possible increase investment is a Sisyphean task.

As we survey the employment landscape there is clear evidence of change. Many traditional areas of employment such as banking are shedding many thousands of jobs as technological innovation sees more and more customers banking online. Similarly others sectors are seeing certain roles replaced as a result of automation, and all the signs are that this trend is set to continue. Traditional those who work in the arts and creative industries have been used to less conventional employment methods, yet more often than not this sector is invariably overlooked when it comes to meaningful research as per its contribution to the wider economy. The next paper offers some new and in some respects surprising insights into this sector. **The economic role of the cultural and creative industry in Europe in the years of crisis 2008-2012 - Slawomir Kotylak** seeks to examine some of the drivers in the design and creative industries with a view to seeing how this sector can be developed further, and possibly help create

employment opportunities for those who in former times might have opted for supposed areas of employment. Kotylak makes a compelling case for a wider appreciation of the contribution being made by this often overlooked sector.

Whilst the analysis takes as its focus the years 2008-2012, the findings have a relevance to the debate post-Brexit, especially as the UK accounts for just under a quarter of all activity in the EU. Germany performs far less well and this provides considerable food for thought in relation to the prevailing mind-set and willingness to embrace degrees of nonconformity and originality. The paper has a clear message in regard to funding, with this sector consistently being underfunded. There seems to be something of an explanation here, if indeed wider society has yet to appreciate the contribution being made by design and creative sector, then maybe herein lies the reason why those providing access to funding streams are largely ambivalent or indeed appear risk averse. There is also the issue of tangible outcomes, something that is not always as concrete when it comes to the creative sector.

Countries that have traditionally languished well down the league table when it comes to creative and design sector would do well to explore further what the likes of the UK, Italy and the Nordic nations are doing that ensures that have such a broad and fertile base.

The penultimate paper of this issue is: **The impact of the Kingdom of Saudi Arabia's joining the World Trade Organization (WTO) on local marketing of national products - Najah Hassan Salamah.** The decision to begin the process of seeking to join the WTO is a momentous one, rich with possibilities, but equally charged with a whole panoply of responsibilities. No country undertakes the process likely, and it is imperative that the process will not be without some degree of discomfort. Inevitably members of such a process comes at a price, and often there are foreseen and unforeseen costs for local businesses. Saudi Arabia's skewed economy is already endeavouring to wean itself off its near total dependence on petroleum related industries, and by exposing itself to tariff free trade is certain to put certain sectors under new strains once they have to face intense competition. Whilst this study appears to highlight a general welcome to the country's desire to become a WTO member, it also makes clear that Saudi companies will have to raise their game. As things stand there are substantial regional disparities, and these would appear to have been largely overlooked.

In trading terms Saudi Arabia has been used to wielding a certain amount of power, something that was recently visible in its unilateral decision to halt live animal imports from Somaliland and others parts of the Horn of Africa. Being part of the WTO may well prove to be a veritable cold shower to some Saudi businesses, not least because for years they have been cossetted and shielded by the Saudi state. From a benchmarking and viability perspective the process is likely to be a healthy, if challenging one. As for the issue of demographic changes, especially a growing population, this should ring alarm bells, especially in the light of rising youth unemployment and under-employment, a fact that the Royal House and those it appoints foolishly tends to downplay. I am pleased to see *Vision 2030* (<http://vision2030.gov.sa/en>) mentioned in this paper, this document provides some useful pointers about future priorities, but in so respects it is all the more revealing for what has been omitted as to what has been included.

Having earlier made mention of E. F. Schumacher it is fitting that the final paper of this edition should take as its focus quality of life and human happiness. So enslaved have societies become to pursuit of profit and material gain that we have become blinded to those dimensions that have a lasting worth, and which bring an inner calm that is beyond price. **Impact of economic development on quality of life and human happiness: a study on urban socio economic classes of suburban Mumbai - Debjani Banerjee** raises some extremely important points that those who frame the current socio-economic debate actively sidestep. Whilst Banerjee

acknowledges the importance of economic development as a key dimension of development, it is evident that conventional thinking, I deliberately used the word 'thinking' rather than 'wisdom' eschews the spiritual and the long term. Some believe that society has become more and more prescriptive and has shed the spiritual along with vernacular dress. The fact that this paper makes mention of a meaningfully creative life should jolt us all. Few organisations and institutions are concerned about anything being meaningful, and cynics might say that the only creative element is the accounting that takes place. A paper of this nature is a challenge for us to reassess the priorities, especially in regards to taking the long view, something which society seems to have utterly failed to do, hence the manner in which it lurches from one crisis to another.

For some in leadership roles the mere mention of 'well-being' causes them to roll their eyes. Anything that smacks of the spiritual often elicits strong, even violent reactions from those who have an overtly secular agenda. That said, it does seem rather odd that companies are quite willing to accept the importance of work life balance, yet are troubled by any exploration of human happiness. By incorporating various extant indices this paper provides some useful starting points, which themselves are telling about what is currently not included. The criteria features in the Fragile States Index (<http://fsi.fundforpeace.org/>) provides some useful pointers of how things might be calculated differently. Rather than dismissing that which challenges our current way of doing things, we would do well to look afresh, and in so doing we might well begin the journey to taking a far more holistic approach one that sees us profit in ways that we have rarely done before.

So much of how we act is based on our ways of seeing, yet one of the greatest challenges we face is learning to look as well as see. It behoves us to endeavour to see the world differently, and to read that which surprises and challenges our preconceptions and misconceptions. If small is indeed beautiful, maybe we can make a start by looking at what some of the smaller countries are doing, in that respect: *The success of small countries and markets* (Natella & O'Sullivan, 2015) makes for an interesting read - See:

<http://publications.credit-suisse.com/tasks/render/file/index.cfm?fileid=EA9D1EC6-FABF-0E39-3FD0E5B31ED70F48>



Mark T Jones

Editor-in-Chief of the *International Journal of Business & Economic Development (IJBED)* and Director of the Centre for Innovative Leadership Navigation (CILN), London, UK

International Journal of Business & Economic Development (IJBED)
Volume 4 Number 3 November 2016
www.ijbed.org

Contents**Editorial****Articles****Page
no.**

The impact of operational closure and reflection on juncture systems Benjamin Kuch	1
Informal economy in emerging economies: not a substitute but a complement! Deepraj Mukherjee	16
An enhanced artificial neural network for stock price predications Jiixin Ma; Silin Huang; S. H. Kwok	28
Promoting gender equality in access to microcredit through flexible lending approaches of female targeting MFIs: Evidence from Duterimbere MFI of Rwanda Liberata Mukamana; May Sengendo; Edith Okiria	33
How does procurement capability maturity affect e-Procurement adoption and leverage purchasing in supply chain Pongpanga Pongsuwan	45
The economic role cultural and creative industry in Europe in the years of crisis 2008-2012 Sławomir Kotylak	55
The impact of the joining of Kingdom of Saudi Arabia for World Trade Organization (WTO) on local marketing of national products Najah Hassan Salamah	64
Impact of economic development on quality of life and human happiness: a study on urban socio economic classes of suburban Mumbai Debjani Banerjee	75

The impact of operational closure and reflection on juncture systems

Benjamin Kuch

University of Stuttgart, Germany

Graduate School of Excellence advanced Manufacturing Engineering (GSaME)

Keywords

Business Strategy, Case Study Design, Operational Closure, Social Systems, Strategic Change, and System Dynamics.

Abstract

Business organisations can be seen as social systems encompassing multiple scales. The more functionally differentiated a system landscape becomes the higher the need to coordinate different processes between these systems is. This helps to develop sound business strategies supporting the identification of synergy potentials. Induced by turbulent markets, especially multinational enterprises have to continuously adapt their strategies and introduce new junctures between parts of their organisations. The current article contributes to the effective management of those junctures whilst adopting a systems theory perspective. Novel insights on the coordination of strategic change processes, which are most relevant to businesses in order to implement new strategies, are derived from a system dynamics model. They are subsequently applied to a single case study in the medical device industry for the purpose of discussing implications for international enterprises. It is shown how the concepts of operational closure and reflection impact on the junctures between complex social systems. Therefore, it is argued that the analysis of the systemic communication patterns should be considered an integral part of any strategic change process within multinational enterprises.

Moreover, the findings are generic enough to be transferred to the regional level as well. The presented approach on the coordination of complex social systems provides valuable impulses, even if the involved systems come from the political or scientific sector. Hence, the investigation of mixed systems coordination is suggested to be part of a future research agenda.

1. Introduction

Business organisations are often described in the literature on the basis of systems theory (Bullinger et al., 2009; Westkämper and Zahn, 2009; Schenk et al., 2014; Wiendahl et al., 2015). Especially against the backdrop of turbulent markets, the changeability of socio-technical structures becomes one of the most vital managerial capabilities with a great impact on organisational performance (Westkämper and Zahn, 2009: 47). The ongoing functional differentiation within the economy and society in general leads to a multitude of structural couplings between communication systems (Luhmann, 1997: 618). This also increases the importance of the junctures between systems due to possible synergy potentials. Given this context, it seems necessary to consider businesses as complex social systems which are operationally closed and structurally bound to their environment. Social systems are constituted by selection processes that reduce complexity (Luhmann, 2005a: 10), and especially organisations continuously try to reduce the contingency they are based on (Schoeneborn, 2011: 671). Moreover, an organisation's communications follow an idiosyncratic and selective logic (Willke, 1994: 59-61). This leads to an operational closure (OC) of the system in which controllability can only be achieved in the form of self-organisation (Willke, 2001: 1). Hence, separate social systems can only irritate each other, but never produce actual operations within the communication patterns of another system (Luhmann, 2005b: 98-99). Even when systems only observe and describe each other, this basic self-reference holds true because the logic of

observation equals the logic of the describing system (Maturana, 1982: 64). Without dissolving their OC, complex systems are structurally bound to their environment and can make use of these relations in order to evolve new and beneficial characteristics. An important factor in this context is reflection (RF), which facilitates the perception and evaluation of external rationalities against the own identity (Kegelmann, 2007: 185). Therefore, RF can be seen as an internal platform that helps the system to observe itself critically and to identify risks and opportunities related to its environment.

The research technique of system dynamics (SD), which rests upon systems-thinking, has been used for a whole spectrum of case applications. Among others, the domains of supply chain management (Ge et al., 2004: 507), strategy and change (Snabe and Größler, 2006: 476; Lyneis et al., 2001: 258; Schwaninger and Groesser, 2012: 360), software (Madachy and Taret, 2000: 145), and operations research (Coyle, 1978: 95) have benefited from this approach. Some attention has also been paid to the combination of SD and the case study method (Williams, 2002; Papachristos, 2012). However, most approaches are lacking the theoretical equipment for the analysis of social systems, their self-referential character in particular. Therefore, systemic communications and the actual consequences of the two basic concepts of social systems, OC and RF, have been widely neglected so far. For instance, no arguments or explanations have been presented to account for the influence of communication and its patterns in terms of social systems theory on the way businesses should organise internal change processes. If OC and RF are relevant to the performance of cooperative activities between social systems, however, practitioners as well as scholars may want to consider these concepts to a larger extent in order to ground their future work in social systems theory. In this case, an approach is needed that is arrayed on the characteristics of a social system and puts emphasis on its basic constituents: communications.

Hence, assuming that synergies can cooperatively be levered on the juncture of two or more systems, this paper examines the effects of OC and RF on the performance of synergistic interface activities. In the sequel, the consequences of these effects for an international business organisation are presented. Emphasis is placed on the effective analysis of the communication structures of the focal systems. The value of the SD method as a tool to learn about the impact of OC and RF on juncture systems is stressed, as well as the opportunity to use it as a reflection platform during a case study in order to evaluate various communication-based change measures.

2. Methodology

The methodological deliberations of this article have two aspects: (1) case study design, (2) systems theory and SD. The focal research method is the case study, the framework within which the discussion shall be led is systems theory and the tool being used to approach new insights is an SD simulation. Hence, the paper aims at new insights and requirements for the coordination of complex social systems, which is most relevant to international enterprises in order to effectively implement new business strategies.

The literature provides valuable approaches concerning how to learn about the sequences of organisational processes (Van de Ven and Poole, 1990: 315; Van de Ven and Huber, 1990: 213). Building theory from case studies involves an iterative process alternating between theory and empirical data (Eisenhardt and Graebner, 2007: 30), and case studies are traditionally based on data from multiple sources involving qualitative as well as quantitative approaches (Eisenhardt, 1989: 534). It is typically stressed that, besides direct observations, also overarching data is needed to complete the canon of data collection (Yin, 1997: 69-70). Hence, this approach essentially encompasses grounded theory and mixed methods. Grounded theory is one of the basic constituents of the theoretical fundament beneath case study research (Eisenhardt, 2007:

534). The connection to mixed methods is established by the concept of triangulation, which means a multi-perspective analysis, e.g. in terms of methods, investigators, or theories (Schneider, 2014: 20-21). Although mixed methods is considered to encompass multiple designs (Creswell and Clark, 2010: 59), the thought of triangulation serves as an implicit foundation. On a more abstract level, this means that both codified and tacit knowledge must be incorporated, analysed, and evaluated.

Based on the theory of Talcott Parsons, Niklas Luhmann developed a systems theory focusing on communications as primal constituents (Luhmann, 1997: 140) in order to allow for self-reference (Luhmann, 1980: 12). Essentially, communications shape and drive a social system, which remains stable through a set of implemented structures. With Luhmann, the concept of autopoiesis was for the first time applied to social systems. Autopoiesis had previously been conceptualised in a biological context, characterising systems which produced and defined their components and boundaries autonomously by their own operations (Varela et al., 1974: 192-193). In order to operationalise the concepts of systems theory, systems-thinking can be considered as the basis, which recognises the recursive relations within and between systems (Senge, 1990:73). Drawing on systems-thinking, SD is an analysis method which acknowledges the non-linearity of complex systems while implementing feedback loops with the aim to integrate several functional areas into one single concept (Roberts, 1999: 3). In terms of implementation, the software "Insight Maker" is used to build a model, including all stocks, flows, auxiliary variables, links, and parameters. "Insight Maker" is a free and web-based simulation tool which particularly covers SD and Agent-Based Modelling (Fortmann-Roe, 2014: 28). The concrete qualitative or quantitative relations between system elements are typically influenced by parameter values. Since these values are sources of uncertainty, multiple simulations with various parameter configurations are performed and conjectures are subsequently derived from a whole dataset of results.

3. The System Dynamics Simulation Model

The system under examination represents the structural coupling between two complex social systems. Hence, the framework is as follows: Two social systems, e.g. two business organisations, have a common interface, conceivably due to a function which requires cooperation between them. The aim of the communications across the juncture is to facilitate synergistic cooperation activities (SCA). A single communication, therefore, is modelled as a requirement for such an SCA. SCA could, for instance, address economies of scale or the transfer of knowhow on a particular subject matter. The performance of the juncture system is operationalised by three variables: (1) the velocity with which the confidence in the structural coupling rises, (2) the upper bound of the system's competencies in regard to SCA, and (3) the total number of successfully concluded SCA. An SD approach is employed in order to model the evolving and interconnected processes which are assumed to affect and steer the behaviour of the interface system. From a corporate change management perspective, a similar approach was followed by Schwaninger and Groesser (2012). They conducted a case study with an insurance company on organisational change and developed an SD model to obtain details about the system's behaviour. The model of the current study builds upon the insights of Schwaninger and Groesser (2012), and applies their basic logic to a scenario of SCA between social systems. Although the sources of change in both SD models are OC and RF, the objectives and structures are different. As opposed to Schwaninger and Groesser (2012), the current model does not deal with different paradigms and direct external perturbations. It rather targets the impact of making the structural coupling a system itself by implementing OC. Furthermore, Schwaninger and Groesser (2012) differentiate between OC and self-reference. However, the basic constituent of OC is a self-referential mode of the organisation-specific communications (Willke, 1994: 149).

Therefore, self-reference is a concept for operationally closed systems rather than a separate variable. Despite this shift of perspective, the crucial parameters under consideration remain the same: OC and RF.

Operational Closure (OC): Willke (1994: 59-61) considers a system to be operationally closed if there are semantic structures and principles in place which influence and design all the communications within it. Hence, OC is a condition which causes the system to reproduce itself in an autopoietic manner. For the purpose of this paper, OC manifests itself in the model by closing the link between concluding and creating organisation-specific communications, i.e. requirements for SCA.

Reflection (RF): RF of a social system is based on self-observation and self-description (Luhmann, 1991: 234), and causes the system to define and evaluate its own identity against its environment (Luhmann, 1991: 252). Therefore, RF can be seen as the observation of communications, their latent patterns and structures. RF, as a process for the generation of mutual comprehension between the various system elements, is modelled by a stock and a flow variable with values ranging from 0 to 1 and an adjustable parameter value, respectively. The flow fills up the stock until the maximum level, whereas the fill rate depends on the parameter value.

In regard to social systems theory, both concepts seem worthwhile to be anchored in the study of social systems. Whether or not their impact is significant for the analysis of a juncture system, however, is yet to be evaluated. Therefore, OC and RF are taken into account while running the SD model and their influence on the juncture system’s performance is assessed.

3.1. Stock Variables of the Model

The logic of the model, as depicted in the stock-flow diagram in Figure 1, is structured by nine stock variables (S1 to S9) whose characteristics and relations shall now be explained.

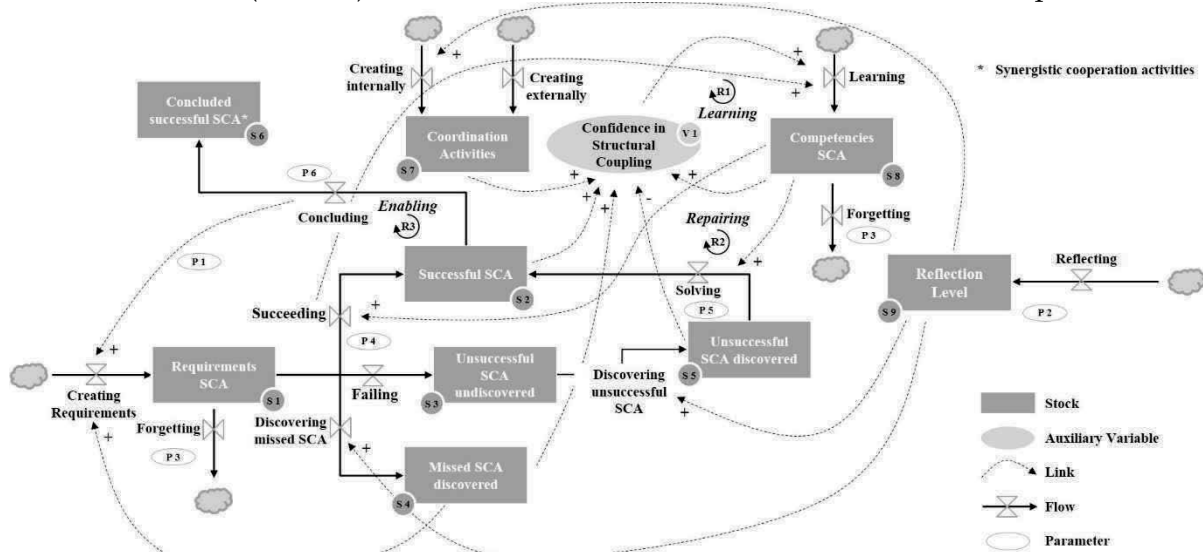


Figure 1: The SD stock-flow diagram

Requirements SCA (S1): This variable contains the requirements for synergistic cooperation activities. As an assumption of this paper, requirements are generated on a regular basis, which means that, at every interval, some requirements for SCA will emerge. In regard to the real world, this points out that every now and then an opportunity exists to lever a potential by launching a cooperation activity between two complex systems. In this context, utilising an opportunity is equal to preventing a risk from materialising. The requirements occur and are

stored into the stock variable. However, they are not conserved forever but slowly disappear over time, which is comparable to the process of forgetting.

Successful, unsuccessful and missed SCA (S2-4): The stock of requirements in S1 serves as the basis for SCA. At each period, there is the possibility to conduct cooperative activities and a certain proportion of the SCA requirements is launched. The rest remains untouched in the repository and may be discarded by the flow “forgetting”. The requirements which are recognised and transformed into SCA can either be successful or they fail, being indicated by a certain success rate. As per Schwaninger and Groesser (2012) the failure of an activity will at first be a latent issue, which has to be discovered in order for the system to be able to make use of this information. Another way of removing activities from the repository is the discovery of a missed opportunity, e.g. a possibility which has become obsolete.

Unsuccessful SCA discovered (S5): Initially, the stock of unsuccessful SCA is not obvious to the system. A process of discovering is necessary in order to gain an insight into what had happened. Controlled by a discovery rate, a portion of the latent unsuccessful activities is followed up at each period, and hence becomes visible to the system.

Concluded successful SCA (S6): Concluding a cooperative activity implies withdrawing the resources and reallocating them to other projects. Following Schwaninger and Groesser (2012), a basic assumption is that if the system under consideration is operationally closed, the conclusion of an activity leads to the creation of a new requirement in order for the system to reproduce itself.

Coordination activities (S7): The identification and implementation of SCA is supported by coordinating the requirements of the different systems. On the one hand, this is triggered by external entities, such as strategic programmes. On the other hand, requirements can also be formulated by the system itself, provided that an adequate level of reflection exists.

Competencies in SCA (S8): In order to perform SCA effectively, certain competencies are beneficial. The level of competencies is increased by a learning process and lowered by the required knowledge fading away. The learning process is supported by the confidence in the structural coupling, leading to a reinforcing cycle as the level of competencies at the same time facilitates structural coupling.

Reflection level (S9): For the purpose of this paper, RF is modelled by a stock variable that is filled by a reflection process. RF is considered to be a cumulated effect, representing the ability of a system to perceive itself in the context of its environment. It is assumed that there is an upper level of RF so it cannot be increased to infinity. This level was operationalised with the value 1, implying that this is 100 % of the possible reflective capabilities of the system. RF affects the system in two different ways. Firstly, it positively influences the internal creation of coordination activities, as it combines an internal and external view with respect to the focal system. Secondly, a high level of RF provides the basis for discovering both missed chances of cooperative activities and latent unsuccessfully performed ones.

3.2. Parameters

The relations within the model are affected by certain parameter values. Most important in this context are six parameters: P1 controls the portion of concluded SCA which leads to new requirements. Since this is the linkage between source and sink, P1 represents the degree of OC of the system. P2 influences the development of the reflective capabilities of the system, represented by the stock variable S9. P3 is related to both the forgetting of SCA requirements and the fading away of SCA-related competencies. P4 equals the maximum success rate for the transformation of requirements into actual SCA. The rest of the requirements, either unsuccessful or not considered, remains latent to the system and can be discovered as missed opportunities. P5 controls the capabilities of the system to solve problems which occurred while

implementing SCA. Hence, failed SCA can be reconsidered and successfully deployed on a second try. P6 defines the conclusion rate with which successful SCA are completed and discarded. All parameters have been conceptualised with values from 0 to 1 and enter the respective equations as factors.

3.3. Further Variables, Loops, and Performance Measures of the Model

Besides the stock variables, another variable V1 was introduced to the model in order to account for an important characteristic. As the model represents the interface of two complex systems, it actually is an entity of structural coupling. The involved systems can be assumed to have a certain degree of confidence in the structural coupling, which is affected by the conditions of several stock variables. Successfully performed SCA will help to build trust and therefore increase the level of confidence in the structural coupling. Likewise, discovered missed SCA lead to the same effect, as they show opportunities the systems could have benefited from. On the contrary, discovering failed SCA will hamper confidence. The active coordination of differences between the systems should support the confidence level. Furthermore, the relations between V1 and the SCA competencies' stock variable S8 represent a reinforcing loop.

Besides the reinforcing loop, which describes the learning process of the interface system, the level of competencies S8 leads to another loop. It takes another route through the model, but is also a reinforcing one. Starting from a rising level of SCA competencies, the solving rate will be accelerated. This produces higher numbers of successfully implemented SCA, which support the confidence in the structural coupling. As structural coupling is positively related to the level of SCA competencies, the loop closes. This, however, is not only possible in the positive direction. While the number of failed but discovered SCA rises, the confidence level regarding structural coupling decreases. In the sequel, this reduces the SCA competencies, which then leads to a higher number of failed and discovered SCA. A third loop can be identified when looking at the relation between the success flow rate and SCA competencies. A high level of competencies is assumed to strengthen the success rate. Likewise, a high success rate increases the level of competencies, as the system acquires more experience.

In order to be able to evaluate the fitness of different model configurations, three variables have been chosen as performance measures. The variables V1, S8, and S6 represent the level of confidence in the structural coupling, the level of SCA competencies and the number of concluded successful SCA, respectively. As opposed to the first two variables the stock variable S6 is not limited to a certain upper level. The restraining level for confidence in structural coupling and SCA competencies is 1. This shall express the maximum level the system under consideration can achieve. It accounts for the fact that an organisation can neither increase its confidence in itself to infinity, nor can it significantly improve its competencies for a given task without any limit.

4. Results of the SD Simulation and Development of Conjectures

The different configurations of the SD model have been evaluated against each other on the basis of three performance measures (i.e. V1, S8, and S6). The model was simulated multiple times to compare different parameter value combinations. Each simulation comprised 48 periods in which the model and its variables could evolve. Figure 2 depicts the resulting curves of the three performance measures for a specific parameter combination. Since the parameters had not been collected in the field, basically all combinations were possible. However, in order to achieve a manageable set and testing schedule, two general situations were discriminated: The parameters were assumed to be either high or low, corresponding to concrete values of 0.8 and 0.1, respectively. By this dyadic division $2^6 = 64$ combinations were left over for consideration. By means of the particular parameter combination depicted in Figure 2, the interpretation of the performance measures shall be explained. The confidence in the structural

coupling (auxiliary variable V1) was limited by the value 1, which was reached by all parameter combinations. Interesting, however, was the amount of periods it took the system to do so. Hence, the particular period when the level exceeded the value of 0.99 was recorded as a proxy for the system’s responsiveness. The curve of the stock variable S8 revealed the system’s upper bound in regard to its SCA competencies. The horizontal asymptote in Figure 2 shows a maximum level of approximately 0.65, missing the absolute upper bound of 1. An explanation for this would be that the success parameter is set low in this particular combination. Combinations with a higher success parameter generally showed an SCA competencies level of over 0.9. However, as soon as the oblivion parameter P3 was set to a high value, the level of competencies dropped. The number of successfully concluded SCA was gathered from the curve of the stock variable S6. As it was a cumulative progression, the absolute value at the last period was especially interesting in terms of comparison. Figure 2 depicts that the curve of S6 gains momentum in period ten and then follows a quite linear slope.

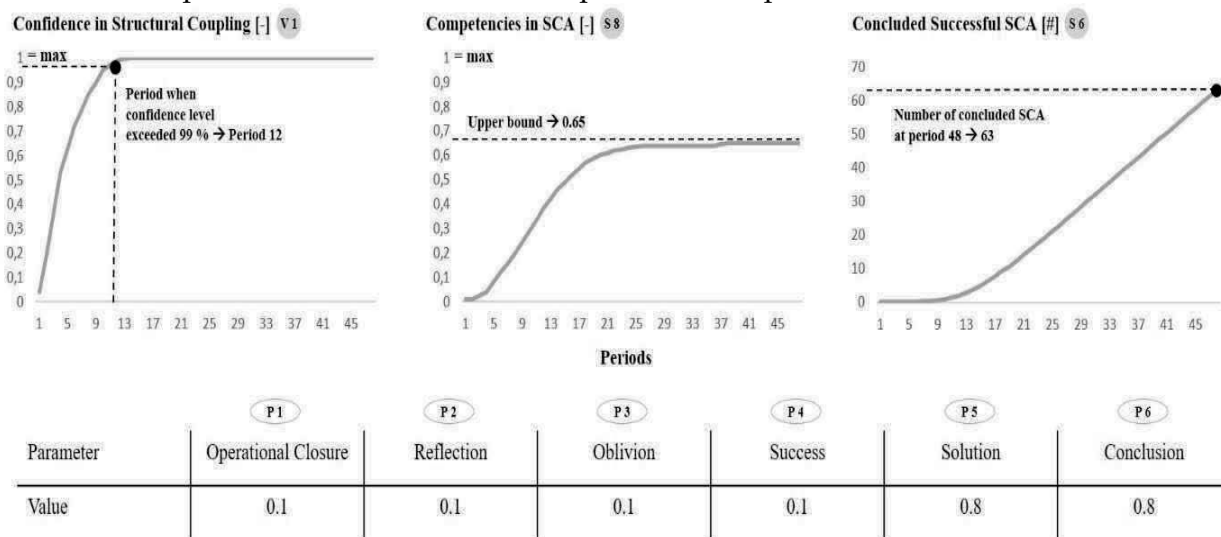


Figure 2: Curves of the performance measures for a specific parameter combination

The parameter configuration had a strong impact on the values of the performance measures. Crucial for the research task were the parameters P1 and P2 and their influence on the system’s performance.

Hence, the aforementioned 64 combinations under consideration were pooled into groups of four, representing the 2² combinatorial configurations of P1 and P2. In each of the created groups, the configuration of the parameters P3 to P6 remained stable, whereas the values of P1 and P2 altered. Consequently, the contribution of P1 and P2 could be observed. The specific configuration that assigned low values to both parameters was chosen as a basic reference configuration and was assigned 100%. In each group, the performance measures were evaluated against this reference. Figure 3 depicts an overview over the parameter configurations, which were tested in the course of the SD simulation. It also explains the influence of other parameters on the system’s performance. P4, for instance, which represents the maximum success rate of requirements implementation, has a positive impact on the SCA competencies. This is reasonable as there is a reinforcing loop connecting the success flow rate with the level of competencies. P3, however, influences competencies even more compellingly. If the value for the oblivion parameter is high, the level of competencies drops sharply.

From the SD simulation schedule the following conclusions can be drawn: (1) the increase in confidence in the structural coupling is mainly driven by RF; (2) the level of SCA competencies is mainly driven by OC; (3) the number of successfully concluded SCA at the last period is influenced by both OC and RF, but more clearly driven by OC. The arguments were

derived from the simulation results by considering the rank orders within each group in regard to the performance measures. Additionally, the results were regarded as a statistical dataset and three linear regression analyses were carried out, each of which comprising one endogenous and two exogenous variables. The population in this case was the entirety of parameter configurations. The explained variables were the three performance measures (V1, S8, and S6), whereas the explanatory variables were P1 and P2. For the three regression models, the coefficients for OC and RF and their respective p-values were calculated. Model 1 had the velocity of the increase in confidence in the structural coupling (V1) as a dependent variable. The coefficients (and p-values), for P1 and P2 were -0.004 (0.70) and -0.289 (5.14 * 10⁻³⁶), respectively. This supports the aforementioned conclusion that confidence in structural coupling is mainly driven by reflection. Model 2 tried to explain the upper bound of the SCA competencies by P1 and P2. The coefficients (and p-values), for P1 and P2 were 0.223 (1.19 * 10⁻⁹) and 0.000 (0.99), respectively. Hence, SCA competencies seem to be governed by OC. Model 3, which presented the number of concluded SCA as a dependent variable, delivered coefficients (and p-values) for P1 and P2 of 0.410 (1.88 * 10⁻⁹) and 0.042 (0.47), respectively.

ID	P1	P2	P3	P4	P5	P6	absolute			relative			ID	P1	P2	P3	P4	P5	P6	absolute			relative		
							V1	S8	S6	V1	S8	S6								V1	S8	S6	V1	S8	S6
1	low	low	low	low	low	low	15	0,64	29	100%	100%	100%	33	low	low	high	low	low	low	10	0,09	5	100%	100%	100%
2	high	low	low	low	low	low	14	0,78	34	93%	122%	117%	34	high	low	high	low	low	low	10	0,09	6	100%	100%	105%
3	low	high	low	low	low	low	9	0,64	30	60%	100%	104%	35	low	high	high	low	low	low	7	0,09	6	70%	100%	104%
4	high	high	low	low	low	low	9	0,78	35	60%	122%	123%	36	high	high	high	low	low	low	7	0,09	6	70%	100%	110%
5	low	low	low	low	low	high	11	0,65	46	100%	100%	100%	37	low	low	high	low	low	high	10	0,09	16	100%	100%	100%
6	high	low	low	low	low	high	11	0,81	63	100%	125%	135%	38	high	low	high	low	low	high	10	0,11	18	100%	122%	114%
7	low	high	low	low	low	high	8	0,65	48	73%	100%	103%	39	low	high	high	low	low	high	7	0,09	17	70%	100%	104%
8	high	high	low	low	low	high	8	0,81	65	73%	125%	141%	40	high	high	high	low	low	high	7	0,11	19	70%	122%	119%
9	low	low	low	low	high	low	16	0,64	42	100%	100%	100%	41	low	low	high	low	high	low	10	0,09	8	100%	100%	100%
10	high	low	low	low	high	low	16	0,8	59	100%	125%	140%	42	high	low	high	low	high	low	10	0,1	8	100%	111%	109%
11	low	high	low	low	high	low	10	0,64	43	63%	100%	103%	43	low	high	high	low	high	low	7	0,09	8	70%	100%	104%
12	high	high	low	low	high	low	9	0,8	61	56%	125%	146%	44	high	high	high	low	high	low	7	0,1	8	70%	111%	113%
13	low	low	low	low	high	high	12	0,65	63	100%	100%	100%	45	low	low	high	low	high	high	10	0,09	22	100%	100%	100%
14	high	low	low	low	high	high	12	0,83	117	100%	128%	186%	46	high	low	high	low	high	high	10	0,12	28	100%	133%	127%
15	low	high	low	low	high	high	8	0,65	64	67%	100%	102%	47	low	high	high	low	high	high	7	0,09	23	70%	100%	103%
16	high	high	low	low	high	high	8	0,83	121	67%	128%	192%	48	high	high	high	low	high	high	7	0,12	29	70%	133%	131%
17	low	low	low	high	low	low	11	0,93	47	100%	100%	100%	49	low	low	high	high	low	low	10	0,18	10	100%	100%	100%
18	high	low	low	high	low	low	11	0,96	67	100%	103%	141%	50	high	low	high	high	low	low	10	0,23	12	100%	128%	115%
19	low	high	low	high	low	low	8	0,93	49	73%	100%	103%	51	low	high	high	high	low	low	7	0,18	11	70%	100%	105%
20	high	high	low	high	low	low	8	0,97	70	73%	104%	147%	52	high	high	high	high	low	low	7	0,23	12	70%	128%	121%
21	low	low	low	high	low	high	10	0,93	52	100%	100%	100%	53	low	low	high	high	low	high	9	0,19	21	100%	100%	100%
22	high	low	low	high	low	high	10	0,96	77	100%	103%	148%	54	high	low	high	high	low	high	9	0,29	25	100%	153%	121%
23	low	high	low	high	low	high	8	0,93	53	80%	100%	102%	55	low	high	high	high	low	high	7	0,19	22	78%	100%	103%
24	high	high	low	high	low	high	8	0,96	79	80%	103%	153%	56	high	high	high	high	low	high	7	0,29	26	78%	153%	126%
25	low	low	low	high	high	low	12	0,93	64	100%	100%	100%	57	low	low	high	high	high	low	10	0,18	14	100%	100%	100%
26	high	low	low	high	high	low	12	0,96	128	100%	103%	200%	58	high	low	high	high	high	low	10	0,25	18	100%	139%	128%
27	low	high	low	high	high	low	9	0,93	65	75%	100%	102%	59	low	high	high	high	high	low	7	0,18	15	70%	100%	104%
28	high	high	low	high	high	low	9	0,96	132	75%	103%	207%	60	high	high	high	high	high	low	7	0,25	19	70%	139%	133%
29	low	low	low	high	high	high	10	0,93	69	100%	100%	100%	61	low	low	high	high	high	high	10	0,19	28	100%	100%	100%
30	high	low	low	high	high	high	10	0,96	148	100%	103%	216%	62	high	low	high	high	high	high	10	0,3	38	100%	158%	137%
31	low	high	low	high	high	high	8	0,93	70	80%	100%	102%	63	low	high	high	high	high	high	7	0,19	29	70%	100%	102%
32	high	high	low	high	high	high	8	0,96	152	80%	103%	222%	64	high	high	high	high	high	high	7	0,3	39	70%	158%	140%

- P1: Operational Closure
 - P2: Reflection
 - P3: Oblivion
 - P4: Success
 - P5: Solution
 - P6: Conclusion
-
- V1: Confidence in Structural Coupling
 - S8: SCA Competencies
 - S6: Concluded SCA

- Group 1: (ID1 to ID4)
- Group 2: (ID5 to ID8)

Figure 3: Overview over 64 dyadic parameter configurations

On the basis of the results outlined above, three hypotheses have been derived. Most importantly, they constitute requirements for an effective management of coordination and change processes and hence are valuable anchor points for practitioners who want to apply insights from systems research to their real world challenges.

Hypothesis 1 (H1): “The operational closure of a system that represents the juncture of two (or more) social systems leads to an increase in successful interface activity.” For a business organisation, this implies that direct and latent communication patterns have to be identified and analysed. The consideration of OC in particular, requires a specific understanding of communication, which is missing in most of the current case studies (or at least is not being

adequately emphasised). The precondition that allows for self-referential communications in the first place, is their threefold selection process of information, utterance, and understanding (Luhmann, 1991: 203). The difference between information (what is selected) and utterance (how it is transmitted) builds a basis for the system to attach an additional communication by understanding (observing the difference between information and utterance), and subsequently accepting or rejecting the content (Luhmann, 1991: 194). Hence, communication cannot be regarded as delivering an ontological form of information. It rather has to be seen as the ongoing process of dealing with different perspectives which significantly influence the change process. Due to the genuine contingency, the actual occurrence of communicative events is fairly unlikely. However, communication can be facilitated by a dedicated medium which enhances connectivity and therefore increases the probability of communications to be accepted and continued (Krämer, 1998: 559). Most important in this context is the step of “understanding”, for it can orient one communication toward a succeeding one (Luhmann, 1997: 87). The managerial approach has to provide the background for a detailed analysis of the several steps of communication.

The emphasis should be put on the communication medium and the juncture between communications. This insight was also applied in the course of the presented case study. In more methodological terms, a shift was required within the composition of data collection channels that is typically suggested by scholars in regard to case study designs. Codified sources of information (e.g. role descriptions, process guidelines, archive records) introduce a distance between the system under consideration and the actual communication patterns. Consequently, in order to minimise this distance, sources of tacit knowledge (e.g. deep-dive interviews, processes analyses) gain importance because they provide the opportunity to look beyond the obvious organisational structures.

Hypothesis 2 (H2): “The operational closure of a system that represents the juncture of two (or more) social systems leads to an increase in competencies in synergistic cooperation activities.” In accordance with H1, this conjecture stresses the importance of tacit knowledge, a dedicated communication medium, and the threefold communication process for the managerial approach.

Hypothesis 3 (H3): “A higher level of reflection of an interface system reduces the time needed to adapt to unexpected circumstances, and therefore increases the changeability of all involved complex systems.” In regard to an effective managerial change technique, this hypothesis constitutes the requirement to address meta-structures of communication. Not only is the consideration and examination of processes of relevance, but also the observation of observations, e.g. the analysis of management instruments, platforms, and approaches the system uses to reflect, discuss and alter its own procedures. This requires the design of communication platforms, for instance implemented as SD models.

5. Case Application

In order to illustrate the points made in this article, the deliberations are applied to a case study in the context of organisational change. Although some scholars suggest that multiple cases are required to reach closure in regard to the theory-building process (Eisenhardt, 1989: 545), many scientists have developed and enhanced their theoretical arguments with only one case at a time (Dyer and Wilkins, 1991: 614). This article uses a single case study to illustrate how to emphasise OC and RF while analysing a social system. The company within which the case was carried out produces medical devices (e.g. surgery equipment, custom procedure trays) and operates in several European countries. It has about 800 employees and reaches an annual revenue of approximately 65 m€ (50 m£). The issue which constituted the relevance for the

current research and triggered the case study (conducted from January to May 2016), was the formation of a new juncture between several social systems within the international organisation.

The company deals with changing requirements (e.g. shifts in customer requirements, market segmentation, labelling, and regulatory affairs) and has to translate them into internal activities and processes against the backdrop of a multi-site structure. The set of social systems is composed of the top-management and the production sites. The initial situation was characterised by a strong top-management team who analysed market changes and conveyed the derived tasks to the respective locations. These tasks equal the requirements in terms of the SD model that shall be translated into synergistic activities. A collaboration of multiple social systems is needed to fulfil them. However, in the initial situation, the requirements were governed by multiple communication patterns. The case analysis showed that this was mainly due to different managerial styles, media disruptions, and alterations in the management-location combination. Notably, this was the case although there was a consistent technical platform available for all sites. In order to enhance the interface management, a new role was created and endowed with resources and competencies. The current article wanted to go beyond codified information on roles and processes and sought to study basic communication patterns within and between social systems. A new role might alter or redefine parts of the communication, but another part definitely influences and defines the new role. Hence, the decisive level of analysis remains the communication patterns in contrast to the role itself.

The main challenge was to operationally close the newly created interface system, which was addressed by a dedicated communication medium. Moreover, the observation of organisational observations was enabled while introducing interdisciplinary reflection phases to the routines. Firstly, the focus was shifted from the metaphor of information transmission, which implies an ontological understanding of information, toward an understanding of communication as the processing of different perspectives. The content, such as process dependent and codified information, is only half of the story. Instead, the emphasis was put on the analysis of how the information was processed and fed back into the system (e.g. how is an ongoing critical assessment of the delivered information encouraged? Is the information embedded in an adequate context that people can conceive of a bigger picture of the process?). Secondly, phases of analysis (e.g. in-depth interviews and process examinations) were combined with phases of creative reflection. The latter was used as a means to scrutinise and reflect on study insights and directly feed them back to the research, as recommended by the case study methodology literature (Eisenhardt, 1989: 539–540). Moreover, these phases served as platforms to evaluate alternative change measures. In particular, the parameters of the generic SD model presented earlier in this paper were altered in the course of a continuous process during the case study. Current and prospective measures within the organisation were evaluated against each other regarding their impact on the SD parameters.

In more operational terms, the analysis was structured by the threefold communication process, i.e. information, utterance, and understanding. The content level of communication, i.e. the information which changes a system's current state, requires multiple partners and systems to cooperate. The respective concept was elaborated during one of the creative reflection phases. It essentially involved the creation of discussion platforms to integrate several functions (e.g. purchasing, production planning, sales, and production site managers) in a reflection process. Thus, many issues about organisational communication surfaced for the first time. An explanation can be found in the selection process a social system performs at each communication. Reflecting on an ideal state, e.g. in terms of information or decision procedures, places emphasis on the more vital parts of the communication process. For instance, the first

interviews addressed merely obvious and codified information flows. Providing space for reflection, including tabula rasa sessions during which communication goals were conceived of and analysed apart from existing restrictions, led to a focus shift. Instead of talking about operational tasks (e.g. how to evaluate weekly statistics about dwelling times of formal change requests within the system), more strategic aspects were introduced (e.g. discussion about important roles and stakeholders for the overall change process in regard to a certain product line). Hence, decisions could be made about how to select information (e.g. a more central coordination versus decentralised responsibilities), considering the peculiarities on product line level.

In regard to utterance, different possibilities were evaluated on how to convey communications. Again, the reflection phases were used in order for the system to observe its own observation strategies. This observation process was substantiated by an evaluation of the impact of a particular strategy on the SD parameters. A communication medium has been conceptualised on the basis of the existing technical structure in order to allow for a high connectivity between the different social systems (i.e. site-management teams, juncture system, and top-management). The medium is based on change requests that are processed partly within the IT-system and partly through interaction systems. This is necessary due to the interdependent and recursive character of a typical change request. On the one hand, the technical system provides a clear structure to depict linear progress. The interaction systems (e.g. meetings of involved managers from different departments), on the other hand, provide hubs for the coordination of more complex situations. The proportion of direct interaction between employees, as opposed to fully software-based organisation procedures, has been translated into higher values of the parameter driving the reflection process (P2). More specifically, an element of the communication medium is an extended image of a change request. It conveys all information about current tasks (which was the before-case standard of the organisational process), but is additionally embedded in a broader perspective (it shows previous and subsequent tasks and requirements and indicates when and in which composition, personal interaction is needed). The medium is technically implemented in an "MS-SharePoint" environment, however, transcends these technical boundaries while explicitly encompassing and requiring human interaction systems. Since the current case accompanied merely the conceptualisation and initialisation phase, long-term effects of newly defined communication media are yet to be examined.

The step of understanding, which serves as a juncture between two communications, has been taken into account while providing each communication with a docking point for a subsequent one. The determination of a requirement should always be linked to reflection about its impact on the current structure and future challenges leading to new requirements that take the change process further. More importantly, however, each communication in the organisational change request process equals a reduction in complexity being performed by the respective system element. Each complexity reduction is necessary for subsequent tasks to be effective. In the classical process, however, the task descriptions were rather isolated and did not provide task owners with the possibility to take on the perspective of previous or subsequent tasks. The dedicated communication medium now allows for transparency along the process. It visualises the set of tasks and triggers reflection phases in order to coordinate recursive steps. The case study showed that a common and dedicated communication medium can connect potentials between different parts of the organisation. For instance, a problem-driven knowhow transfer along the change request process can be implemented across the organisational structure. The selection and design of the communication medium was accompanied by an impact evaluation on the SD-level. Various ideas were conceived of and explicated during

reflection phases and subsequently transferred into lower or higher parameter values (in this case P1).

The benefit for practitioners, therefore, is twofold: On the one hand, the conceptualisation of a dedicated communication medium introduces transparency and a more collaborative perspective to the change process. On the other hand, the SD approach presents how the suggested reflection phases can be facilitated. Hence, the basic concepts from systems theory, operational closure and reflection, are properly being dealt with.

6. Discussion and Conclusion

The current article contributes to the understanding of managerial processes in international businesses from a systemic and communication-based point of view. It starts with theoretical deliberations on organisations as systems and uses an SD approach to build a model representing the juncture of two social systems. Emphasis is put on the influence of OC and RF, on the juncture system's performance. The results indicate that OC leads to an improvement of synergistic interface performance and that RF supports the system's changeability. Hence, synergy potentials occur on the interface between complex social systems which can be levered in the course of change processes. It requires the analysis of the communication structure and the implementation of OC and RF.

It is argued that communications should be considered as an imperative for managerial approaches addressing organisational change. On the basis of system analysis, requirements regarding such a managerial approach are formulated: (1) the approach has to put emphasis on communication within and between systems and has to provide the tools to uncover latent communication patterns. Most important in this context is the connectivity between consecutive communications in order to ensure OC. The transition from one communication to another has to be facilitated which can be addressed by the development of a dedicated communication medium; (2) the approach has to look for, support, or establish communicative platforms for the purpose of social systems' RF. Whereas OC causes communications to be compatible to one another, RF addresses the structures within which those communications flow. RF is crucial because it removes sources of opacity and exposes what can be considered the actual nature of a social system.

In operational terms, strategic business activities should be arrayed on the process steps of communication: information, utterance, and understanding. These steps address issues about what is communicated, how and why it is communicated and possible responses in order to take the communication further. The proposed SD model can help to operationalise reflection phases as the case study evolves. Particular issues and measures, e.g. different ways how to organise a change request process, can be evaluated against each other in regard to the impact on the SD model's parameters. Hence, a concrete environment is provided fostering the reflection process and helping the system to observe itself.

The article's consolidated conclusion can be formulated as follows: The insights from an SD simulation suggest a communication imperative for managerial approaches concerning the business strategy of multinational enterprises. This leads to requirements in regard to the operational closure of the systems as well as their ability to observe their own structures. It is argued that these requirements have to be met in order to allow for an effective analysis of synergistic cooperation between social systems regarding organisational change processes. This can be achieved by conceptualising a dedicated communication medium and utilising an SD approach in order to operationalise reflection platforms within the organisations.

7. Limitations and Future Research Directions

Insights obtained from an SD simulation were applied in the course of a single case study in order to substantiate the theoretical argument developed in this article. Building theory

from a case methodology, however, is limited to the particular context and scope of the actual study (Eisenhardt, 1989: 547; Van de Ven and Huber, 1990: 216). Although many scholars have applied single case studies to derive their theoretical arguments from (Dyer and Wilkins, 1991: 614), increasing the number of studies could enhance the validity of results (Eisenhardt, 1989: 545).

The scope of the present case took place against the backdrop of a conceptualisation and initialisation phase of an organisational change process. This limits the insights insofar as long-term effects of newly defined communication media could not be evaluated. Since it was observed that communications come about through numerous channels (e.g. through implemented processes, regular and occasional tasks, infrequent contacts, and latent communication patterns), extending the case study would require considerable resources. Moreover, working with an SD model requires some initialisation efforts in order for the participants to familiarise with the approach. The SD environment might be perceived as rather abstract since it does not entail concrete agents. In this context, the use of a browser based SD environment is favourable because the model can be opened and analysed virtually anywhere. The points mentioned above constitute practical problems and limitations of the current study. Some of the limitations, likewise, deliver impulses for a future research agenda. Especially the need for more sources of empirical evidence (e.g. in different contexts) and the extension of the project scope (e.g. evaluating the impact of long-term effects of dedicated communication media on the business strategy) are suggested as important research directions in order to obtain a more complete understanding of strategic change processes in multinational enterprises. Furthermore, the arguments developed in the form of the three hypotheses H1-H3 are generic in character, i.e. their relevance does not seem to be limited to organisations within enterprises. Rather, the involved systems could stem from different sectors, e.g. from the political or the scientific one. Hence, the findings of the article should be transferable to a perspective of regional development placing emphasis on the communication-based coordination between firms, political departments, and scientific institutions.

References

- Bullinger, Hans-Jörg, Dieter Spath, Hans-Jürgen Warnecke, and Engelbert Westkämper. 2009. *Handbuch Unternehmensorganisation: Strategien, Planung, Umsetzung* [Handbook of Company Organisation: Strategies, Planning, Implementation]. 3rd ed. Berlin: Springer.
- Coyle, R.G. 1978. "Tanker chartering." *European Journal of Operational Research* 2 (2): 86-96.
- Creswell, John W., and Vicki L. Plano Clark, 2010. *Designing and Conducting Mixed Methods Research*. Los Angeles: Sage Publications.
- Dyer, W.Gibb, and Alan L. Wilkins. 1991. "Better stories, not better constructs, to generate better theory: A rejoinder to Eisenhardt." *Academy of Management Review* 16 (3): 613-619.
- Eisenhardt, Kathleen M. 1989. "Building Theories from Case Study Research." *Academy of Management Review* 14 (4): 532-550.
- Eisenhardt, Kathleen M. and Melissa E. Graebner. 2007. "Theory building from cases: opportunities and challenges." *Academy of Management Journal* 50 (1): 25-32.
- Fortmann-Roe, Scott. 2014. "Insight Maker: A general-purpose tool for web-based modeling & simulation." *Simulation Modelling Practice and Theory* 47: 28-45.
- Ge, Y., J.-B. Yang, N. Proudlove, and M. Spring. 2004. "System dynamics modelling for supply-chain management: A case study on a supermarket chain in the UK." *International Transactions in Operational Research* 11 (5): 495-509.
- Kegelmann, Jürgen. 2007. *New Public Management: Möglichkeiten und Grenzen des Neuen Steuerungsmodells* [New Public Management: Opportunities and Limits]. Wiesbaden: VS Verlag für Sozialwissenschaften.

- Krämer, Sybille. 1998. „Form als Vollzug oder: Was gewinnen wir mit Niklas Luhmanns Unterscheidung von Medium und Form?“ [Form as execution or: What do we win with Luhmann's distinction between medium and form?] *Rechtshistorisches Journal (Max Planck Institute for European Legal History)* 17: 558–573.
- Luhmann, Niklas. 1980. “Talcott Parsons: Zur Zukunft eines Theorieprogramms.” [Talcott Parsons: On the Future of a Theory Programme.] *Zeitschrift für Soziologie* 9 (1): 5–17.
- Luhmann, Niklas. 1991. *Soziale Systeme* [Social Systems]. 4th ed. Frankfurt am Main: Suhrkamp.
- Luhmann, Niklas. 1997. *Die Gesellschaft der Gesellschaft* [Theory of Society]. Frankfurt am Main: Suhrkamp.
- Luhmann, Niklas. 2005a. *Soziologische Aufklärung 2: Aufsätze zur Theorie der Gesellschaft* [Sociological Enlightenment 2: Essays on the Theory of Society]. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Luhmann, Niklas. 2005b. *Soziologische Aufklärung 5: Konstruktivistische Perspektiven*. [Sociological Enlightenment 5: Constructivist Perspectives]. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Lyneis, James M., Kenneth G. Cooper, and Sharon A. Els. 2001. “Strategic management of complex projects: A case study using system dynamics.” *System Dynamics Review* 17 (3): 237–260.
- Madachy, Ray, and Danton Tarbet. 2000. “Case studies in software process modeling with system dynamics.” *Software Process: Improvement and Practice* 5 (2-3): 133–146.
- Maturana, Humberto R. 1982. *Erkennen: die Organisation und Verkörperung von Wirklichkeit* [Cognition: the Organisation and embodiment of reality]. Braunschweig: Vieweg.
- Papachristos, George. 2012. “Case study and system dynamics research: Complementarities, pluralism and evolutionary theory development.” *Proceedings of the 30th International Conference of the System Dynamics Society* 30: 1–29.
- Roberts, Edward Baer. 1999. “System Dynamics: An Introduction.” In *Managerial Applications of System Dynamics*, edited by Edward Baer Roberts, 3–36. Waltham: Pegasus Communications.
- Schenk, Michael, Siegfried Wirth, and Egon Müller. 2014. *Fabrikplanung und Fabrikbetrieb: Methoden für die wandlungsfähige, vernetzte und ressourceneffiziente Fabrik* [Factory Planning and Operation: Methods for the Changeable, Interconnected and Resource Efficient Factory]. 2nd ed. Berlin: Springer Vieweg.
- Schneider, Armin. 2014. “Triangulation und Integration von qualitativer und quantitativer Forschung in der Sozialen Arbeit.” [Triangulation and integration of qualitative and quantitative research in social work]. In *Perspektiven sozialpädagogischer Forschung* [Perspectives of socio-pedagogical research] edited by E. Mührel, and B. Birgmeier, 15–30. Wiesbaden: Springer VS.
- Schoeneborn, Dennis. 2011. “Organization as Communication. A Luhmannian Perspective.” *Management Communication Quarterly* 25 (4): 663–689.
- Schwaninger, Markus, and Stefan N. Groesser. 2012. “Operational Closure and Self-Reference: On the Logic of Organizational Change.” *Systems Research and Behavioral Science* 29 (4): 342–367.
- Senge, Peter M. 1990. *The fifth discipline: Mastering the five practices of the learning organization*. New York: Doubleday.
- Snabe, Birgitte, and Andreas Größler. 2006. “System dynamics modelling for strategy implementation-case study and issues.” *Systems Research and Behavioral Science* 23 (4): 467–481.

-
- Van de Ven, Andrew H., and George P. Huber. 1990. "Longitudinal Field Research Methods for Studying Processes of Organizational Change." *Organization Science* 1 (3): 213-219.
- Van de Ven, Andrew H., and Marshall Scott Poole. 1990. "Methods for Studying Innovation Development in the Minnesota Innovation Research Program." *Organization Science* 1 (3): 313-335.
- Varela, F.G., H. R. Maturana, and R. Uribe. 1974. "Autopoiesis: The organization of living systems, its characterization and a model." *Biosystems* 5 (4): 187-196.
- Westkämper, Engelbert, and Erich Zahn. 2009. *Wandlungsfähige Produktionsunternehmen: Das Stuttgarter Unternehmensmodell* [Changeable Manufacturing Firms: The Stuttgart Enterprise Model]. Berlin: Springer.
- Wiendahl, Hans-Peter, Jürgen Reichardt, and Peter Nyhuis. 2015. *Handbook Factory Planning and Design*. Berlin: Springer.
- Williams, Dedembe. 2002. "Integrating System Dynamics Modeling and Case Study Research Method: A theoretical framework for process improvement." *Proceedings of the 20th System Dynamics Conference* 20: 1-27.
- Willke, Helmut. 1994. *Systemtheorie: Interventionen theories* [Systems Theory: Theory of Intervention]. Stuttgart: G. Fischer.
- Willke, Helmut. 2001. *Systemtheorie: Steuerungstheorie* [Systems Theory: Theory of Controlling]. 3rd ed. Stuttgart: Lucius & Lucius.
- Yin, Robert K. 1997. "Case study evaluations: A decade of progress?" *New Directions for Evaluation* 76: 69-78.
-

Informal economy in emerging economies: not a substitute but a complement!

Deepraj Mukherjee
Kent State University, USA

Keywords

Informal Economy, Formal Sector, Globalization, International Business, Economic Development.

Abstract

Contrary to the conventional belief of diminishing presence of informal entities in a more globalized world, there has been an upsurge in the size of the informal economy in the recent decades. The article summarizes the factors behind the existence and persistence of such economy and explains the advantages of the informal economy in reducing transaction costs, in sidestepping the bureaucratic obligations, and in complementing the formal economy. The paper refutes the idea that the informal firms act as a weak substitute for the formal firms. The paper uses anecdotal evidence and highlights the linkages between the two sectors.

1. Introduction

An informal economy refers to the “set of illegal yet legitimate (to some large groups) activities through which actors recognize and exploit opportunities” (Castells & Portes, 1989; Feige, 1990). A significant amount of activity takes place in the informal economy, suggesting its theoretical and practical importance. Schneider (2002) estimated that informal economy activities account for approximately 17 percent of gross domestic product (GDP) in developed economies and approximately 40 percent of GDP in developing economies. The World Bank estimates that this informal economy generates 40 percent of the GNP of low-income nations and 17 percent of the GNP of high-income ones. In some industries, such as retailing and construction, informality can account for as much as 80 percent of employment (Farell, 2004). According to the International Labor Organization (ILO) it “comprises half to three-quarters of all non-agricultural employment in developing countries”

(<http://www.ilo.org/global/topics/employment-promotion/informal-economy/lang-en/index.htm>). Further, six countries (India, Brazil, Mexico, Vietnam, Pakistan, and the Philippines) constitute three-fourths of the total informal employments (ILO, 2012).

The informal economy grows when stringent tax laws, stiff regulations, and complicated bureaucracy make the formal economy unattractive in terms of high entry costs to the potential entrants. The concern of high entry cost is well documented in the existing literature, as shown by De Soto (1989) in the case of Peru, and further documented by Djankov, La Porta, Lopez-de-Silanes and Shleifer (2002) in their 85 country study. They observed that firms incur significant “entry costs”, in the form of registration and license fees, in order to operate formally.

What is an informal economy?

The conceptual terrain of the informal economy intertwines several academic disciplines that span the last four decades. The term “informal sector” was first coined by social anthropologist Hart (1973) and analyzed by the International Labor Organization (hereafter referred to as the ILO) in its mission to Africa in the early 1970s. It encompasses an array of economic activities, from street vendors in Bangkok or Calcutta to garbage collectors in Cairo; rickshaw pullers in Dhaka to home-based garment workers in Manila, Mumbai or Mexico City;

home-based electronic workers in the Leeds or Kuala Lumpur to low priced software producers in Bangaluru. Many definitions were introduced by different authors and ILO itself has redefined it several times. An excellent body of literature is available on this topic that covers statistical and ethnographic studies (Bromley, 1978; Hart, 1973; McGee & Bassett, 1976) and also studies related to the theoretical validity of the concept of the informal market along with its implications on developmental plans and policies (see for e.g., Smith, 1981; Sethuraman, 1976; Moser, 1984). Another branch of literature linked the informal market as a subsidiary of the prevailing capitalist system. This line of research has linked informal sector with the "petty commodity production", an integral part of a capitalist system (Moser, 1978; Babb, 1985).

In 1999, the international symposium of ILO categorized the workforce in the informal sector in three broad groups: "(a) owner-employers of micro enterprises, which employ a few paid workers, with or without apprentices; (b) own-account workers, who own and operate one-person business, who work alone or with the help of unpaid workers, generally family members and apprentices; and (c) dependent workers, paid or unpaid, including wage workers in micro enterprises, unpaid family workers, apprentices, contract labor, home workers and paid domestic workers." This contemporary definition of ILO separated the concept of 'informal economy' from other closely related notions, for instance, the formal economy, criminal economy or care economy. The formal economy is understood to be the world of regular, stable, and protected employment and of legally regulated activities. In addition, the informal economy should not be confused or conflated with the criminal economy.

While production or employment arrangements in the informal economy are often semi-legal or illegal, the informal economy produces and distributes legal goods and services. In contrast, the criminal economy deals with illegal goods and services. The care economy which is comprised of unpaid domestic work and care activities is also not part of the informal economy. This is because the informal economy is defined as part of the market economy: that is, as producing goods and services for sale or some other form of remunerations. Some early conceptualizations believed that the informal sector is simply too variegated and heterogeneous in order to be a meaningful concept to understand (Peattie, 1987; Peattie, 1980; Richardson, 1984). However, a growing body of recent research acknowledges that informal economy significantly contributes towards the employment and output of an economy and hence cannot be ignored (Goldberg and Pavcnik, 2003; Carr and Chen, 2004).

For instance, Tokman (1992) highlighted that the informal sector grew in Latin America and was a solace to the majority of working people during periods of economic crisis in the mid-1980. Relatedly, it was observed that millions of people who lost jobs during the East Asian economic crisis found employment in the informal economy (Lee, 1998). However, even before the Asian crisis, official statistics by the ILO indicated that the share of the informal economy in the nonagricultural work force ranged from over 55 percent in Latin America to 45-85 percent in different parts of Asia to nearly 80 percent in Africa (Charmes, 1998). Consequently, we can reasonably argue that the informal sector has and will continue to have an indelible impact on economic, political and social network and, therefore, needs to be better understood.

The remainder of the paper is organized along the following lines. The next section outlines the transformation of the informal sector to the new expanded concept of the "informal economy" that includes small entrepreneurs, own account operators, informal wage workers, and industrial out workers. Section three discusses extant literature and summarizes the motives behind the existence of such an economy. The related literature is vast though views are sparse and uncorrelated. The paper attempts to fill the lacuna that exists in the related field and presents all the motives in a diagrammatic form that identifies future

research avenues. The international economic development of the informal economy is discussed next. Formal-informal linkages are explained in the context of emerging countries. The growing importance of the informal economy is stressed throughout this paper especially in understanding its role in the economies of the post- liberalization era.

2. The Genesis of Informal Sector

Early studies about the informal sector in less developed countries considered the informal sector as a subsistence level employment for the “reserve army of labor.” Swaminathan (1991) claimed that “the substantial presence of the informal sector in those countries” as the main reason for mass poverty and unemployment. Fortuna and Prates (1989) noted that in developing countries the flourishing period of the export of manufactured items resulted in high levels of benefit for entrepreneurs, advancement in technology used, and growth in the scale of production. In addition, it promoted a process of going informally, disguised as small independent entrepreneurship. Grossman (1982) presented an interesting synopsis of various forms of informal activities that were utilized in the former USSR. He showed that demand for informal income and supply of informal goods and services reinforced each other and exchange of favors in terms of access to informal goods and services are prominent characteristics of informal sectors. Additionally, Kornai (1993), Schneider (1997) and Lacko (1998) provided theoretical and empirical evidence about the informal sector in former socialist countries.

The articles showed that the informal sector activities in those countries, especially in the last period before transition, were much more widespread than the commonly held belief that these countries experienced a relatively small informal sector, compared to developed countries. Johnson, McMillan, and Woodruff (1999) argued that in the transition countries that are exposed to a market economy, the informal economy cannot play any significant role. Informal activities cannot make use of market-supporting institutions (like courts of law) and this may discourage investments and economic growth. This has occurred in Peru, as reported by De Soto (1989). Kaufmann and Kaliberda (1996) shared the same viewpoint and claimed that even if it is large, the informal sector is mostly a survival sector where the short-term turnover dominates the long-term one, and where large-scale and vital investments do not take place. Table 1 provides representative studies of informal economy post millennia.

Table1:SummaryofRepresentativeStudieson Informal Economy

Author(s)	Setting	Key Arguments/Findings
Akintoye, 2008	Case Study with Informal sector of Nigeria	Informal Sector backed by state support reduces the unemployment rate.
Anjaria, Jonathan Shapiro, 2006	Street Vendors in Mumbai, India	Predatory behavior of the state against the street vendors.
Carr and Chen, 2004	Globalization, Informal Employment, and Gender	Unfavorable terms of inclusion in various aspects of work and employment are important drivers of poverty and inequality. suggests why and how more equitable linkages between the informal economy
Chen, 2007	Informal-Formal Economy Linkage	and the formal economy should be promoted through an appropriate policy and regulatory environment.
Djankov et al 2002	Data on the regulation of entry of start-up firms in 85 countries	Countries with heavier regulation of entry have higher corruption and larger informal economies than countries with the lighter regulation of entry.
Friedman et	Macro data from 69 countries	Higher tax rates are associated with less informal

al, 2000		activity as a percent of GDP but corruption is associated with the more informal activity.
Godfrey, 2011	Model of Informal Economy	Provided a 2x2 matrix and analyzed the presence of informal economy
Goldberg and Pavcnik, 2003	Brazil and Colombia, country-level study	The study examines the response of the informal sector to liberalization. In Brazil, no evidence of a relationship between trade policy and informality is found. In Colombia, evidence of such a relationship is found, but only for a specific time period.
Kesteloot and Meert, 1999	Different categories of the informal economy and their spatial distribution in the geographical setting of Brussels	Offers a powerful tool to understand informal economic activities as a set of interrelations between households and other economic actors in order to gain access to their living resources
Kus, 2010	Macro-level study across a broad set of countries	Countries have different types of regulatory environments that help explain why some nations have more informal economic activity than others. Informal firms are small and unproductive, compared even to the small formal firms, and especially relative to the larger formal firms.
La Porta and Shleifer 2008	World Bank firm level data	Growth comes from the creation of the highly productive formal firms.
Maloney, 2004	Latin American informal sector	Forward a view of the informal sector in developing countries primarily as an unregulated micro-entrepreneurial sector and not as a disadvantaged residual of segmented labor markets
Ordóñez, 2010	Informal sector and economic development	Informality is associated with resource misallocation. This is driven by the government inability to enforce tax and regulation policies on all firms. As a result, the tax base is small, and high taxes have to be levied on a small subset of firms, usually the most productive ones.
Portes, and Schaffler, 1993.	Latin American informal sector	Offer views of the informal economy not as a manifestation of the problem of poverty but a potential solution to it.
Schneider, 2005		The average size of the shadow economy as a proportion of official GDP in 1999–2000 in developing countries was 41%, in transition countries 38%, and in OECD countries 17%.
Porto, 2005	Case study with informal economy from Moldova	Reducing export barriers for the informal sector would benefit the average Moldovan household across the whole income distribution. Poverty would also decline, affecting 100–180 thousand individuals.
Turnovsky and Basher 2009	The interdependence between tax policy and enforcement in a developing economy that has a substantial informal presence	Judicious policy choices ensure that the presence of the informal sector need not hinder its ability to raise tax revenues
William and Round, 2007	Russia, 313 households during 2005/06	Examining the multiple types of informal employment, more positive impacts emerge as it is the key seedbed for enterprise development and principal mechanism for delivering community self-help.

According to the ILO (2012), informal economy, broadly defined, comprises of one-half or three-quarters of the non-agricultural employment in developing countries: 48 percent in North Africa; 51 percent in Latin America; 65 percent in Asia; and 72 percent in sub-Saharan Africa. Informal employment is comprised of both self-employments in informal enterprises (i.e., small and/or unregistered) and wage employment in informal jobs (i.e., without secure contracts, worker benefits, or social protection). In all developing regions, self-employment comprises a greater share of informal employment (outside of agriculture) than wage employment: specifically, self-employment represents 70 percent of informal employment in sub-Saharan Africa, 62 percent in North Africa, 60 percent in Latin America and 59 percent in Asia. Three categories of informal wage employment- self-employment, part-time work, and temporary work - comprise 30 percent of overall employment in 15 European countries and 25 percent of total employment in the United States. Table 2 reported the 5- year data of the percentage of informal workers in agriculture and in the non-agriculture sector from 2009-2013 in a selected number of developing countries (based on the data availability from the International Labor Organization)

Table 2: Data from Selected Developing Countries

<u>Year</u>	<u>Agricultural Economy Activity</u>			<u>Non-Agriculture Economic Activity</u>		
	<u># of Countries</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u># of Countries</u>	<u>Mean</u>	<u>Standard Deviation</u>
2009	NA	NA	NA	20	52.96%	17.53
2010	NA	NA	NA	21	55%	21.35
2011	7	85.35%	11.72	17	46.50%	20.6
2012	10	89.37%	12.36	20	49.25%	24.35
2013	8	85.99%	11.96	20	47.20%	23.1

*Average % of informal workers in the agricultural economic activity for that year based off the International Labor Organization's data when refining the search to total sex's and national geographic coverage.

**Average % of informal workers in the non- agricultural economic activity for that year based off the International Labor Organization's data when refining the search to total sex's and national geographic coverage

Table 2 reflects that for the non-agriculture economic activity (see the list of countries in the appendix below) the number of informal workers contributes fifty percent of total workforce. The number is significantly larger in the agricultural activity, both reflecting the importance of the informal sector in the growth and development of a developing nation.

3. Drivers of informality: Existence and Persistence

3.1. Existence

Why do entities and entrepreneurs operate informally? The literature offers four-fold explanations though the reasons are not mutually exclusive and each demands a distinct policy implication. First, entrepreneurs operate informally when the tax rates are high and other official regulations are grueling (De Soto, 1989; Schneider and Enste, 2000). Reduction in the tax rate and relatively quicker unbinding of red tape are considered to be the ways to induce the entrepreneurs to operate formally. Second, informal sectors can also emerge from predatory behaviors of government officials who extract bribes from registered firms (Shleifer and Vishny, 1993; Kaufmann, 1994; Shleifer and Vishny, 1994; Kaufmann, 1997; Shleifer, 1997; Shleifer and Vishny, 1998; S. Johnson, Kaufmann, and Zoido-Lobaton, 1998). The plausible solution according to this line of argument is to address bureaucratic corruption. In addition, firms' may seek to hide their activities to avoid extortion from antisocial groups or criminal gangs (Zhuravskaya and Frye, 2000). As De Soto (1989) documented in the

Peruvian economy that small entrepreneurs do not expand their business even if they can, in order to avoid the mafia threats. According to this view, the state needs to enforce a better law and order system to protect the entrepreneurs from antisocial elements.

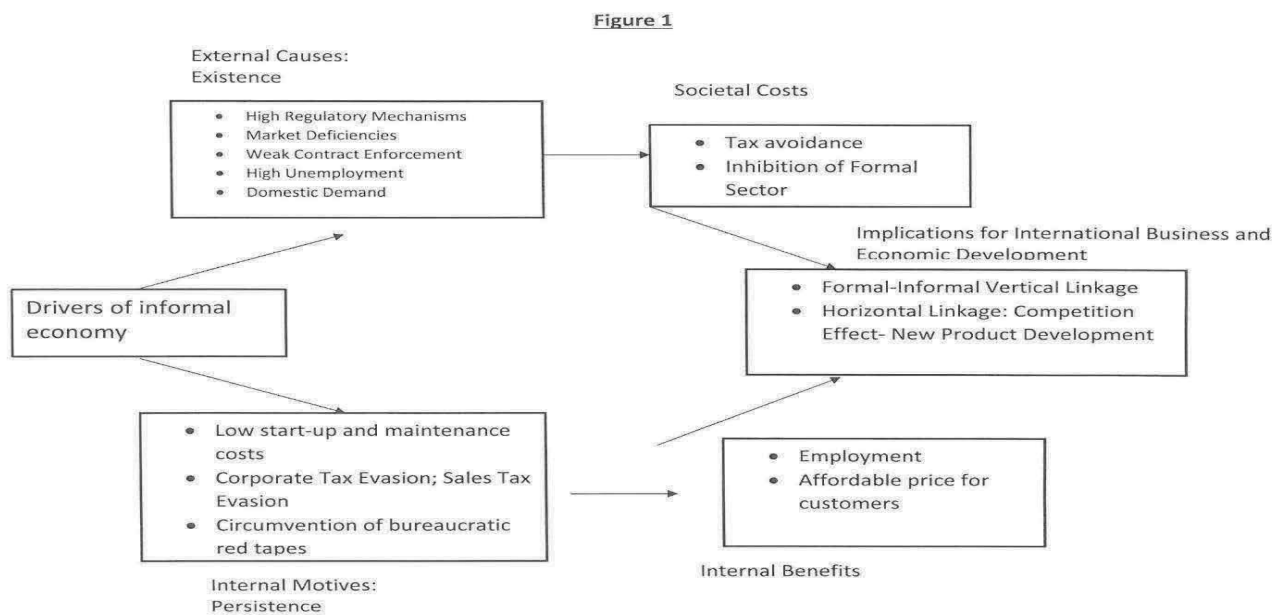
The role of the state in terms high regulation costs in the formal sector motivate participation in the informal sector (Gershuny, 1979). Most common government regulations are related to environment protection, consumer protection, quality control, labor protection in terms of the inflexible formal labor market, and financial capital availability. Of all types of regulations, labor protections in various forms, such as minimum wages, fringe benefits, social security benefits and strong labor union considerably increases the cost of staying formal. Tokman (1992) in his study of Latin American countries reported that such regulations increase labor costs by an average of around 20 percent. A similar study had been done by Nipon (1991) for informal businesses in Thailand found that by ignoring labor-protection laws, these businesses save about 13 to 22 percent of labor wages.

Finally, the existence of informal sectors in many countries could be due to the presence of inadequate and inefficient institutional environments. For example, a weak contract enforcement environment and ineffective legal system may discourage entrepreneurs from operating in a formal environment. Bhattacharya and Ghose (1998) note that informality is a response to the pervasive level of bureaucratic corruption: they show that foreign firms in India avoid reporting sales and income in order to protect themselves from the reach of corrupt police, tax, and bureaucracy.

3.2. *Persistence*

Why do entities and entrepreneurs continue to operate informally? Are there external motives as mentioned in the previous paragraphs or there are internal reasons for those entities to persist informally? The rationality of staying informal can be analyzed considering the cost and benefits that a legal status entails. The costs of formality can be divided into costs of entry and costs to remain formal. For a potential entrant in the formal sector, there are certain costs to the entrance. The access costs that are often highlighted in the literature are bribes to the government officials to complete the registration process or to obtain the license and other requirements. De Soto (1989) studied the informal sector in Peru. The author conducted a few real-time experiments in order to quantify the entry cost. The study revealed that the total cost of registration and license was equivalent to 32 times the minimum monthly salary that was prevalent at that time. In addition, it took almost ten months to complete the registration process. In another study, Tokman (1992) reported similar results for other Latin American countries. To circumvent such costs, many firms continue to stay in the informal sector.

The costs of staying formal can be further categorized into taxes, government regulations, and bureaucratic obligations. Tax collected from the formal sector is an important source of government revenue. In developing countries, corporate income taxes are set up at a higher level to compensate for its lack of well-administered tax system, required in order to efficiently monitor the informal firms. Burgess and Stern (1993), in their study, reported that in developing countries, corporate income taxes represent 17.8 percent of total tax revenues, while individual income taxes, only 10.6 percent. In contrast, for industrial countries, corporate income taxes account for only 7.6 percent of total tax revenues while individual income taxes constitute 27.7 percent. Bureaucratic obligations are also a significant cost of continuing in the formal sector. As discussed in Alonzo (1991) for the Philippines, and Chickering and Salahdine (1991) for Egypt, bureaucratic obligations to unbind the red tape and to finish the paperwork is time-consuming and an arduous task for the entrepreneurs. Next, we present a thematic diagram that presents the tone of the previous sections and sets up the discussion section that follows:



4. Implications for Economic Development

Studies related to the informal economy in the field of emerging economies have gained momentum with increasing attention on emerging markets (McGahan, 2012; Godfrey, 2011; Carpenter et al., 2001; Spreitzer, 1997). Organizations need a group of global managers who are able to manage the necessary global integration and cross-border coordination activities within or between organizations. These trends suggest a compelling need for managerial commitment to developing or acquiring international expertise as global markets continue to expand. Along with that line, focusing research on the dynamics of the informal sector is a valuable contribution to the field of international business in particular and organizational management in general. In spite of the recognition of the importance of research pertaining to informal economy and its intricate relationship with institutional developments of emerging economies (Hambrick and Mason, 1984), inadequate effort and attention have been devoted to better understand the factors that contribute to the development of such economies, and the theoretical and practical implications of such development. The present paper seeks to draw attention in the related field to fill this lacuna in international business and management literature.

Informal Economy and Vertical Linkage

For instance, India has achieved an average of significantly high annual growth for the last two decades. Conventional wisdom depicted informal sectors as weak substitutes for its formal counterparts and hence predicted that greater integration in the world market would shrink informal markets in size and capacity in the emerging economies. As the ILO study (2002) and Chen (2004) suggest that the informal economy in India has also expanded simultaneously. Such a paradox can be explained from the direct vertical linkage of the formal and the informal economies. India primarily grew due to the supernormal growth of the Indian service sector. Such growth in emerging market economies was well supported through an excellent and cost effective supply chain mechanism. Informal suppliers provided cost-effective resources that helped the large firms to stay competitive globally. Partly because, the cost of operating informally is less, the suppliers stayed cost effective and competitive. Below, we present a table that illustrates the presence of informal employment in the formal sector¹.

Table 3: Informal Workers in the Formal Sector for Selected Countries

<u>Countries in 2009</u>	<u>% of informal workers in the formal sector*</u>	<u>Countries in 2010</u>	<u>% of informal workers in the formal sector*</u>
Argentina	64.7	China	98
Armenia	75.9	Colombia (II)	58.4
Brazil	53.1	Liberia	66.1
Costa Rice	58.4	FYR Macedonia	85.2
Dominican Republic	61.9	Serbia	84.9
Ecuador	70.2	South Africa (IV)	39
El Salvador	59.7	Uganda	67.5
Honduras	78.4	West Bank Gaza	81.3
India (2009-2010)	88.4	India (2009-2010)	88.4
Indonesia	79.4	Pakistan (2009-2010)	95
Mexico	67.9		
Moldova	90.4		
Pakistan (2009-2010)	95		
Panama	64.2		
Paraguay	69.9		
Peru	80		
Sri Lanka	90.3		
Uruguay	40.7		
Venezuela	89.4		
Vietnam	59.5		

*Informal employment outside the informal sector, i.e. employees holding informal jobs in formal enterprises (incl. government units and non-profit-institutions) or as contributing family workers in formal enterprises.

The data collected from the International Labor Organization reveals the significant contribution of informal workers to the formal sector. The data refers to a crucial implication, about the two sectors that looking at these two sectors as separate and mutually exclusive entities would be incomplete. Rather, it should be acknowledged from the start that the activities that are normally considered part of the informal economy are often in one way or another linked to the activities in the formal economy (Portes, Guarnizo, and Haller, 2002; Gereffi, 1999; Lund and Srinivas, 2000). The supply chain vertical aspect of formal and informal linkage needs further attention as it has not been explored effectively yet. Evidence from Bangladesh garment industry suggests the importance of informal workers who operate at informal sector. They offer low-end labor of the value chain with sewing, stitching, and packing at a low piece rate that allows the formal garment enterprises to stay globally competitive. Though the huge gap in the profit distribution is clearly something that needs to get the attention of the policymakers. Laborers at the lowest level (or the start) of the chain receive very little return relative to the final sale price of a commodity or a good.

Informal Economy and the Horizontal Linkage

In a similar vein, the formal-informal linkage may have horizontal aspects too. In recent years, intra-industry competition has not only intensified, its nature has fundamentally changed: it has become more knowledge-based, and the sources of competitive advantage have shifted unmistakably from physical assets to intellectual resources (Prahalad and Hamel, 1990; Quinn, 1992; Stewart, 1997). This is particularly true for the emerging market

formal firms attempting to stay competitive internationally. Here again, informal firms in the same industry play a crucial role. Because of the lax of strong enforcement of property rights in the emerging markets, the knowledge transfer is quite pervasive. Hence, the emulation of a product by the informal firms, and selling it at a cheaper price puts the formal firms at a disadvantage. One way to overcome this challenge is to stay innovative through new product developments. Again, this horizontal competition from the informal firms' act as a boon in disguise for the formal firms and requires further academic attention in the field of international business.

5. Conclusion

The informal economy is huge and it is safe to predict that the informal economy is going to persist as well. In fact, depending on how informal economy is defined, it might be the most dominant model of economic organization, and hence calls for an appropriate policy response that can promote equitable linkages between formal and informal economies. All stakeholders that include government and formal firms require understanding the importance of incorporating informal economies in policy making. Surveys like Global Competitiveness Report, surveys of entrepreneurs about their own activities, or the World Bank Enterprise Surveys that collect data from entrepreneurs and managers in both formal and informal firms on their sales and inputs, employee and manager education, as well as a variety of assessments of the institutional environment, can shed further light on the role of the informal economy in management practices and in international business.

References

- Akintoye, I.R., 2008. Reducing unemployment through the informal sector: A case study of Nigeria, *European Journal of Economics, Finance and Administrative Sciences*, Vol. 11, pp. 97-106.
- Alonzo, R., 1991. *The Informal Sector in the Philippines: the Silent Revolution*. (Eds). A. Chickering and M. Salahdine. International Center for Economic Growth, San Francisco.
- Anjaria, J. Shapiro, 2006. Street hawkers and public space in Mumbai. *Economic and Political Weekly*, pp.2140-2146.
- Babb, Florence. E., 1985. *Middleman and 'Marginal Women': Marketers and Dependency in Peru's Informal Sector, Markets and Marketing: Monographs in Economic Anthropology No. 4*, University Press of America.
- Bhattacharyya, D.K., and Ghose, S., 1998. Corruption in India and the hidden economy *Economic and Political Weekly*, Vol. 33 No. 44, pp. 2795-2799.
- Burgess, R. and Stern, N., 1993. Taxation and development, *Journal of economic literature*, Vol. 31 No. 2, pp.762-830.
- Bromley, R., 1978. Organization, Regulation and Exploitation in the So-called Urban Informal Sector: The street traders in Cali, Columbia. *World Development*, Vol. 6, No. 9-10, pp. 1161-1171.
- Carpenter, S.R., Walker B., Anderies J. M., and Abel N., 2001. From metaphor to measurement: resilience of what to what? *Ecosystems*, Vol. 4, No. 8, pp. 765-781.
- Carr, M. and Chen, M., 2004. *Globalization, Social Exclusion, and Work: With Special Reference to Informal Employment and Gender*. Working paper No. 20, International Labour Office Policy Integration, Geneva, May 2004.
- Castells, M. and Portes, A., 1989). *World underneath: The origins, dynamics, and effects of the informal economy* In A. Portes, M. Castells, & Benton (Eds.), *The informal economy: Studies in advanced and less developed countries*, Baltimore, Johns Hopkins Press, pp. 11-37.

- Charmes, J., 1998. Street vendors in Africa: data and methods, New York: United Nations Statistical Division.
- Chen M.A., 2007. Rethinking the Informal Economy: Linkages with the Formal Economy and the Formal Regulatory Environment. Working paper No. 46, Department of Economic and Social Affairs, New York, July 2007.
- Chen, M.A., Vanek J., Carr M., 2004. Mainstreaming Informal Employment and Gender in Poverty Reduction: A Handbook for Policy-Makers and Other Stakeholders, Commonwealth Secretariat, London.
- Chickering, A., Salahdine M., 1991. Introduction and the Informal Sector Search for Self-Governance: the Silent Revolution, (Eds.). International Center for Economic Growth, San Francisco.
- De Soto, Hernando., 1989. The Other Path: The invisible revolution in the third world, Harper and Row, New York.
- Djankov, S., La Porta R., Lopez-de-Silanes F., Shleifer, A., 2002. The Regulation of Entry, The Quarterly Journal of Economics, Vol. 117, No. 1, pp. 1-37.
- Farrell, D., 2004. The Hidden Dangers of the Informal Economy. McKinsey Quarterly, No. 3, pp. 27-37.
- Feige, Edgar L., 1990. Defining and Estimating Underground and Informal Economies: The New Institutional Economics Approach, World development, Vol.18, No.7, pp. 989-1002.
- Fortuna, J.C. and Prates, S., 1989. Informal Sector Versus Informalized Labor Relations in Uruguay, The informal economy: Studies in advanced and less developed countries, pp.78-94.
- Friedman, E., Johnson, S., Kaufmann, D. and Zoido-Lobaton, P., 2000. Dodging the grabbing hand: the determinants of unofficial activity in 69 countries, Journal of public economics, Vol.76, No. 3, pp.459-493.
- Frye, T. and Ekaterina Z., 2000. Rackets, Regulation, and the Rule of Law. Journal of Law, Economics, and Organization, Vol. 16, No .2, pp. 478-502.
- Gereffi, G., 1999. International trade and industrial upgrading in the apparel commodity chain, Journal of international economics, Vol. 48, No. 1, pp. 37-70.
- Gershuny, J.I., 1979. The Informal Economy: Its Role in Post-Industrial Society, Futures, Vol. 11, No. 1, pp. 3-15.
- Godfrey P.C., 2011. Toward a theory of the informal economy, Academy of Management Annals, Vol. 5, No. 1, pp. 231- 277.
- Goldberg, P., Pavcnik N., 2003. The response of the informal sector to trade liberalization, Journal of Development Economics, Vol. 72, pp. 463- 496.
- Grossman, J.B., 1982. The Substitutability of Natives and Immigrants in Production. Review of Economic and Statistics, Vol. 64, No. 3, pp. 596-603.
- Hambrick, D.C., Mason, P.A., 1984. Upper echelons: The organization as a reflection of its top managers, Academy of Management Review, Vol. 9, No. 2, pp. 193-106
- Harris, J. R., Todaro M. P., 1970. Migration, Unemployment, and Development: A Two-Sector Analysis. American Economic Review, Vol. 60, No. 1, pp. 126-142.
- Hart, K., 1973. Informal Income Opportunities and Urban Employment in Ghana. Journal of Modern African Studies, Vol. 11, No. 1, pp. 61-89.
- International Labour Office, 2012. International Standard Classification of Occupations, ISCO-08 (Geneva). ----- 2012. Women in Informal Employment: Globalizing and Organizing (WIEGO). 2012. Women and men in the informal economy 2012 - A statistical picture (Geneva).
- International Labour Office, 2002. Conclusions Concerning Decent Work and the

- Informal Economy. Geneva: International Labour Office. Available online at: <http://www.ilo.org/public/english/standards/relm/ilc/ilc90/pdf/pr-25res.pdf>
- International Labour Office, 1972. *Employment, Incomes and Equality: A Strategy for Increasing Productive Employment in Kenya*. Geneva: International Labour Office.
- Johnson, S., McMillan, J. and Woodruff, C., 1999. *Contract enforcement in transition*. Working paper No. 211, CESifo, Germany, November 1999.
- Johnson, S., Kaufmann, D., Zoido-Lobaton, P., 1998. *Regulatory discretion and the unofficial economy*, *The American Economic Review*, Vol. 88 No. 2, pp.387-392.
- Kaufmann, D. and Kaliberda, A., 1996. *Integrating the unofficial economy into the dynamics of post-socialist economies: A framework of analysis and evidence*. World Bank Policy Research. Working paper No. 1691, Washington D.C., December 1, 1996.
- Kaufmann, D., 1997. *Corruption: the facts*. *Foreign policy*, No. 107, pp.114-131.
- Kesteltoot, C., Meert, H., 1999, *Informal spaces: the geography of informal economic activities in Brussels*, *International journal of urban and regional research*, Vol. 23, No. 2, pp. 232-251.
- Kornai, J., 1993. *The Evolution of Financial Discipline Under the Postsocialist System*, *Kyklos*, Vol. 46, No. 3, pp. 315-336.
- Kus, B., 2010. *Regulatory governance and the informal economy: cross-national comparisons*, *Socio-Economic Review*, Vol. 8, pp. 487-510.
- Porta, R.L., Shleifer, A., 2008. *The unofficial economy and economic development*. Working paper No. 14520, National Bureau of Economic Research, Massachusetts, December 2008.
- Lacko, M., 1998. *The hidden economies of Visegrad countries in international comparison: a household electricity approach*. Edited by L. Halpern and C. Wyplosz, Hungary: towards a market economy, Cambridge University Press, Cambridge, pp. 128-152.
- Lee, E., 1998. *The Asian Financial Crisis: The Challenge for Social Policy*, International Labour Organization, Geneva.
- Lund, F.J., Srinivas, S., 2000. *Learning from experience: A gendered approach to social protection for workers in the informal economy*. International Labour Organization, Switzerland.
- Maloney, W.F., 2004. *Informality revisited*, *World development*, Vol. 32, No. 7, pp. 1159-1178.
- McGahan, A.M., 2012. *Challenges of the informal economy for the field of management*, *Academy of Management Perspectives*, Vol. 26, No. 3, pp. 12-21.
- McGee, J. S., Bassett, L. R., 1976. *Vertical Integration Revisited*, *The Journal of Law & Economics*, Vol. 19, No.1, pp. 17-38.
- Moser, C.O., 1978. *Informal Sector of Petty Commodity Production: Dualism or Dependence in Urban Development*, *World Development Report*, Vol. 6, No. 9, pp. 1041-1064.
- Moser, C.O., 1984. *The Informal Sector Reworked: Viability and Vulnerability in Urban Development*. *Regional Development Dialogue*, Vol. 5, No. 2, pp. 135-178
- Nipon, P., 1991. *The Informal Sector in Thailand, The Silent Revolution*. (Eds.) A. Chickering and M. Salahdine. International Center for Economic Growth, San Francisco.
- Ordóñez, J.C.L., 2010. *Informal sector, productivity and tax collection*, *Centro de Investigación y Docencia Económicas*, October 2010.
- Peattie, L., 1980. *Anthropological perspectives on the concepts of dualism, the informal sector, and marginality in developing urban economies*, *International Regional Science Review*, Vol. 5, No. 1, pp. 1-31.
- Peattie, L., 1987. *An idea in good currency and how it grew: The Informal Sector*. *World Development*, Vol. 15, No. 7, pp. 851-860.
- Portes, A., Castells M., Benton L., 1989. *The Informal Economy: Studies in Advanced and Less-developed Countries*, John Hopkins University Press, London.

- Portes, A., Guarnizo, L.E., Haller, W.J., 2002. Transnational entrepreneurs: An alternative form of immigrant economic adaptation, *American sociological review*, Vol. 67, No. 2, pp. 278-298.
- Portes, A., Schauffler, R., 1993. Competing perspectives on the Latin American informal sector, *Population and development review*, Vol. 19, No. 1, pp. 33-60.
- Porto, G.G., 2005. Informal export barriers and poverty, *Journal of international Economics*, Vol. 66, No. 2, pp. 447-470.
- Prahalad, C.K., Hamel G., 1990. The Core Competence of the Corporation, *Harvard Business Review*, May/June 1990: 79-91.
- Quinn, J.B., 1992. *Intelligent enterprise: A knowledge and service-based paradigm for industry*, The Free Press, New York.
- Richardson, Harry W., 1984. The role of the informal sector in developing countries: an overview. *Regional Development Dialogue*, Vol. 5, No. 2, pp. 3-54.
- Schneider, F., 1997. The Shadow Economies of Western Europe, *Journal of the Institute of Economic Affairs*, Vol. 17, pp. 42-48.
- Schneider, F., 2002. Size and Measurement of the Informal Economy in 110 Countries around the World," Rapid Response Unit, World Bank.
- Schneider, F., 2005. Shadow economies around the world: what do we really know?, *European Journal of Political Economy*, Vol. 21, No. 3, pp. 598-642.
- Schneider, F., Enste, D.H., 2000. Shadow Economies: Size, Causes, and Consequences. *Journal of Economic Literature*, Vol. 38, pp. 77-114.
- Sethuraman, S.V., 1976. The Urban Informal Sector: Concept, Measurement, and Policy. *International Labour Review*, Vol. 114, No. 1, pp. 69-81.
- Shleifer, A., 1997. The government in transition. *European Economic Review*, Vol. 41 No. 3, pp. 385-410.
- Shleifer, A., Vishny, R., 1993. Corruption, *Quarterly Journal of Economics*, Vol. 108, pp. 599-618.
- Shleifer, A., Vishny R., 1994. Politicians and firms, *Quarterly Journal of Economics*, Vol. 109, pp.995-1025.
- Shleifer, A., Vishny, R., 1998. *The grabbing hand*. Harvard University Press.
- Smith, A., 1981. The informal economy, *Lloyds Bank Annual Review*, Vol. 141, pp.45-61.
- Spreitzer, G.M., 1997. Toward common ground in defining empowerment", in Woodman R.W and W.A. Pasmore (Ed.), *Research in Organizational Change and Development*, JAI Press, Greenwich.
- Stewart, T., Ruckdeschel, C., 1998. *Intellectual capital: The new wealth of organizations*, Doubleday/Currency, University of Michigan.
- Swaminathan, M., 1991. Understanding the informal sector: A survey. Working paper No. 95, World Institute for Development Economics Research of the United Nations University, Finland.
- Tokman, V., 1992. *Beyond Regulation: The Informal Economy in Latin America*, Lynne Rienner Publishers, Boulder, CO.
- Turnovsky, S.J., Basher, M.A., 2009. Fiscal policy and the structure of production in a two-sector developing economy, *Journal of Development Economics*, Vol. 88, No. 2, pp. 205-216.
- Williams, C.C., Round, J., 2007. Beyond negative depictions of informal employment: some lessons from Moscow, *Urban studies*, Vol. 44, No. 12, pp. 2321-2338.

An enhanced artificial neural network for stock price predications

Jiixin Ma
Silin Huang
S. H. Kwok

The Hong Kong University of Science and Technology
Hong Kong SAR

Keywords

Artificial Neural Network (ANN), Min-Max Normalization, Iterative Approach, Stock Price Predication

Abstract

Predicting stock price of a particular stock is a difficult non-linear problem. Artificial Neural Network (ANN) is a tool to solve this kind of problem and has received much attentions in the field of financial modeling in recent years. This paper proposes an enhanced ANN for predicting stock prices with a novel Max-Min normalization method as well as an iterative approach. Our experimental results confirm that the predication accuracy outperforms other existing ANN predication mechanisms.

1. Introduction

Stock price prediction is one of the most important topics in finance and business. However, the stock market is highly changeable and unpredictable. Fundamental analysis and technical analysis are two main schools of approaches trying to solve the problem from different perspectives. Unlike fundamental analysts who look into the intrinsic implications of the stock indicators, technical analysts evaluate stocks based on patterns or trends recognized from data analysis. One of the novel, yet highly discussed techniques is Artificial Neural Network (ANN). With the ability to solve complex such as nonlinear and stochastic problems with simple computational operations as well as the self-organizing feature (Daniel Graupe, 2013), ANN is progressively considered as one appropriate approach for stock price prediction.

Though much work has been done on finding the best configuration of ANN for stock price forecasting, little attention has been given to data pre-processing and training-testing set division. This paper aims at proposing an enhanced ANN to improve prediction accuracy by adopting a new Min-Max normalization method as well as the iterative approach with fewer inputs. The proposed ANN was tested with stock price data of the Hong Kong and China Gas Company Limited (0003.HK).

2. Proposed Artificial Neural Network

The objective of the proposed ANN is to predict the closing price of a given stock, and to modify the existing ANN model to increase the prediction accuracy.

The performance of the ANN model mainly depends on the data processing method, neural network configuration and network training approach. The proposed ANN is presented in Table 1.

- | |
|---|
| <ol style="list-style-type: none"> (1) Data collection (2) Choose appropriate network architecture and algorithm. Multi-layer perception model trained with back propagation algorithm was primarily chosen (3) Determine the data pre-processing (cleaning and normalization) method (4) Choose appropriate network configuration (number of hidden layers, number of hidden neurons) (5) Adopt the Iterative approach (6) Perform the training and testing for each cycle (7) Choose the network with the smallest MSE results among all the tested cycles |
|---|

Table 1: Algorithm for the proposed ANN.

a) Data Collection

The dataset used in this paper is extracted from daily data of the Hong Kong and China Gas Company Limited (0003.HK), also known as "Towngas", which is the first public utility in Hong Kong and currently one of the Hong Kong's largest energy suppliers. As one of the constituents of the Hang Seng Index (Hang Seng Indexes, 2016), it is considered to be a typical stock in the Hong Kong stock market, and thus it is more likely that the methodology used for it can be further applied to other similar stocks in Hong Kong.

The dataset contains the date, opening price, daily highest price, daily lowest price, closing price, daily transaction volume and adjusted closing price of the stock in every trading day from 2014-01-01 to 2015-12-31. The data was collected from the website of Yahoo! Finance (Yahoo! Finance, 2016).

b) Basic Architecture and Algorithm

This paper adopts resilient back propagation for the optimization of neural network (Anastasiadis, Magoulas & Vrahatis, 2005). The logistic function was chosen for the activation function and the sum of squared errors was used as the error function. In the training process, the number of repetitions for training was set to be 5. The maximum step of the training is set to be 10^5 .

c) Data Pre-processing

i. Cleaning of Incomplete Data

To ensure the overall prediction accuracy, the daily data containing missing entries should be removed from dataset. The database selected for this research contains daily data with zero volume possibly because of company's restructuring operation or other issues. They were removed from the dataset. After cleaning those incomplete data, there are data of 494 trading days remaining in the dataset.

ii. Data Normalization

For data normalization, the Max-Min normalization method was adopted to the training set, and the scaling range of $[-1/2, 1/2]$ was used. The function used is:

$$i = \frac{i' - \text{center}(i')}{\text{scale}(i')} = \frac{i' - \frac{\max(i') + \min(i')}{2}}{\max(i') - \min(i')}$$

where i = a normalized value

i' = value to be normalized

$\max(i')$ = maximum value of the variable series to be normalized

$\min(i')$ = minimum value of the variable series to be normalized

d) Network Configuration

The proposed ANN uses a three-layer multilayer neural network model with one 5-node input layer, one 5-neuron hidden layer, and a single node output layer as shown in Fig. 1

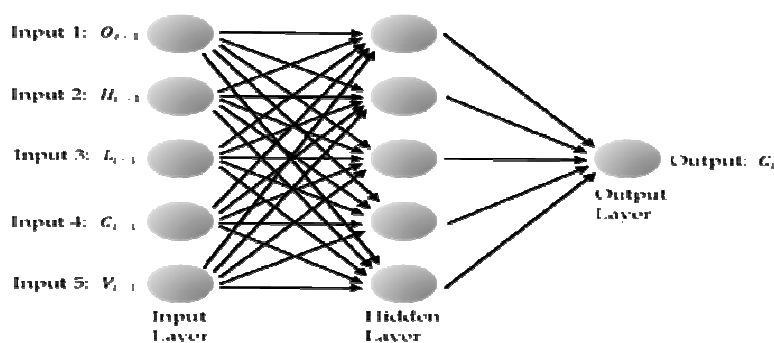


Figure 1: Neural network configuration with three layers.

According to the objective of the proposed ANN, the output variable is the closing price of day i (C_i). According to the findings from the literature review, five basic daily stock parameters were considered as input variables, which are: O_{i-1} : opening price of day $(i - 1)$; H_{i-1} : the highest price of day $(i - 1)$; L_{i-1} : the lowest price of day $(i - 1)$; C_{i-1} : closing price of day $(i - 1)$; and V_{i-1} : transaction volume of day $(i - 1)$.

e) Iterative Training Approach

To fully utilize the given data, an iterative training approach is proposed for training. The length of the training set is fixed to be 474 days, while the length of the testing set is 1 day. The testing set starts from 2015-12-03. In other words, the closing price for 2015-12-03 is predicted using the training result of 474 trading days right before it. In the end of 2015-12-03, when its exact closing price is known, the training set is updated by adding the latest observation in 2015-12-03 and discarding the oldest one. Thus the new training set for the prediction of 2015-12-04, is the previous 474 days. For the particular dataset selected for this paper, the data of the last 20 trading days were to be predicted. The remaining daily data were used at least once as training data. Before the iterative training process, the series of the input variables in the training set were normalized. The input data in the testing set were scaled according to the training set.

3. Experiments

a) Measurement Criteria for Network Performance

The network performance is assessed mainly by prediction accuracy. Each neural network was first trained for 5 times. In each trial, the mean squared error (MSE) of the de-normalized predicted closing price was calculated. The prediction accuracy was measured by the mean and the standard deviation (SD) of the five-trial MSEs.

$$MSE = \frac{1}{n} \times \sum_{i=1}^n (\hat{C}_i - C_i)^2$$

where n = the number of the predictions in the testing set

\hat{C}_i = the de-normalized predicted closing price of day i

C_i = the actual closing price of day i

$$Mean = \frac{1}{m} \sum_{j=1}^m MSE_j$$

$$SD = \sqrt{\frac{\sum_{j=1}^m (MSE_j - Mean)^2}{m - 1}}$$

where m = the number of the training trials

MSE_j = the MSE of the trial j

b) Comparison with Existing Model

In our experiments, six different combinations of two commonly used normalization methods (Max-Min method and Z-score method) with three different scales ($[-1/2, 1/2]$, $[-1, 1]$, $[0, 1]$) were tested. The dataset we used was a two-year (2014-03-31 to 2016-03-30) daily data of Towngas, with the first 95.94% (472 days) being the training set and the last 20 days is the testing

set. For all the 6 combinations, the network structure of 6 inputs, 1 output with 1 hidden layer was constructed. Inputs were O_{i-1} , H_{i-1} , L_{i-1} , C_{i-1} , V_{i-1} and A_{i-1} respectively, where

A_{i-1} represents adjusted closing price of day (i - 1). Output was C_i . Different numbers of nodes (6, 12, 18 or 24) in the hidden layers were tested. For Max-Min method, calculation was

Normalized Training-set Range	Center	Scale
[-1, 1]	$\frac{\min(i) + \max(i)}{2}$	$\frac{\max(i) - \min(i)}{2}$
[-1/2, 1/2]	$\frac{\min(i) + \max(i)}{2}$	$\max(i) - \min(i)$
[0, 1]	$\min(i)$	$\max(i) - \min(i)$

Table 2: Max-Min normalization method with three scales ("i" refers to each input variables).

performed according to Table 2.

For Z-score method, raw data was first normalized. After pre-normalization, Max-Min normalization method was then used to scale the data to the range of [-1/2,1/2] , [-1,1] and [0,1] respectively.

Normalized Training-set Range	1 st Normalization			2 nd Normalization	
	Center	Scale	Pre-normalized Training-set Range	Center	Scale
[-1, 1]	Mean of i	SD of i	S = [a, b]	$\frac{\max(S) - \min(S)}{2}$	$\frac{\max(S) - \min(S)}{2}$
[-1/2, 1/2]	Mean of i	SD of i	S = [a, b]	$\frac{\min(S) + \max(S)}{2}$	$\max(S) - \min(S)$
[0, 1]	Mean of i	SD of i	S = [a, b]	$\min(S)$	$\max(S) - \min(S)$

Table 3: Z-score normalization method with three scales.

In each combination, we set 6, 12, 18 and 24 as the number of hidden-layer neurons respectively and found out the best configuration that gives the best MSE. The result for each combination is shown in Table 4. In this table, configuration is displayed in the form of "number of inputs - number of hidden-layer neurons - number of outputs". For example, 6-12-12-1 represents the network with 6 inputs, 2 hidden layers containing 12 neurons in each hidden layer and 1 output.

Normalization Method	Normalized Training-set Range	Best Configuration	Mean of 5-trial MSEs	SD of 5-trial MSEs	Comments
Max-Min	[-1, 1]	6-6-1	0.17649292	0.01174585	
Max-Min	[-1/2, 1/2]	6-6-1	0.16306232	0.00273675	Smallest MSE
Max-Min	[0, 1]	6-12-1	0.16490424	0.00570716	
Z-Score	[-1, 1]	6-6-1	0.16628546	0.00930811	
Z-Score	[-1/2, 1/2]	6-6-1	0.16390940	0.00492479	
Z-Score	[0, 1]	6-6-1	0.16932494	0.00875395	

Table 4: Results for different normalization methods and scales.

Table 4 shows that all the 6 combinations perform similarly. However, the Max-Min normalization with the scale of [-1/2,1/2] gives the best combination of mean and SD of MSEs. Thus we will adopt the Max-Min normalization with scale of [-1/2,1/2] in our model.

Forecast performance is shown in Table 5 for the same training and testing set using two methods - without consideration of iteration and the purposed iterative training approach.

Method	Window size	Configuration	Mean of 5-trial MSEs	SD of 5-trial MSEs
Without iteration	1 day	5-5-1	0.01031	0.0008352
Iterative Approach	1 day	5-5-1	0.00968	0.0008228

Table 5: Forecast performance.

According to Table 5, it can be concluded that the iterative training approach gives better prediction results. However, for predicting the same 20 days, the iterative approach takes longer time.

4. Conclusions and Future Works

This paper proposed an enhanced ANN to predict the closing price of a stock in the Hong Kong stock market. Prediction of the stock closing price of the next day was modeled using a three-layer neural network trained with back propagation function. The paper enhanced existing neural network models to increase the prediction accuracy. The major contribution of this paper is to advance the normalization method and the training approach. For data normalization, the Max-Min normalization method was adopted and the scaling range were proposed to be $[-1/2, 1/2]$. For the training process, this paper proposed the iterative training approach, which limits the testing set length to be 1 day and kept updating the given data information while training the network. To compare with the existing model and to assess the prediction performance of the proposed model, empirical implementation was conducted on the stock of the Hong Kong and China Gas Company Limited (0003.HK). The mean and standard deviation of the MSEs obtained from the 5-trial trainings in every pair of comparison were used to measure and analyze the model performance. The empirical results show that the proposed ANN performs better with a higher level of prediction accuracy. A possible explanation for this is that the proposed normalization method keeps the distribution of the original data unchanged after scaling, and that the relatively small scaling interval contains both positive and negative values, which could make the data information more sensitive for prediction. And the iterative training approach also ensures that network training can make full use of the latest updated data information to provide more accurate prediction results. In conclusion, the application of the proposed model to the prediction the stock's closing price of the selected database has demonstrated its potential to be used in other stocks in Hong Kong stock markets. It will play a supportive role in helping investors make decisions in the stock market to achieve better prediction.

Since stock price is sensitive to many factors, five basic input variables used in the proposed model might not provide enough information for prediction. For future studies, we will introduce more input variables and figure out a better combination of the input sets. Potential input variables may include technical indicators, such as SMA (simple moving average), EMA (exponential moving average), MACD (moving average convergence), etc. Fundamental indicators like exchange rate and price per annual earning might be considered as well.

References

- Anastasiadis, Magoulas & Vrahatis., 2005. New globally convergent training scheme based on the resilient propagation algorithm. *Neurocomputing*, [e-journal] 64. 253-270. Available through: ScienceDirect website
<<http://www.sciencedirect.com/science/article/pii/S0925231204005168>> [Access 8 May 2016].
- Graupe, D., 2013. *Principles of Artificial Neural Networks*. 3rd ed. Singapore: World Scientific Publishing Company.
- Hang Seng Indexes, (2016). Hang Seng Index and Sub-indexes. [online] Available at: <http://www.hsi.com.hk/HSI-Net/HSI-Net> [Accessed 9 May. 2016].
- Yahoo! Finance, (2016). Historical Prices. [online] Available at: <http://finance.yahoo.com/q/hp?s=0003.HK+Historical+Prices> [Accessed 2 Apr. 2016].

Promoting gender equality in access to microcredit through flexible lending approaches of female targeting MFIs: Evidence from Duterimbere MFI of Rwanda

Liberata Mukamana

May Sengendo

Edith Okiria

School of Women and Gender Studies, Makerere University,
Kampala, Uganda

Key words

Gender equality, access to microcredit, flexible lending approaches, Female targeting MFIs

Abstract

Access to loans is one of the most important areas of focus by many development practitioners for reducing the existing gender gap in access to productive resources. Microfinance Institutions which target females as key clients were promoted for their lending approaches which avoid previous discriminatory practices that excluded women in the financial system. The current study examines the role of Duterimbere MFI of Rwanda in promoting equality in access to microcredit between female and male borrowers.

The results of the study are generated by analyzing quantitative data collected from 244 females and 94 males using the questionnaire and qualitative data collected from focus group discussions and interviews with key informants. The study findings revealed that Duterimbere has been able to adapt its requirements to the specific needs of poor women. A significant number of poor women have been able to join the MFI through group solidarity, a method that has upgraded their borrowing capacity to the level of getting individual loans on equal basis as male peers. This study recommends further research that should go beyond access to loan and consider the dynamics of power relations about utilization of the loan received by female and male borrowers.

1. Introduction

Microfinance institutions (MFIs) have been introduced in 1970s by development partners as a strategy of promoting economic development through equal access to productive resources. These MFIs were given mandate to provide small loans to the poor who were previously excluded from the financial system by commercial banks. By having access to microcredit, beneficiaries of microfinance were believed to actively participate in the development of their localities through entrepreneurship, increased income and bargaining power in social and political matters (Maes and Foose, 2006).

Gender gap in financial access: Despite this enthusiasm of financial inclusion for both women and men, global empirical research documented that women's access to finance is relatively low compared to men (Triki and Faye, 2013). These researchers have shown that in Africa 4 out of 5 women lack access to an account at a formal financial institution, compared to only 1 man out of 4. This gender gap in financial access is worse in rural areas where women receive only one tenth of the credit given to small farmers and less than 1% of total credit to agriculture. This low status of women results from discriminatory practices that limit their ability to have access to available financial services such as compulsorily collateral as most women are less likely to own assets than men (DFID, 2013).

Elimination of gender discrimination: For promoting gender equality in financial access, Boros, Murray and Sisto (2002) supported the intervention of female-targeting MFIs that focus more on gender concerns and women's specific needs in financial matters as the majority

of previous Microfinance programs had gender neutral policies and targeted women for the high repayment rate and poverty alleviation arguments. The pledge to support women's access to finance is central to international development initiatives such as the launch of the Global Partnership for Financial Inclusion (GPII) by G20 leaders and their commitment to finance over 200,000 SMEs with at least £5 billion of which 25% of loans should be given to women-headed SMEs (DFID, 2013). African leaders have also decided to take into account women's specific needs in access to finance in the Post 2015 Development Agenda (Report of the African Union Assembly, 2015).

Gender focused Policy interventions: The government of Rwanda also made commitments of promoting women's economic capacity through increased access to finance in a number of development initiatives articulated in different documents namely the Vision 2020, the National Poverty Reduction Strategy Paper and the Decentralization Policy of Rwanda, the overall objective of the National Gender Policy of 2004 (Dejene, 2008). In this regards, the government supported the creation of female- focused microfinance programs whose focus was to serve at least 70% of female clients in their financial services (The National Microfinance Implementation Strategy, 2007). However, despite these initiatives of tailoring financial and non-financial services that match with the specific needs of women, little is known about the extent to which women benefit from the available microcredit programs (Dejene, 2008; Mayoux, 2005; Cheston and Kuhn, 2002; Mayoux and Hartl, 2009). Moreover, little research has focused on the contribution of the MFIs that target women as their primary beneficiaries in reducing the existing gender gap in financial services. This paper addressed this gap by comparing the ability of women and men to have access to microcredit and non-financial services provided by Duterimbere, as one of the female-targeting MFIs that operate in Rwanda. The key research questions addressed during the study included:

- a) How do female-targeting MFIs take into account the specific needs of poor women and men in their requirements of accessing to loan?
- b) How do women and men access to loan and non-financial services offered by female-targeting MFIs?

2. Literature review

For promoting equal access to microcredit, Gender sensitive MFIs should avoid replicating credit terms developed by other institutions from different contexts, sometimes on gender neutral context with little or no consultation of borrowers. Instead, they should revise their lending methodologies to fit with the business capacities of their clients (Mayoux, 2002; Mayoux and Hartl, 2009). Some of the most pervasive requirements in question include physical collateral requirement, loan amounts which are too small compared to women's business need, compulsory signature of the male guarantor of women's loans, short loan repayment terms that do not match with the productivity plan of the borrowers, and interest rates that are too high (DFDI, 2013).

Adjustment of the collateral requirement: Female-targeting credit programs have a mandate of designing flexible collateral alternatives to better serve poor clients and women in particular (Triki and Faye, 2013). The dominant type of women flexible collateral is the social collateral or group loans whereby women organize themselves into group and members are jointly responsible for the repayment of each other's loans (Boros et al., 2002). Other substitutes of the formal collateral that were developed by female focused MFIs include movable collateral or unconventional collateral such as jewelry and household utensils, warehouse receipts, accumulated savings and micro-leasing loans (Triki and Faye, 2013). From their empirical research on women's access to finance in Yemen, Burjorjee and Jennings (2008) argued that these

women-friendly collaterals have been efficient in promoting women's opportunity to start up or expand their own businesses when they couldn't get such support elsewhere.

Cost of serving poor and rural clients: The interest rates charged by MFIs have been critiqued as being much higher than commercial lending rates, the reason being that MFIs want to offset the cost of serving poor and rural clients (Burjorjee and Jennings, 2008). According to Mayoux and Hartl (2009), the interest rate should be much higher than the cost of service provision for ensuring the sustainability of the MFI. However, these authors also suggest that MFIs must set lower interest rates than the interest charged by money lenders for promoting easy access to their services. Mitra (2009) recommended an interest rate of 15 percent per year as appropriate and sufficient to cover the cost of lending operations in MFIs. He considered MFIs that charge an interest rate that exceeds 15 percent per year as the MFIs that left the micro-credit area and joined the loan-shark area.

Size of loan and women's needs: Concerning the loan size, it was generally argued that women's needs are related to smaller loans offered on group basis as they can't afford to meet the requirements and conditions of accessing larger individual loans (Haq and Safavian, 2013). But this was found to be true only for the initial stage and for poor women (Mayoux, 2005; Goetz and Gupta 1996). There are some women who have business projects necessitating larger loan amounts like men, but face numerous challenges in accessing such loans (GPIF and IFC, 2011). To avoid this risk of discriminating against women accessing to larger loan by ghettoizing them in small loans, Gendered Microfinance Institutions were required to initiate loan graduation programs for facilitating women to undertake more profitable activities (Mayoux, 2005)

Provision of non-financial services: The measure of tackling traditional barriers to loan access was found to be part of the solution of improving women's economic capacity, as poor women need more than access to money. In general, low-income women lack educational and financial skills and this limits their ability to access of the financial system (Driemeier, 2013). That is why non-financial services including financial competency training and business development are needed to enhance women's competency in financial management (UNCDF, 2011). This approach of lending known as "credit plus" or "maximalist lending approach" is in line with the comprehensive approach to poverty alleviation of Hickson (1999), which assumes that very poor clients are basically incapable of running small businesses and hence unable to use financial services before receiving any training from capacity-building programs.

Customer care in service delivery: Staff attitude in dealing with female and male clients has been viewed as one factor that helps the clients to benefit from the available financial services and avoid becoming over-indebted as staff aim at providing adequate information and helping the clients to understand and muster the working conditions of the MFI (Hartl and Mayoux, 2009). Due to the importance of good customer relations, Ledgerwood and White (2006) proposed to incorporate customer care into the objective and philosophy of the MFI and to give it priority in staff training. Another priority issue in promoting good customer relations is the recruitment of female staff, particularly among loan officers of the MFIs. Female loan officers help to deal with different forms of gender stereotypes that female clients face in their relationship with some male loan officers who consider women less entrepreneurial than men (Triki and Faye, 2013). The importance of recruiting female staff is not limited to retaining female clients but also extends to financial benefits. A global study on 339 microbanks in 73 countries revealed that female leadership is positively related to micro bank performance as a result of MFI's female market orientation (Strøm, D'Espallier and Mersland, 2010).

In addition to promoting female staff, previous researchers such as Barros, Murray, and Sisto (2002), Murray (2005), Mayoux and Hartl (2009) suggested that gender sensitive training

must be offered to all staff as both female and male staff may be insensitive to gender issues. Gender training help to change the mindset and attitude of the staff in the ways they view and treat both female and male clients (Murray, 2005). Staff members should be aware of gender differences that exist amongst their clients and be able to understand the consequences of such differences in empowering poor clients in their daily activities (Murray, 2005).

3. Study methodology

This study used structured questionnaire to collect data from male and female beneficiaries of microcredit services offered by Duterimbere MFI. The questionnaire was made up by two different sections. The first section employed a Likert-type scale in which respondents were given a choice of answers that were assigned an ordinal value. This first section provided information relating to the lending approach that takes into account the specific needs of poor women and men in accessing loans. The second section of the questionnaire contained a set of responses that focused on a certain themes and each respondent was asked to indicate his or her choice. This concerned mainly the information regarding the loan amount taken by the respondents and whether the respondents have received any training from Duterimbere MFI. The answers of the questionnaire produced quantitative data that were presented and interpreted in frequency tables and charts. Z-test helped to test whether there was a significant difference on the loan amount obtained by male and female borrowers. This research used also qualitative data that were collected from interviews with key informants selected from the staff of Duterimbere MFI, and Focus Group discussions with some respondents selected from those who have enough experience in the lending program. Qualitative data were collected verbally and recorded through a voice recorder and transcribed later as text. To select respondents, three techniques were combined: stratified sampling, quota sampling and simple random sampling. As a gender sensitive research, sampling that uses multiple techniques was very important for obtaining a sample that is representative of the target population by respecting both geographical and sex specific characteristics for all the groups concerned by the study. This sampling strategy came up with 99 male and 253 female respondents but only 94 males and 244 females gave the answers that were used in this research. The response rate of this research was 96% which is sufficient to allow generalization to the whole population as it was greater than the average response rate of 80 percent for most social research surveys as noted by Bryman (2008).

4. Study findings

4.1 Taking into account specific needs of poor women and men in the requirements of accessing to loan

This study used the questionnaire to collect information related the provision of loan services. Respondents were asked to give their views on how they value different services using a five-point Likert-scale where 1 signified strongly disagree, 2 disagree, 3 indifferent, 4 agree, and 5 indicated strongly agree. The views of respondents are presented in table 1 below:

Table 1: Opinions of respondents about the flexibility of the requirements of accessing to loan

Views of respondents		Strongly disagree	Disagree	Indifferent	Agree	Strongly agree	Total
Loan conditions							
The interest rate charged is affordable	% within males	1.1	3.2	12.8	56.4	26.6	100.0
	% within females	0.0	4.1	19.7	46.7	29.5	100.0
Maximum loan amount is convenient	% within males	1.1	6.4	34.0	45.7	12.8	100.0
	% within females	2.0	9.4	32.8	38.5	17.2	100.0
The collateral requirement	% within males	1.1	3.2	8.5	36.2	51.1	100.0

is flexible	% within females	0.4	2.5	12.7	34.0	50.4	100.0
The repayment plan is appropriate	% within males	2.1	3.2	9.6	43.6	41.5	100.0
	% within females	1.2	5.7	13.1	39.3	40.6	100.0
The staffs care about the clients of the MFI	% within males	0.0	0.0	3.2	41.5	55.3	100.0
	% within females	0.0	0.0	2.5	36.5	61.1	100.0

Source: Primary data, 2014

4.1.1 Interest rate

Duterimbere MFI charges a fixed interest rate of 2% per month on group loans and 15% per year on individual loans. The majority of respondents accepted that the interest rate charged by Duterimbere MFI is affordable. 56.4 percent of male and 46.7 percent of female respondents “agreed” with the affordability of the interest rate while 26.6 percent of male respondents and 29.5 percent of female respondents “strongly agreed” with the affordability of the interest rate of the MFI. Similarly, in the focus group discussions, female and male respondents who were members of other financial institutions revealed that they are happy with the interest rate charged by Duterimbere MFI. One man of Muhanga branch said that he was charged an interest rate of 16 % on an individual loan in Goshen Finance before joining Duterimbere MFI. Likewise, one woman from Kigali branch said that the interest rate of 2 per month is common on group loans in different MFI by giving reference to COOPEDU (Cooperative d’Epargne et de Credit Duterimbere) and Inking Microfinance. Despite the dominance of a positive appreciation, some respondents (12.8 percent of male and 19.7 percent female respondents) had an indifferent opinion. Some men who were present in the focus group discussion in Kigali branch said that they do not like fixed interest approach used by Duterimbere MFI as the total interest paid through this approach is much higher than the interest paid through declining balance approach mostly used by commercial banks. These two approaches of calculating interest differ from the principal amount on which the interest rate is applied. In fixed interest approach, monthly installments are calculated on the original loan amount given to the borrower for the whole the term of the loan. But in declining balance approach, monthly installments are calculated on the remaining loan balances.

4.1.2 Maximum loan amount given

The maximum loan amount given by Duterimbere depends on the type of the loan requested by the borrower. For group solidarities, every group member is eligible to a maximum loan of 500,000 Rwf while individual loans depend on the collateral given by the borrower and the viability of his or her business project. Overall, the maximum loan amount given to individual borrowers is fixed at 20,000,000 Rwf (24,800US\$; exchange rate, 1 US\$=806.4 Rwf).

The findings of this research have shown that the majority of female and male respondents were happy with the maximum loan amount given by Duterimbere MFI. Among them, there are 45.7 percent of male respondents and 38.5 percent of female respondents who revealed that they “agree” with the statement that the loan amount given by Duterimbere MFI is convenient and 12.8 percent and 17.2 percent of male and female respondents respectively who said that they “strongly agree” with the same statement. Likewise, participant of the focus group discussion have shown a positive attitude on the loan amount. One woman said: “*We know that the maximum loan amount is 20,000,000 Rwf. But who can have access to that amount among us? Everyone puts on the size of the shoe that fits his or her foot, to mean that everyone takes the loan that matches with the size of his/her business and his/her capacity to repay it* (Female participant, women FGD, Nyagatare branch) ”

Despite this positive attitude of the majority of respondents, there is a significant percentage of respondents (34 percent of male respondents and 32.8 percent who were indifferent about the maximum loan amount given). On this concern, the management of Duterimbere MFI revealed that there are some clients who want to get a loan amount that exceeds 500,000 Rwf per borrower on group basis. However the institution cannot offer such amount in order to avoid transferring a huge burden of non-repayment to other group members. On this point he said that: *"A loan amount that exceeds 500,000 Rwf must be covered by the collateral as a safety of the borrowed amount"* (Male key informant, Musanze branch).

4.1.3 Flexibility of the collateral requirement

The findings of this study revealed that the majority of respondents were satisfied with the collateral requirements of Duterimbere MFI. 51.1 percent of males 50.4 percent of females indicated that they strongly agree with flexibility of the collateral requirement while 36.2 percent of male respondents and 34.4 percent of respondents indicated that they "agree" with the flexibility of the collateral requirement of Duterimbere MFI. In agreement with this, one key informant mentioned that: *"Duterimbere MFI has a strategy of relaxing the collateral requirement by developing a variety of loan products that favors every person who is morally credible to get access to microcredit services even in the absence of asset to offer for mortgage. I can give an example of 2 types of loan products that can be easily afforded by poor people without prior assets. One is group loan which is based on social collateral; another is micro-leasing loan where the clients give the leasing material itself as a guarantee"* (Female key informant, Muhanga branch). This was also confirmed by one female participant of the focus group discussion who said that: *'For the moment, Duterimbere has made life easier for poor entrepreneurs who were constrained by the problem of collateral. The MFI doesn't require much for group loans. We only sign an agreement that every member is responsible for the non-repayment of other group members"* (Female participant, women FGD, Nyagatare branch).

The only problem that was reported by female participants in their focus group discussion was related to the requirement of the signature of a guarantor. One woman said: *"When I was applying for the loan for the 1st time, my husband refused to sign on my loan agreement by saying that I will not be able to manage my business and hence fail repay the loan and leave the burden of repayment to him. Fortunately, as I was applying for a group loan, there was a possibility to replace his signature by any signature of a family member. When I explained the challenge I faced to my parents, they have accepted that my mother can be a guarantor for my loan. I finally got the loan, did my business and completed the repayment. When I was about to apply for the loan for the 2nd time, my husband accepted to sign on my loan application as he has seen that I have the capacity to manage the repayment of the loan and obtain additional profits."* (Female participant, women FGD, Musanze branch).

Whereas some female clients have seen the signature of their husband as challenge for their access to loan, the management of DUTERIMBERE MFI has a different opinion on this point: *"The signature of the spouse (either male or female) is an indication of a prior consent among family members about the decision to take the loan, which promotes better utilization of the loan and limits defaulting loans"*. (Female key informant, Kigali head quarter office). Female borrowers also support this point of view. One woman who was in the focus group discussion of Rubavu branch said that: *"I remember one day, my husband has taken a loan from Duterimbere MFI to buy a taxi moto. At that time, I was informed because I signed on his loan agreement. After only two months, my husband got sick. As I knew that our house which was given as collateral will be sold if the loan is not repaid, I was obliged to work hard in order to repay the loan. I decided to start a business of mobile forex here at the border of the Republic of Congo and Rwanda. I was even given a name of "Gatara" by my colleagues meaning "light" because of working until late in the evening. I was able to repay the loan and secured the welfare of my family"* (Female participant, women FGD Rubavu branch).

4.1.4 Convenience of the repayment plan

The findings of this study established that most respondents were happy with the repayment plan of Duterimbere MFI which is monthly for individual and group loans that are given for various business activities and semi-annual repayment plan for group loans that invested in agricultural projects. 43.6 percent of male and 39.3 percent of female respondents “agreed” with the statement that the repayment plan fits with the profitability of their businesses while 41.5 percent of male and 40.6 percent of female respondents indicated that they “strongly agree” with the convenience of the repayment plan. Female respondents who were members of other group lending mechanisms such as Urwego Opportunity Bank and Vision Finance argued that they have decided to join Duterimbere MFI due to better repayment conditions (1 month repayment period in Duterimbere compared to 2 weeks repayment period offered by other MFIs). They also revealed that Duterimbere MFI has a particularity on group loans invested in agriculture projects where borrowers are asked to pay when their harvests are ready. One female participant said: *“The maximum duration for agriculture loans is one year but the repayment is made in two installments of six months. As most crops that are grown in this region are harvested after 4 months, this repayment plan is convenient for being able to get profit and pay back the loan without delay”* (Female participant, women FGD, Rubavu branch).

4.1.5 Good customer care in the provision of financial services

The study findings revealed that almost all female and male respondents said that the care provided by the staff of Duterimbere MFI was pleasing. 55.3 percent of males and 61.1 percent of females evaluated the customer care of the staffs of the MFI with “strongly agree” while additional respondents (41.5 percent of males and 36.5 percent of females) have chosen “agree” likert scale on the customer care statement. Similarly, the information collected through focus group discussions confirmed that the clients of Duterimbere are well received by all the staff irrespective of their position. One participant said that: *“In Duterimbere MFI, there is no discrimination, all clients whether rich or poor, rural or urban, woman or man are given equal treatment. Whenever you ask information or assistance, it is given on time”* (Female participant, women focus group discussion, Muhanga branch).

Some of the strategies that help the MFI to promote good customer relations are the recruitment of both sexes in different positions, and gender training offered to all staff members. The Director General of the MFI told the researcher that good customer care starts with gender disaggregated data in staffing whereby the MFI makes sure that there is equal numbers of females and males in all the positions of the MFI. He said that: *“We managed to achieve 50% of females in all the positions of the MFI but our target is to go beyond this percentage in some positions like credit officers and cashiers due to the predominance of female clients in our MFI.”* (Male key informant, Kigali headquarter office). However, Duterimbere MFI recognizes that equal number of females and males in staffing is not sufficient to ensure that all staff members take into account gender-based differences that affect the provision of financial services. The MFI offers gender training to all its staff for enhancing their understanding and commitment to gender issues in service delivery. It was said by one key informant that: *“All staff members are trained to be flexible while dealing with female and male clients. We specifically focus on being polite and attentive to the specific needs of women and men in their daily activities. They must ensure that individual client receive enough information and any support needed to enable her/him to easily have access to available services”* (Female key informant, Kigali headquarter).

4.2 Access to non-financial services

Duterimbere design and offer non-financial services in addition to its core activity of providing loans, for enabling its clients to utilize the loan more efficiently and effectively. Table 2 below shows the number of respondents who were trained:

Table 2: Provision of training in Duterimbere MFI * Sex of respondents Cross-tabulation

			Sex of respondents		Total
			Male	Female	
Have you received any training from Duterimbere MFI	Yes	Count	21	119	130
		Percentage	22.3%	48.8%	38.5%
	No	Count	73	125	208
		Percentage	77.7%	51.2%	61.5%
Total	Count	94	244	338	
	Percentage	100.0%	100.0%	100.0%	

Source: Field research, 2014

Table 2 shows that 48.8 percent of female respondents were trained while only 22.3 percent of male respondents received training in Duterimbere MFI. Due to limited funds, Duterimbere MFI prioritizes members of solidarity groups as the most vulnerable category. The coordinator of the lending program said that they have put in place a training program for empowering their clients with SMEs’ management skills namely how to make a business plan, how to keep the records of their activities, how to evaluate and decide on a profitable investment activity, how to respect the repayment plan among others. She also explained that in each and every session of the training, gender equality and women’s rights issues are discussed in order to promote self-confidence of women and better gender relations within the household as fundamental components of women’s empowerment. The importance of training offered by Duterimbere MFI was reflected in the focus group discussion of women held at Muhanga branch where it was noted that business training helped women to expand and diversify their businesses. One woman said that: *“I make a local wine known as Kanovera from Pineapple . I was used to sell my wine to neighbors from home. When I was trained by Duterimbere MFI, I got new skills on how I can expand my business. In those trainings, I was also able to meet other entrepreneurs who do the business of food and beer processing and were able to exchange experiences and share the market opportunities. My market has now expanded to other cities such as Huye, Nyanza and Ruhango. In the nearest future, I plan even to go to Kigali”*. (Female participant, women FGD, Muhanga branch). Men also acknowledge the importance of the training on their businesses. One man said: *“I joined Duterimbere MFI with the purpose of taking the loan for expanding my cattle project. I had 3 local cows by that time; When I attended training on modern livestock farming methods, I was able to understand the benefits of modern cattle particularly the quantity of milk got on daily basis. That training helped me to get out from traditional biases that modern cattle are weak. I was also able to know where I can get veterinary services for additional advices. I decided to shift from traditional to modern cattle. I see that the earnings from my project are increasing.”* (Male participant, men FGD, Nyagatare branch).

4.3 Loan amount taken by female and male clients

Figure 1: Latest loan amount obtained in Duterimbere MFI

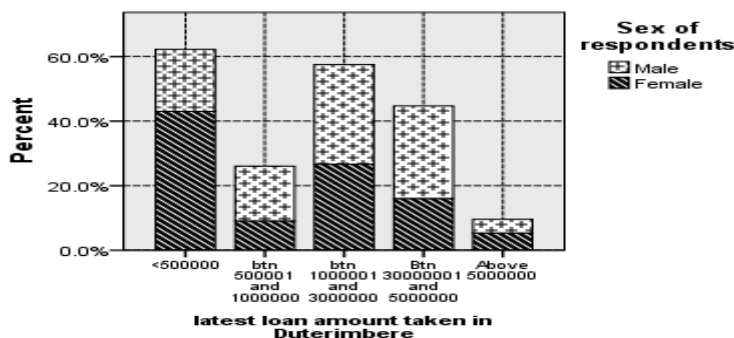


Figure 1 above shows that the loan amount that is in the range of ≤500,000 Rwf dominates other ranges of loan amount taken by respondents. It also shows that females comprise the majority of the borrowers in this group of small loans as 43 percent of female respondents took a loan that is ≤500,000 Rwf while only 19.1 percent of male respondents fall in this category. For serving this group of people who don't have guarantees for accessing larger loan amounts, Duterimbere MFI designed a collateral-free group loan product that is offered to solidarity groups. For reaching its objective of serving more women on group solidarity, Duterimbere MFI has a requirement of having at least 2/3 of female members in every group. This helped many women to borrow small loan amounts that match with the need of their small businesses. In support of that, one woman said: *Duterimbere koko ni 'Igicumbi cy'iterambere ry'umugore' to mean that Duterimbere is really a cornerstone for the development of a woman. Before I know Duterimbere, I could not even dream about loan even though I had a need. You can ask me why? Collateral problem.....I believe that if there was no alternative of having access to loan though solidarity groups, some of us could stay outside the financial sector. I thank Duterimbere for thinking about vulnerable women'*(Female participant, women FGD, Nyagatare branch).

Figure 1 also shows that men dominate women in accessing loan amount exceeding 500,000 Rwandan Francs. For instance, 17 percent of male respondents vs 9 percent of female respondents obtained a loan amount that was in the range of "500,001 to 1,000,000 Rwf", 30.9 percent of male respondents vs 26.6 percent of female respondents took a loan that was in the range of "1,000,001 to 3,000,000 Rwf" and 28.7 percent of male respondents against 16 percent of female respondents obtained a loan that was in the range of "3,000,001 and 5,000,000 Rwf".

4.4 Gender difference or gender equality in access to loan services?

The above difference in loan amount obtained by female and male respondents motivated the research to compute the mean of loan amounts obtained by female and male respondents. The results obtained are presented in table 3 below:

Table 3: Loan amount taken by female and male respondents

Sex of respondents	Mean	N	Std. Deviation
Male	2,404,787	94	1872926.368
Female	2,067,868	244	2346862.621
Total	2,161,568	338	2227638.548

Source: primary data, 2014

For checking whether statistical analysis support or contest this claim of difference in loan amount obtained by female and male borrowers, the researcher tested for difference in sample means using z test.

Z test was chosen due to the following reasons (Bluman, 2009):

- The samples were independent of each other
- The populations from which the samples were obtained were normally distributed as both sample sizes were greater than 30 according to the central limit theorem
- The true variances of the population were unknown but the sample variances were known

The test statistic is
$$Z = \frac{(\bar{X}_1 - \bar{X}_2) - (\mu_1 - \mu_2)}{\sqrt{s_1^2/n_1 + s_2^2/n_2}}$$

Steps followed for testing the hypotheses

a) Data

s_1^2	=	1,872,926.368	$n_1 = 94$	$\bar{X}_1 = 2,404,787$
s_2^2	=	2,346,862.621	$n_2 = 244$	$\bar{X}_2 = 2,067,868$
				$\alpha = .05$

b) Hypotheses

$H_0: \mu_1 \leq \mu_2$ μ_1 represents the mean of loan amounts given to men

$H_a: \mu_1 > \mu_2$ (Claim) μ_2 represents the mean of loan amounts given to women

c) Appropriate test statistic: one tailed test as the assumption is that the mean of the loan amounts obtained by men is greater than the mean of the loan amounts obtained by women

d) Decision rule: With $\alpha = .05$, the critical value for one-tailed test is +1.64, we reject H_0 if $z > +1.64$

e) Calculation of the test statistic

$$Z = \frac{(\bar{X}_1 - \bar{X}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}} = \frac{(2,404,787 - 2,067,868) - 0}{\sqrt{\frac{(1,872,926.368)^2}{94} + \frac{(2,346,862.621)^2}{244}}} = \frac{336,919}{244726.13} = 1.38$$

f) Make decision: do not reject the null hypothesis at $\alpha = 0.05$, since $z=1.38 < 1.64$

g) Interpretation of the result: There is not enough evidence to support the claim that loan amounts obtained by men are greater than loan amounts obtained by women. This implies that Duterimbere MFI was able to promote gender equality in access to loan services

In agreement with this finding, the credit officer of Duterimbere MFI Kigali-Nyarugenge city market confirmed that women can get access to larger loans like their male counterparts. She even revealed that the highest loan that was given in her branch is 15,000,000 Rwf which was obtained by a woman to finance her project of growing and selling mushrooms.

The findings of this study established that for most women, the opportunity to have access to larger loans is made possible by their ability to prevail in the lending operations for graduating their businesses and their borrowing capacities: "I joined Duterimbere MFI when group members were given 50,000 Rwf per person and it was in 1998. From that time, I still member. I took many loans on group basis and gradually shifted to individual loan. For the moment (2014), I have a loan of 5,000,000 Frw" (Female participant, Women FGD, Kigali branch). This point of view was also supported by one loan officer who said that: "Provision of small loan amounts is a worthwhile intervention for poor women particularly for those who live in the rural areas. At our branch, the majority of women who are taking loan on individual basis have started on group basis. A loan amount of 500,000 Rwf or less that was given to an individual woman within the group helped them to start or support their small business, remain and being familiar with lending operations and in the long run accumulate enough profits for buying an asset that can be used as collateral for individual loan" (Female key informant, Muhanga Branch).

5. Discussion and conclusion

The findings of this study revealed that Duterimbere MFI played a significant role of promoting gender equality in financial access, mainly by adjusting some of the rigid requirements that limit women's opportunity to loan services. The majority of respondents evaluated the interest rate as being affordable; the maximum loan amount has been accepted as convenient, some respondents revealed that they could not even request the half of the maximum ceiling. The collateral requirement of Duterimbere MFI has been revised to include loan products that are given to clients who could not get access to physical collateral. The repayment plan of Duterimbere MFI takes into account the productive cycles of the investment activities in which the loans of the clients are invested. According to Mayoux (2005), female-targeting MFIs are supposed to adjust financial services such as interest rates, repayment schedules, application procedures, loan size, and so on to better address women's needs, achieve

gender equality and women's empowerment. Similarly, Gobzie(2010) noted that the strategy of promoting equal access to microcredit requires particular attention in the design of financial services. His proposition was that MFIs should concentrate their efforts in simplifying the procedures by staying away from burdensome appraisal processes and other rigid conditions that are compulsory in conservative banks. This coincides also with the suggestion of the Women World Bank (2003) that MFI should design flexible loan amounts and repayment schedules to match the income flows and repayment capacity of the borrowers. In addition to these measures of improving access to financial services, Boros, Murray and Sisto (2002) stated that the process of empowerment requires complementary services such as skills trainings for improving technical and management skills of micro-entrepreneurs. That is why the strategy of relaxing the conditions of accessing loan services of Duterimbere MFI has been combined with the provision of non-financial services for enhancing women's experience in loan services.

The study findings revealed that inclusive lending approaches of Duterimbere MFI, promoted equal access to microcredit. Group loans have been an entry point in the lending programs for many women who could not meet the collateral requirement. Therefore, women's increased experience in the lending programs helped them to upgrade their borrowing capacity and get individual loans on an equal footing to the men. Gupta and Goetz (1996) established that progressive lending enabled women to graduate from group loan to individual loan due to increased experience of managing their businesses and mastering credit procedures of the MFI.

For tackling gender discrimination in loan provision, Duterimbere MFI designed collateral-free loan products such as group loans that meet the need of low income women and leasing loans that respond to the specific need of poor men of having their own motorcycles/automobiles that they use for earning an income in transport services. Moreover, the MFI requires all the clients, women and men, to get the signature of their spouses on their loan contracts for promoting prior consent and better utilization of the loan. Provision of gender training to all staff is also a strategy used by the MFI for promoting the custom of not differentiating the clients in service delivery.

6. Future research agenda

This study left a room for further researches that should take into account the relationship between access to loan services and the process of women's empowerment. It was noted by Longwe(1994) that equality of access to the factors of production including microcredit is at the lower level of gender equality and women's empowerment. This limitation proposes to carry out a forward research on how women invest their loans and how they control their investment activities and the resulting profits.

References

- Bluman, A. G.,2009. Elementary statistics: A step by step approach. New York: McGraw-Hill Higher Education.
- Boros, R., Murray, U. and Sisto, I., 2002. A Guide to gender-sensitive microfinance: Socio-economic and Gender Analysis (SEAGA) Program.
<http://www.fao.org/docrep/012/ak208e/ak208e00.pdf>
- Bryman, A., 2016. *Social research methods*. Oxford, Oxford University Press
- Burjorjee, D. and Jennings, M., 2008. Microfinance Gender Study: A Market Study of Women Entrepreneurs in Yemen. *Sana'a: Social Fund for Development*.
- Cheston, S. and Kuhn, L., 2002. Empowering Women through Microfinance, Final Draft. *Women's Opportunity Fund/UNIFEM*.
- Dejene, Y., 2008. Rwanda Gender Assessment: Progress towards improving women's economic status. *African Development Bank: Human Development Department*

- DFID, 2013. Promoting Women's Financial Inclusion. Department of International Development, London and East Kilbride, United Kingdom.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213907
- Gobeze, G., 2010. Empowerment of women in rural Ethiopia: A review of two microfinance models. *Praxis: The Fletcher Journal of Human Security*, 25, pp.23-38.
- Goetz, A.M. and Gupta, R.S., 1996. Who takes the credit? Gender, power, and control over loan use in rural credit programs in Bangladesh. *World development*, 24(1), pp.45-63.
- GPII and IFC, 2011. Strengthening Access to Finance for Women-Owned SMEs in Developing Countries. *International Finance Corporation. Washington, DC.*
- Hallward-Driemeier, M., 2013. *Enterprising Women: Expanding Economic Opportunities in Africa.* World Bank Publications.
- Haq, A. and Safavian, M., 2013. *Are Pakistan's Women Entrepreneurs Being Served by the Microfinance Sector?: Are They Being Served by the Microfinance Sector?.* World Bank Publications.
- Hickson, R. 1999. Reaching extreme poverty: financial services for the very poor. *Nairobi: MicroSave-Africa.*
- Ledgerwood, J. and White, V., 2006. *Transforming microfinance institutions: providing full financial services to the poor.* World Bank Publications.
- Longwe, S. H. and Clarke, R., 1994. Women in Development. In *Culture and Youth: Workshop Readings., Longwe Clarke and Associates, Lusaka, Zambia.*
- Maes, J. and Foose, L., 2006. Microfinance and non-financial services for very poor people: Digging deeper to find keys to success. *The SEEP Network Poverty Outreach Working Group. Washington, DC: The SEEP Network.*
- Mayoux, L., 2005. Women's Empowerment through Sustainable Microfinance. Rethinking Best Practice. Discussion Paper, Gender and Microfinance website
<http://www.genfinance.net>
- Mayoux, L. and Hartl, M., 2009. Reaching and empowering women: gender mainstreaming in rural microfinance: guide for practitioners. *Rome:(IFAD).*
- Mitra, S.K., 2009. Exploitative microfinance interest rates. *Asian Social Science*, 5(5), pp.87-93
- Murray, U., 2005. *Promoting gender-sensitive entrepreneurship via microfinance institutions.* Food and Agriculture Organization of the United Nations (FAO). Gender and Population Division.
- Report of the African Union Assembly, 2015
- Rwandan National Microfinance Implementation Strategy, 2007
- Strom, O., D'Espallier, B. and Mersland, R., 2010. Gender, performance and governance in microfinance institutions. .
<https://www.rug.nl/research/events/workshopmicrofinance2010/pdfmicro/stromespalliermersland.pdf>
- Triki, T. and Faye, I., 2013. Financial inclusion in Africa. *Tunis, Tunisia: African Development Bank.*
- UNCDF, 2011. Conference on Women's Economic Empowerment "Growing Women's Businesses: Increasing Access to Finance and Business Services" Remarks by David Morrison <http://www.uncdf.org>
- Women's World Banking, 2003. What Works? Online Vol.1, No.1.
http://www.ruralfinance.org/fileadmin/templates/rflc/documents/1160574976361_Customer20Value_April04.pdf

How does procurement capability maturity affect e-Procurement adoption and leverage purchasing in supply chain

Pongpanga Pongsuwan

National Institute of Development Administration
Bangkok, Thailand

Keywords

Capability Maturity, Centralized Procurement, Decentralized Procurement, e-Procurement, Digital Context, Supply Chain

Abstract

This study refers to the research model of Batenburg (2008) which defined procurement functions to six maturity dimensions; strategy, processes, control, organization, information, e-Technology as the starting point and indicates twenty two items to support capability maturity measurement which is called "Procurement Competitive Capability Maturity"(PCCM). This model is used for a company to assess current practices of procurement function and perceives the level of its capabilities. The data collection is from a survey of fifty-two selected procurement organizations in Southeast Asia (SEA) countries; from Thailand, Vietnam, Philippines, Indonesia, Malaysia and Singapore. The objective of this study is to demonstrate the significant value of industry type, size of spending and centralized/decentralized procurement that affect procurement capability maturity. The results show that the industry has no relation to the capability maturity; the size of procurement spend has a positive relation to the capability maturity; and the centralized procurement has higher capability maturity than the decentralized. Moreover, this study extends the knowledge of e-Procurement and digital context to leverage procurement processes and visible procurement integration in an organization and across the supply chain.

1. Introduction

Procurement is defined as "All activities that are required in order to get the product/service from the supplier to its final destination" (Well Van Weele,2004). Procurement refers to a process in which organizations establish agreements for the acquisition of goods or services (contracting) or purchase of goods or services in exchange of payment (purchasing) (Robinson et al, 2010, Rolstadas et al, (2011). Spend on average at least one third of the budget on acquiring goods and services (Segev et al, 1998),therefore procurement has a key role of cost saving in an organization. Procurement is an important strategic function rather than as an operational function (Peter Kraljic,1983). Procurement attempted to transform to a strategic function and leverage technology to drive a greater value and make differentiation of suppliers. Today's technology provides a new channel for procurement to achieve its objectives and be more efficient in managing transactions and processes. According to the internet technology, it has migrated procurement from paper based to e-Procurement processes; sourcing of buyers and sellers, a digital catalogue of products, online bidding, ordering, payments, goods dispatching notices, logistics and supply chain management (Thomson & Singh, 2001).

In 2015, the establishment of four pillars of ASEAN Economic Community (AEC),creating a single market and production base, increasing competitiveness, promoting equitable economic development, and integrating into the global economy (<http://aseanup.com/benefits-asean-economic-community-aec>). This leads to an increased number of competitors, strengthens relativity of competitors, increases level of demand and supply, and eases the competitors into the market. The consequence is that procurement functions may struggle with the negotiation of low cost contracts and a broader of strategic role in the competitive environment. This requires procurement to find a new/different approach of

purchasing products and services to ensure that the company receives the best value for their money. Capable procurement should provide value not only for internal functions, but also for external functions of suppliers and customers. Moreover, organizations must have comprehensive visibility into supply chain performance to maximize competitive advantage (Croom and Johnson, 2003). With the fast growing technological needs, procurement functions have to adapt them properly in order to improve communications, collaboration, analytic reports, and applications along P2P processes. It is therefore essential to explore the factors which determine the relationship perspective to the capability maturity and how to improve the performance in the functions in order to extend procurement value in the supply chain.

The outline for this paper is to introduce the background and to theoretically follow with research questions and the research model. Subsequently, the outline will present the results of significant relationships of industry, size of procurement spend, and centralized/ decentralized procurement that influences the capability maturity in procurement organization. Then the last session proposes the conclusion, contributions, limitations, and directions for the future research.

2. Theory and Research model

2.1 Procurement Maturity

Procurement maturity is viewed as a broad and aggregated concept of organization structures, strategies, supplier relationships, internal processes and systems (Van Weele, 2010). Maturity of procurement is referred to “the level of professionalism in the purchasing function” (Rozemeijer et al., 2003). Maturity levels indicate an organization’s current (or desirable) capabilities in regards to a specific class of entities (Rosemann and de Bruin, 2005). Maturity models are commonly applied to assess the as-is situation, to derive and prioritize improvement measures, and to control progress (Iversen et al., 1999) also to establish auditable, cumulative stages which require the order from purchasing function to achieve a greater level of sophistication, typically from a process orientation through to a strategic value-based contribution (Rozemeijer et al., 2003; Schiele and McCue, 2006).

In this study the Procurement Competitive Capability Maturity (PCCM) framework is applied for *as-is* assessments where the current capabilities of organization can be assessed with the respect to the given criteria. In this model, there is an initial stage of procurement capability building a foundation to a final stage of excellence. The indicative of capability maturity in each stage shows in the Table 1as below;

	Foundation - stage 1	Established - stage 2	Leading – stage 3	Excellence – stage 4
Org.	Success of the capabilities depends on certain specialist	Procurement knowledge is performed, but lacks of cross-functional team	Procurement functions work as cross functional team	Practice knowledge is very high and leads to competitive advantage
Process	No measurement and performance adjustment	Foundation capabilities with business processes, methods and projects are becoming more formalized	Operating models and skills alignment to practice are seeded	Processes are analyzed optimized and adjusted to changes in market requirement systematically
Strategy	At the basic level with phone and fax considered the primary tools	A process for conducting basic sourcing events likely via emails with spreadsheet	Business process capabilities are integrated with blend of methods, tools and technologies	Procurement goal's, metrics are part of the daily life and become visibility across the enterprise
Information	Quality and cost of efforts are not predictable at all times	Basic spend analysis likely spreadsheet basis	Proper spend analysis using business intelligence across business units, regions	Benchmarking and leading practice are continuously used to identify improvement potential
Monitor	Seldom perform supplier performance on paper basis	Perform supplier assessment for risk, performance capability likely managed via	Supplier networks integrated into the sourcing solutions to improve company supplier base	Supplier networks integrated into the sourcing solutions to improve company supplier base
e-Technology	Basic technology and platform components are in place, store record in paper base	Basic technology and platform components are in place, likely on premise ERP solution	E-procurement used to reduce paper, Po and invoices to a bare minimum	Integrated source to pay (S2P) into cloud online via web browser

Table 1: Four stages of Procurement Competitive Capability Maturity (PCCM)

2.2 e-Procurement

e-Procurement is a comprehensive approach using electronic tools to manage procurement activities and streamline process efficiency between organization and its suppliers. e-Procurement is defined as using internet technology in the purchasing process excluding old applications like ordering by telephone or by fax (De Boer, 2002). The use of information technology in the procurement process (Abu-Elsamen, Chakraborty, & Warren, 2010; Garrido, Gutierrez, & Jose, 2008; Gunasekaran & Ngai, 2008). e-Procurement helps a company to reduce business costs (Gunasekaran & Ngai, 2008), to reduce purchasing time (Lefebvre, Elia, & Boeck, 2005) to streamline purchasing processes (Teo, Lin, & Lai, 2009). In addition, it enables “just in time” strategy, streamlining of the supply chain by removal of inefficient intermediaries, better access to information and transparency and removal of market barriers like time difference and geography (Leonard and Cochran, 2003). Moreover, it creates a higher profile for supply management and boots its visibility to top management (Presutti, 2003).

A properly implemented e-Procurement system will connect company and business processes directly with suppliers while managing all interactions between them (Giner et al., 2011). Since the late 1990’s, the rise of e-business and new opportunities related to procurement: e-Procurement, spend management, outsourcing, joint product design, and more (Lacione & Smith & Oliva 2000). Incrementally improving technology utilization for automation will increase in cost savings of sourcing from 3.2 % to 7.4% (Aberdeen Group, Spend Analysis, page 16, August 2007). As companies go forward in 2020, Procure-to-Pay (P2P), sourcing, contract management and other automation engines will be de rigueur; they will be integrated up and down supply chains, fully adopted, providing full transparency and real-time insight (Vision 2020, October 2013).

2.3 Research Model

This study develops "Procurement Competitive Capability Maturity "model as shown in Figure 1. The model is applied to assess the current capabilities in procurement organization referred to Table 2.

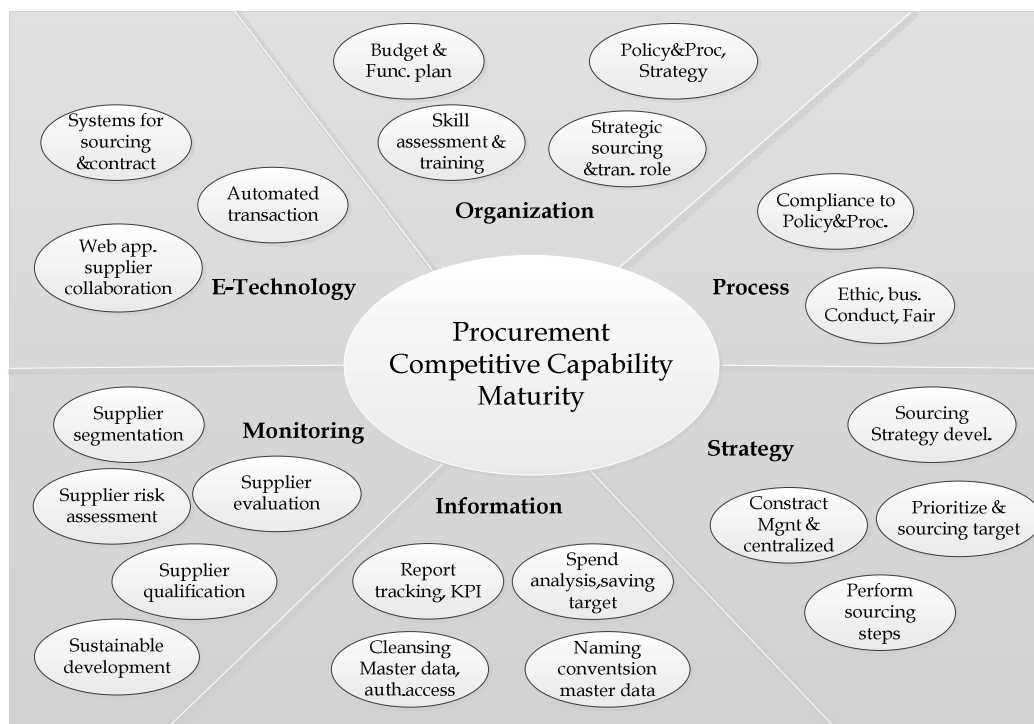


Figure 1: PCCM model with the indicators of capability maturity in each dimension

		Level of procurement capability maturity (score from 1-4)					
Industry Type	Size of Spending	Centralized/Decentralized	Dimensions	Foundation 1	Established 2	Leading 3	Excellence 4
			Organization				
			Process				
			Strategy				
			Information				
			Monitoring				
			e-Technology				

Table 2: PCCM framework with the levels of procurement capability maturity

The focus group is procurement organizations in Southeast Asia which include Thailand, Philippines, Vietnam, Indonesia, Singapore and Malaysia. Score is given by perceptions of the respondents from an online survey. Table 3 shows the aspects of PCCM model and criteria for measurement.

Dimension	Measurement
1 Organization	What is your skills and operating model to drive leading process in procurement
2 Process	How is your procurement in line with the process
3 Strategy	What is your performance in strategic procurement
4 Information	What is your visibility in spend analysis and key performance
5 Monitor	How good is your supplier management
6 e-Technology	How good is your deployment and adoption of technology

Table 3: Criteria for measurement in PCCM model

This is an empirical study and adopts a quantitative approach which draws inferences from the findings on relationships of capability maturity/performance and independent variables; industry type, size of spending, centralized/decentralized procurement.

Result of assessment shows the capabilities of procurement function in addition to benchmarking with the others. As a result, it will be beneficial for a procurement organization to use as a guideline to formulate an effective in procurement process, strategy and organization.

3. Research questions

3.1 Problem statement:

Today there is a highly competitive and rapidly changing technological environment; therefore, only businesses that are responsive, adaptable and flexible will thrive. Consequently, it is necessary for a company to enable procurement agility due to its involvement in the majority of the spending activities and cost savings for the company. Thus the study is interested in procurement function and attempts to explore significantly the value of industry, size of spend and centralized/decentralized procurement that influences capability maturity, including a dynamic view of procurement maturity. Additionally, there is no research framework that applies-Procurement systems to the digital context along a supply chain.

Our research questions:

RQ1: Is there a significant relationship between capability maturity and industry type?

RQ2: Is there a significant relationship between capability maturity and size of procurement spend?

RQ3: Is there a significant relationship between capability maturity and centralized/decentralized procurement?

In this study centralized procurement(regional) is defined as the control in policy & procedure, purchasing & sourcing by a central/regional team, but allows procurement functions in a local country for flexibility to find products and suppliers that best match to their needs; Decentralized procurement(local) is defined as the control policy & procedure, purchasing & sourcing performed by its own entity/country.

4. Data Collection

4.1 Data Analysis:

The reliability of measurement scales are determined by analysis of internal consistency and Cronbach's coefficient alpha (α) test. The threshold value of coefficient alpha 0.70 or above is sufficient for a measure to be acceptable (Nunnally,J.C., 1978). In this study, Cronbach's coefficient alpha (α) =.95 which exceeds the minimum threshold value.

Data collection is from anon line survey with the follow up interview of fifty two companies consisting of twenty two questions related to capability maturity of procurement. Each question was scored on a four-point scale with Foundation = 1, Established=2, Leading and=3,and Excellence=4. The indicative in each capability maturity refers to Table 1. High score means high capability maturity. This study infers high maturity is high performance from the finding of "A positive relation of procurement maturity and performance" (Batenburg and Versendaal, 2008).

Variables:

Dependent variables the determinant of capability maturity in procurement function. Independent variable is the explore determinant of industry type, size of spend and centralized/decentralized procurement that affect to capability maturity in procurement.

Table 4 shows the data profile of this study by industry type, size of spend (in million \$ US) and procurement strategy of centralization and decentralization.

Industry type	Procurement Spend \$			Procurement Strategy	
	< 50	50 -200	> 200	Centralized	Decentralized
Manufacturing	4	4	5	4	9
Consumer Products	4	4	5	7	6
Retails	4	4	5	8	5
Food&Beverage	4	4	5	8	5
Total	16	16	20	27	25

Table 4:Data profile

5. Results

From the study the result of significant value as is shown below

R1: Procurement capability maturity is not significantly different by industry

R2: Procurement capability maturity is significantly different by procurement spend

R3: Procurement capability maturity is significantly different by procurement centralized/decentralized structure

In summary, procurement capability maturity has no relation to the industry type, but it depends on size of spend and centralization/decentralization of procurement structure. Thus this study has furthered the investigation of the relation of procurement spend and centralized/decentralized structure to the capability maturity in a procurement organization with regardless of the industry.

Figure 2 shows that the larger spending has a higher capability maturity/ performance in all dimensions than the smaller spending. The average score on the e-Technology has the least score compared to other dimensions.

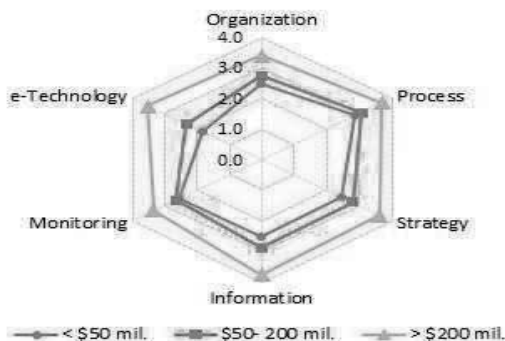


Figure 2: Compare and benchmark by procurement spend

Figure 3 shows that centralized procurement (Regional) has a higher capability maturity/ performance than decentralized procurement (Local) in all dimensions of capability maturity. Also e-Technology has the least score compared to other dimensions.

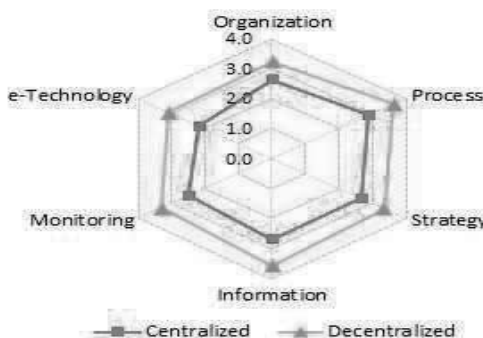


Figure 3: Compare and benchmark by centralized/ decentralized procurement

Table 5 shows the average score in each of the six dimensions of capability maturity, with the assumption that each dimension has equal weight. The highest score is the process 3.26, monitoring and e-Technology is 2.88, 2.61 respectively. It concludes that procurement functions mainly develop on the process dimension. E-Procurement systems only support for the operational transaction, not for sourcing activities along with P2P process. In addition, there are the possible areas for improvement in the region.

	Mean
Organization	2.91
Process	3.26
Strategy	3.00
Information	3.11
Monitoring	2.88
e-Technology	2.61

Table 5: The mean score of procurement capability maturity

Table 6 shows the average capability maturity score detailed in six dimensions. This represents the capability maturity status of procurement functions in this region.

Dimension	Item	Mean	SD
Organization:		2.91	0.70
	Operating Budget & Functional Plan	3.13	0.66
	Policies and Procedures & Strategy	2.65	0.95
	Strategic Sourcing & Transactional role	2.87	0.99
	Skill Assessment & Training	2.98	1.11
Process:		3.26	0.70
	Compliance to Policies and Procedures	3.15	0.67
	Ethics, Bus. Conduct & Fair Competition	3.37	0.93
Strategy:		3.00	0.78
	Sourcing Strategy Developed	2.96	1.01
	Prioritized and Sourcing Targets	2.88	1.08
	Contracts Management & Centrally store	3.13	1.01
	Perform Sourcing steps	3.02	1.08
Information:		3.11	0.85
	Spend Analysis, Savings lever & Benefit targets	2.83	1.13
	Report Tracking Performance and KPI's	3.29	0.91
	Cleaning Master Data & Authorization Access	3.21	1.02
	Naming Convention of material master	3.10	1.09
Monitoring:		2.88	0.75
	Supplier Performance Evaluation	3.10	0.91
	Supplier Qualification/ Assessment	3.23	0.67
	Supplier Segmentation	2.44	1.09
	Supplier Risk Assessment	2.52	1.20
	Sustainable Development with supplier	3.10	0.93
E-Technology:		2.61	1.08
	Automated transaction	2.50	1.26
	Systems for Sourcing Activities & Contract	2.90	1.07
	Web Application for Supplier Collaboration	2.42	1.32

Table 6: Shows the detail scores in each capability maturity of six dimensions

The study has extended the knowledge of PCCM model with the digital technology. “Procurement Digital Framework” (PDK) is defined and depicted as shown in Figure 4. It shows the six dimensions of PCCM, Procure to Pay (P2P), e-Procurement systems and digital context in a framework in order to leverage procurement processes and visible procurement integration in an organization and across the supply chain.

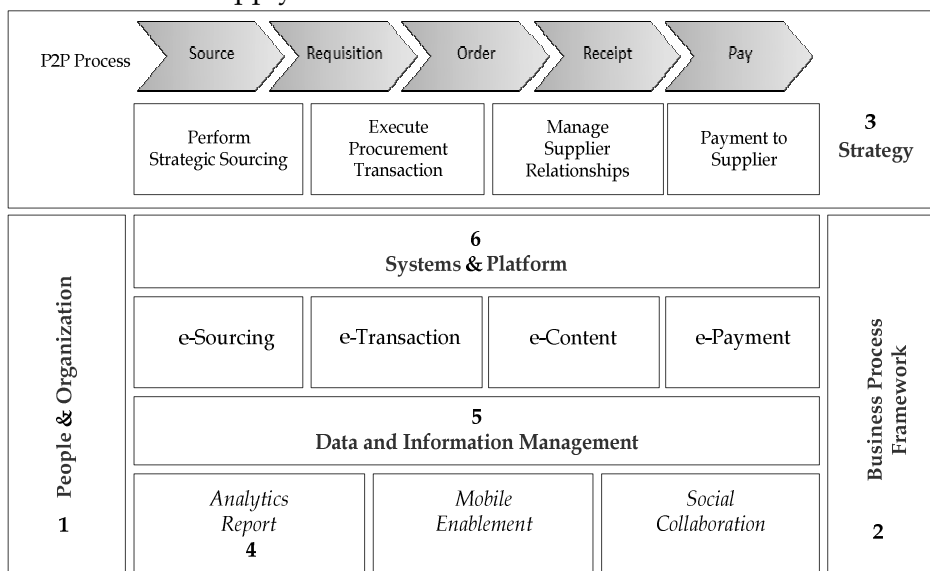


Figure 4: Procurement Digital Framework (PDK), depicted with six dimensions of PCCM

Digital technology will help procurement increase communication, collaboration, analytic reports, and engagement using a spectrum of tools along P2P process from planning and sourcing to contract negotiations, order delivery, payment, and supplier management. Digitalization will support procurement organization and its capabilities to the new opportunities for globalization and new challenges to speed up communications and close up the network. In addition, layout an IT architecture strategy and e-Procurement platform will specify procurement processes, organization structure and a road map for procurement function.

6. Discussion and Conclusions

In this study we applied the six dimensions of procurement maturity (Batenburg, 2008), strategy, processes, control, organization, information and e-Technology and defined twenty two determinants of procurement capability maturity. This model is called "Procurement Competitive Capability Maturity" (PCCM).

The PCCM enables procurement functions to visualize their capability maturity stage and be able to point out the missing capabilities in order to reach the higher level of capability maturity and balance them in its organization. This study selected fifty two procurement organizations in Southeast Asia as the target group. The approach of the study is applicable only in four business categories; manufacturing, consumer products, retails, and others. More industries and case studies should help in determining of the validity of PCCM.

From the study we found that procurement capability maturity has no relation to the industry, but it is dependent on the size of procurement spend and centralization/ decentralization structure in the procurement function. The larger spend and centralized procurement has a positive relation to the capability maturity. In addition, the need to encourage companies which have an opportunity on a larger-scale and optional for procurement structure to extend vision of the capability maturity and leverage it in order to gain the benefit in the complex and dynamic environment in this region.

With e-Procurement solutions, internet technology makes the purchasing activities more efficient and cost effective for a business to reduce the transaction costs, making better decisions, minimizing order cycles, improved relationship with suppliers and increase their value of customer service. A good e-Procurement system will support the interaction of suppliers in a network globally not an individually. This will lead to the sustainability for collaboration and relationships with a supplier in the supply chain. PCCM will help management to assess and benchmark procurement functions across the company for balanced capability maturity in order to improve value in the organization. In addition, if procurement standardizes the ordering process it will increase compliance which reduces the confusion and misinterpretation.

Based on the results of this study, it has been realized that there are many opportunities for procurement functions to drive additional value into their organizations and enhance value in the procurement model with the proper technology implementation. Moving to the digital strategy companies must be able to identify and evaluate its own capabilities in order to build a solid foundation.

Procurement should become a strategic know-how about suppliers and an expertise about the goods and services that are procured and gain the value from today's competitive market. Capable procurement organizations can provide the value not only for the internal, but also external to suppliers and customers. People, organization and systems will increasingly connect to a network through the digital technology to benefit the entire group.

Moreover, the positive significance of the capability maturity is strategic leaders who have a lower cost of growth, greater business flexibility, increased market certainty and a significant competitive advantage. The importance of CPO collaboration and the Supply Chain

Director is to articulate the tangible benefits of embedding procurement into the business planning and direction making processes, and bringing spend under contract, auditing and monitoring progress, reducing costs and making better use of systems and technology.

The challenge for the further study is how to influence the business to improve the existing process and transform their organization to the desired maturity stage. Future research should aim at a larger number of the organizations and extend the study group in diverse industries. And it is possible to apply Kraljic's Portfolio matrix by the product categories and procurement segmentation to capability maturity with respective of IT technology. The centralization and decentralization procurement organizations have been an on-going discussion for several decades to understand and manage it. The future study may extend the model to indicate the applicability of e-Procurement in this area.

References

- Batenburg, R. & Versendaal J., 2008. Maturity Matters: Performance Determinants of the Procurement Business Function, 16th European Conference on Information Systems (ECIS), Galway, Ireland.
- Van Weele, A., 2004. *Purchasing and Supply Chain Management Analysis, Strategy, Planning, and Practice*, 4th Edition, London: Thomson, pp. 16.
- Robinson, P. & Wale, D. & Dickson, G., 2010. *Events Management*. Cambridge, MA: CABI.
- Rolstadas, A., Hetland, P.W., Jergeas, G. F. & Westney, R. E., 2011. *Risk Navigation Strategies for Major Capital Projects: Beyond the Myth of Predictability*, London NY: Springer.
- Segev, A., Beam, C. & Gebauer, J., 1998. Procurement in the Internet Age—Current Practices and Emerging Trends (Results From a Field Study). Working Paper 98-WP-1033, Fisher Center, University of California, Berkeley.
- Kraljic, P., 1983. *Purchasing must become supply management*. Harvard Business Review, September–October, pp. 109–117.
- Thomson, D. and Singh, M., 2001. A Macro Level Business Model For E-Enabled Procurement, *CollecTeR Conference*, Coffs Harbour, December 3–4.
<http://aseanup.com/benefits-asean-economic-community-aec> [Access June 2016]
- Croom, S. & Johnson, R., 2003. E-service: Enhancing Internal Customer Service through E-procurement. *International Journal of Service Industry Management*, 14(5).
- Rozemeijer, F.A., van Weele, A., Weggeman, M., 2003. Creating Corporate Advantage through Purchasing: toward a contingency model. *The Journal of Supply Chain Management: a global review of purchasing and supply* 9, 4–13.
- Rosemann, M. and de Bruin, T., 2005. Towards a Business Process Management Maturity Model. In proceedings of *the European Conference on Information System (ECIS)*, Regensburg, Germany.
- Iversen, J., Nielsen, P.A. and Norbjerg, J., 1999. Situated assessment of problems in software development. *Database for Advances in Information Systems*, 30 (2), pp.66–81.
- Schiele, J. J., & McCue, C., 2006. Professional Service Acquisition in Public Sector Procurement: A Conceptual Model of Meaningful Involvement. *International Journal of Operations and Production Management*, 26 (3): 300–325.
- De Boer, L., Harick, J., Heijboer, G., 2002. A conceptual model for assessing the impact of electronic procurement, *European Journal of Purchasing and Supply Chain Management*, 8, 25–33
- Gunasekaran, A., & Ngai, E.W.T., 2008. Adoption of e-procurement in Hong Kong: An empirical research. *International Journal of Production Economics*, 113, 159–175.
- Lefebvre, L., Lefebvre, E., Elia, E., & Boeck, H., 2005. Exploring B-to-B e-commerce adoption trajectories in manufacturing SMEs. *Technovation*, 25, 1443–1456.

-
- Teo, T.S.H., Lin, S., & Lai, K. (2009). Adopters and non-adopters of e-procurement in Singapore: An empirical study. *The International Journal of Management Science*, 37, 972-987.
- Presutti, W.D., 2003. Supply Management and E-procurement: Creating Value Added in the Supply Chain. *Industrial Marketing Management*, Vol. 33 No. 2, pp. 219-26.
- Giner, A. H., Alberto, A. A., Guillermo, C.R., & Cuauhtemoc, S. R. , 2011. Improving E-Procurement in Supply Chain Through Web Technologies: The HYDRA Approach, *Supply Chain Management - New Perspectives*, Prof. Sanda Renko (Ed.), ISBN: 978-953-307- 633
- Lancioni, R.A. Smith, M.F. Oliva, T.A. , 2000. The role of internet in supply chain management logistics catches up with strategy. *Industrial Marketing Management*, 29(1), 45-56.
- Aberdeen Group, Spend Analysis, pp. 16, August 2007.
- Vision 2020: The future of procurement, Ideas for Procurement in 2020 by Industry Leading Procurement Executives, Published on 30 Oct 2013.
- Nunnally, J. C., 1978. *Psychometric Theory*, 2nd Edition). New York: McGraw-Hill.
-

The economic role cultural and creative industry in Europe in the years of crisis 2008-2012

Sławomir Kotylak

University of Zielona Góra, Poland
Faculty of Economy and Management

Key words

Cultural and creative industry, world economic crisis

Abstract

Currently is the main factor driving the world economy is creation of new values through the products and services innovations in the area of technology. Yet the modern market poses a new challenge. This new challenge is "the Creativity" which is the corner stone of economic strategy based on products and process innovation – which are so desired in the modern economy. "Creative Subjects" with their creativity are capable of finding all new solutions in order to improve the services offered in the particular sector in the scope of design, products' traceability, reference of identity and special values, individual fulfillment etc. In this way creativity is helping to increase versatility of products and companies' competitiveness in turn stimulating the economic growth.

Taking into account the above statements one needs to notice that technological development on its own is not enough to create original concepts of economic growth that would meet the demands of individuals regarding the material and non-material needs. Therefore, it is important to conduct the analysis of the role of the cultural sector and creative industries for the future development of the national economies. For this analysis to be useful one needs to reflect upon the reaction of the creative sector and the creative industries to the economic crisis in the years 2008-2012.

Research methods used are: scientific analysis of the literature, comparative analysis, synthesis and generalization, graphical visualization.

Introduction

Design and the creative business are today two of the biggest development potentials of Europe. In the "post-industrial" era of economy the culture sector and the creative industries are becoming as important as the automotive or drilling sector. The competitiveness in the future will be highly dependent on the development of the culture sector and creative industries where creativeness is the key competitive element. In the twenty-first century the biggest success will be achieved by these economies and societies that will be creative" (Polish Ministry of Culture, National Development Strategy for the years 2004-2013, p.13). Policy aimed at supporting creativity should include both the people and the industry ability to be creative, since creativity is not only restricted to the traditional world of art, but also stimulates various sectors of economy.

For this reason, it is important to analyze the role of the culture sector and creative industries for the future development of national economies. However, for this analysis to be useful it is needed to reflect upon the reaction of the creative sector and the creative industries to the economic crisis in the years 2008-2012.

1. What exactly are the sector of culture and the creative industries

Enterprises compiling various branches of creative industries co-create the new sector of economy dubbed creative industries. The effect of the creative industries are products and services of intellectual, artistic and scientific nature. Individual creative work is dominant as

well as team cooperation connected with research and development and artistic and cultural actions (Klasik 2009, p. 31-32).

Creative industries are connected with such notions as: culture industry and creativity. The works of T. Adorno and M. Horkheimer published in 1947 are considered to be the beginning of the research on culture and creative industries issues. They have introduced the difference between the “mass culture” and “culture industry” (Adorno, Horkheimer 2002, s. 242.). The first, in the view of Adorno is the culture that *spontaneously arises from the masses* (Adorno 1999, p. 13), the modern version of the folk art. Whereas when writing about the culture industry Adorno wrote: *the culture industry differs massively from [mass culture]. It sums the old habits into new quality. In all the branches the products are steadily overshadowed more or less by the measure of the mass consumption and to a large extent define this consumption themselves.* The core value of the culture industries – according to the canonical definition of Adorno – is imposing on the receivers (consumers) sameness standards of culture goods perception and unanimous evaluation system of esthetic values. (Adorno 1999, s. 14).

As result, the notion of culture industry was now being used in reference to such industries in which the culture goods and services are produced and copied in industrial way. Such industries are the radio and television, book or photography. When adopting such an approach the significance of the industrial infrastructure is highlighted, where the state, the organizational structure and the management highly influence the type and the offer range of hereupon mentioned industries. This led to the situation where the culture elements are differentiated not because of their culture-creating character, but rather because of the character of the end products (goods and services) manufactured with engagement of human creativity (Kotylak, Michałowska, Danielak, 2015).

So what exactly is the culture and the creative industries sector? The answer is difficult to define as unambiguous, therefore for the purposes of this article a notion formulated by the British Department for Culture Media and Sport (DCMS¹) shall be adopted from the report on the sector of culture and creative industries. In this report “those industries which have their origin in individual creativity, skill and talent which have a potential for job and wealth creation through the generation and exploitation of intellectual property”. DCMS list 11 creative sectors including: architecture, film, video, photography, fashion, music and performance art, software, computer games, electronic publications, press and books; radio; advertisements; artistic craftsmanship, art and antiques; Applied arts (design); television. Also the classification of UNCTAD² is similar to the one above, here four sectors constitute the culture and creative industries: heritage, art, media and utility project.

2. Economical paradigm of culture sector and creative industries

For many decades of the twentieth century it was thought that the economical and culture and art sectors exclude each other. Today however they converge in so many points that we can start considering a new economic model in which the functioning of art and culture sectors can tell us a lot about the functioning of the economy itself. Many examples of such convergence can be found. One of each is the fall of the Bretton Woods system. Not by accident it converged together with an unprecedented scale of increase in price paintings in the world market that was mainly reached through speculations. Hence the formal sophistication of the culture and art shows its resemblance with formal sophistication of the financial market tools based on the tools and algorithms containing all the signs of creativity.

¹DCMS Investing in creative industries – a guide for local authorities, UK Government, Department of Culture, Media and Sport (DCMS), London 2009

² UNCTAD - United Nations Conference on Trade and Development

Modern artists and artist that grew to the business model presented in concepts by R. Floryda (Floryda, 2005) resemble more managers of well prospering enterprises rather than romantic artist not interested in wealth of everyday life. However, the convergence of both sectors i.e. sector of culture and art as well as the sector of economy is mutual. This is the result of second side of post-Frodism work which more and more resembles the work of an artist. Corporate motivation model includes ethics, according to which the employee is to define and develop himself in the constant process of development and devotion to his/her work, which is to be for him/her a true area of creative actions. So the division between the time of work and rest is fading away, seemingly the division between the school, factory, enterprise and university.

In addition, the model of economy and art convergence can be well observed in the economic phenomenon described in the literature under the notion culture sector and creative industries. According to the theories of Richard Florida on the creation and functioning of the creative class, it is assumed that the social and economy panacea for the economy slowdown or stagnation of particular cities, regions or whole countries is the creative sector that is becoming the main element in theoretical and political disputes regarding the factual influences on the economy. The ideological discussion on the creativity and creative industries is focused on the market value of products and services' profitability of the culture sector and creative industries. This overshadows the commercial mechanism of "creative" actions.

So the starting point is somewhat forgotten heritage of the first Frankfurter school and also the Marxism notion of real subsumption which today can be used as theoretical tool for analysis of the economic paradigm. Paradigm defined as cognitive capitalism states that additional value is produced first of all in the area of production of knowledge, information, nonmaterial goods and services. Of the same opinion are John Roberts and Francis Mc Gimsey (Roberts, Mc Gimsey, 2011), that focus on analysis of the anthropological aspect of the cognitive capitalism stating that for the purpose of producing value, all of the human capabilities have been employed including the language and communicative nature of the human. This leads to posting a renewed issue of the work alienation and work time so called "post-workerism" in other words a category of nonmaterial work.

Expansion of the cognitive work based on creation of new productive relationships between the capital and work force as a complete process forces for revaluation of such notions as productive forces and capital forces and also for the notions of specific and abstract work. The philosophical reinterpretation of these core categories was conducted by Matteo Pasquinelli (Pasquinelli, 2008). Pasquinelli, while creating a structure between the mechanical ontology of Deleuze'a and Guattari (Deleuz, Guattari, 2009) and the Marxism critique of economics, denoted it as common intellect. Common intellect by Marks is the knowledge accumulated in the capital. Today, however the common intellect is not only the property of machines but it is ascribed to the societies of humans communicating with each other of an undefined network size. Analysis deriving from these categories turns out to be really interesting, for instance, when analysing the economics value being the core-driving-element of the culture sector and creative industries.

So the modern economy reality in the sector of culture and creative industries is the world in which the social creativeness is being freed from the abstract shackles of the capital and the work. This work is driven by profit towards the use of the "creative" potential in order to focus the needs of today's society. This builds the ground for the culture sector and creative industries to have a direct and stronger effect on the economy. But is this really happening?

3. Culture sector and creative industries as a measure of influence they have on economy during the crisis

The enterprises from the sector of creative industries with the income in the amount of 535.9 billion in the year 2012 generated 4.2% of the European GDP. This sector took the third place for the employment value after the construction industry and service enterprises connected with gastronomy including bars and restaurants. Picture no. 1 shows the amount of income of the creative industries sector in Europe in 2012.

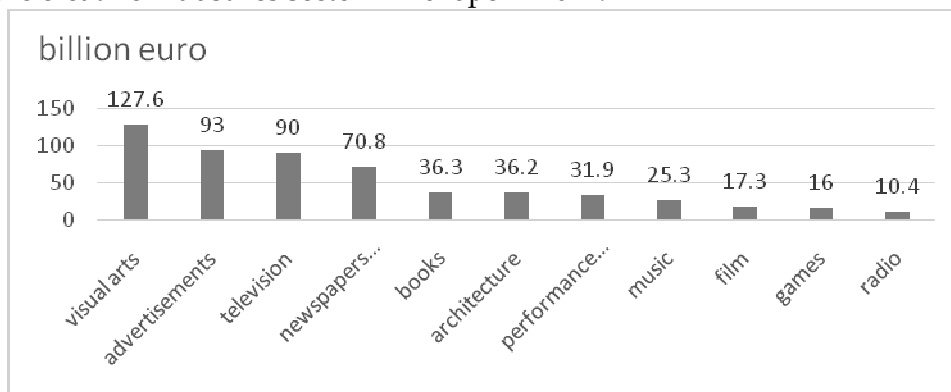


Figure 1. Creative industries sector income in Europe in 2012

Source: *Creating growth. Measuring cultural and creative markets in the EU*. Ernst & Young Global Limited, Paris 2014, p. 10.

More than 7 million of Europeans were directly or indirectly employed in the enterprises from the creative industries sector, which constituted 3.3% of the EU active working population. Sectors of performance art (1 234 500), visual arts (1 231 500) and music (1 168 00) employ over 1 million people each, following advertisement (818 thousand), press market (646 thousand) and film (641 thousand). Picture no.2 illustrates detailed division of employment in the creative industries sector in Europe in 2012.

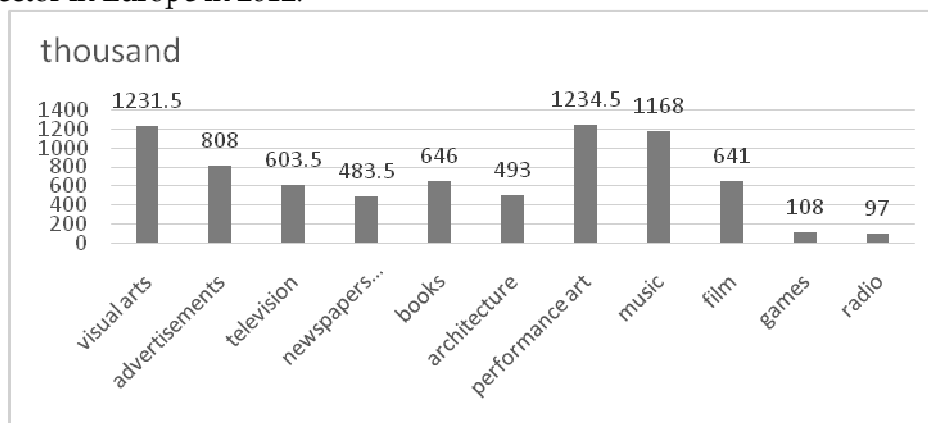


Figure 2. Employment in the creative industries sector in Europe in 2012 (in thousands)

Source: *Creating growth. Measuring cultural and creative markets in the EU*. Ernst & Young Global Limited, Paris 2014, s. 10.

The data from the departments of Statistical Classification of Economic Activities in the European Community can be used to perform a sectoral analysis within the cultural sector and in the sector of creative industries for the period of economic crisis.

In 2009 when the worldwide economic crisis was clearly visible the total employment in the above listed five departments in the UE in 2009 was estimated for 3.6 million people that constituted around 1.7% of the total employment in the EU in that year. The highest

employment in the creative sectors of the total employment was noted in the Nordic countries and the lowest in Portugal and Rumania. When considering the employment structure in the creative sectors in The European Union from the gender perspective it must be stated that participation of women in the creative employment was higher than in the total employment. The employers of the creative sectors are well educated. In all the countries EU-27 the participation of the employed in the creative sectors, having the higher education greatly exceeded the participation of these people in the total employment. For the whole European Union, the total difference was 24 percentage points.

A common characteristic of the creative sectors in Europe is the common presence of non-standard forms of employment and work time. In some countries (Italy, Netherlands, Ireland and Austria) the self-employed together with the supporting family members constituted over 30% of the employment in the creative sectors, whereas in the total employment the percentage was much lower. The employment for temporal time is much more common in the creative sector than in the total of employments among others in France, Denmark, Slovenia and Belgium and less common in Poland, Netherlands and Italy.

In Most of Europe the part-time employment is much more common in the creative sector than in the total of employments; for EU-27 it is respectively 25% and 19%. Also another common unifier in the creative sector is the frequent work from home approach and the work simultaneously for several employers.

One needs to underline that in 2009 the five creative sectors discussed, provided employment in the whole UE-27 only to two-thirds of the employees employed in the professions of the core creativity (group of specialists from culture and art). There were however significant differences in particular countries: whereas in Belgium and Sweden the creative sectors employed less than half of representatives of the 245 professions, in Poland, Estonia, Lithuania and Slovenia it was around 80%. This points how greatly can the scale of employment in the creative sector be misevaluated. Due to the lack of access to comparative aggregated data on the adequate level the analysis is restricted only to the sector data and neglects the representative of the creative class working outside the sectors considered as creative.

The creative sector connects then the art, culture and new technological solutions with business enterprise. Taking the above into consideration in the first part of the economic evaluation the role the culture sector and creative industries had on economy in the context of the economic crisis, one needs to mention the parameters that constitute the base for comparison in the area of employment level in the sector and the participation of that said sector in the GDP of particular country at the time of the economic crisis breakout. Table no.1 presents the amount and the percentages input of the creative and culture industries in the development of the economies of the European Union countries in 2008.

Table no.1 Input of the creative and culture industries in the development of EU economies in 2008.

No.	Country	Citizenship number [thousands]	% participation in the total number of citizenships	Turnover in 2008 (in millions in Euro)	% participation in the total turnover	Value added to the GDP[%]
1	Great Britain	60 975	12,14	132 632	24,522	3,0
2	Italy	59 418	11,83	84 559	15,634	2,3
3	France	63 753	12,69	79 424	14,684	3,4
4	Spain	46 157	9,19	61 333	11,340	2,3
5	Netherlands	16 418	3,27	33 372	6,170	2,7
6	Belgium	10 584	2,11	22 174	4,100	2,6

7	Sweden	9 196	1,83	18 155	3,357	2,4
8	Norwegian	4 769	0,95	14 841	2,744	3,2
9	Austria	8 348	1,66	14 503	2,681	1,8
10	Germany	82 060	16,34	12 606	2,331	2,5
11	Finland	5 313	1,06	10 677	1,974	3,1
12	Denmark	5 484	1,09	10 111	1,869	3,1
13	Ireland	4 422	0,88	6 922	1,280	1,7
14	Greece	11 216	2,23	6 875	1,271	1,0
15	Portugal	10 677	2,13	6 358	1,175	1,4
16	Poland	38 139	7,59	6 235	1,153	1,2
17	Czech Republic	10 425	2,08	5 577	1,031	2,3
18	Hungary	9 931	1,98	4 066	0,752	1,2
19	Slovenia	5 455	1,09	2 493	0,461	2,0
20	Romania	22 245	4,43	2 205	0,408	1,4
21	Slovakia	2 039	0,41	1 771	0,327	2,2
22	Bulgaria	6 262	1,25	884	0,163	1,2
23	Lithuania	3 350	0,67	759	0,140	1,7
24	Luxemburg	474	0,09	673	0,124	0,6
25	Estonia	1 307	0,26	612	0,113	2,4
26	Latvia	2 261	0,45	508	0,094	1,8
27	Cyprus	796	0,16	318	0,059	0,8
28	Island	319	0,06	212	0,039	0,7
29	Malta	403	0,08	23	0,004	0,2
	TOTAL:	502 196	TOTAL:	540 878	AVERAGE:	2,0

Source: own study on the base of: Creative Economy Report, ONZ 2010

When analyzing the changes in the employment in the whole economy of that European Union one can notice, that beside the year 2011, in which a slight improvement was observable, since 2008 till 2013 the employment declined (by total of 2.8%)

The biggest reduction in employment in the economy took place between the years 2008 and 2009, when the decreases was nearly by 2%. When considering the above, the change in the volume of the employed in the five creative divisions in total was better and it was different for various sectors of analyzed industries. The biggest decline was noted from year to year in 2011 when 1% of working assets in the five creative industries vanished in comparison to the previous year. Year 2012 brought about a significant improvement of the number of employed in the creative sectors, increase in employment by 0.4% in 2008 and in 2011 by 1.8%

The worst results when considering the dynamics of employment had the press industry as in 2012 78 thousand less people worked there compared to 2008. It is difficult to evaluate how much this phenomenon had to do with the restructuring of the business due to the way the industry functions in the era of electronic media development and the changes in the way the media are consumed and how much it had to do with the decrease in demand for the goods of the higher sort due to the economic crisis. The other four industries of the creative sector were doing quite well – beside the industry 91 (libraries, archives, museums, other cultural businesses) – and the employment between the years 2008 and 2012 grew. During that time in the creative business connected with culture and entertainment the employment grew by 35 thousand more working people and in the business including the production of multimedia it grew by almost 22 thousand more working people.

When considering the broadcasting industry and the employment numbers one need to be cautious. Its great result in the years 2008-2012 (increase of the working by 12.3%) was mainly caused by a sudden increase in employment in 2009. After that the industry was doing worse

(2.5% less employed in 2012 in comparison to 2009) than the total economy (0.9% decrease during the same period).

In order to accurately show the role that the culture sector and creative industries played at the time of the economy crisis, detailed data is presented in pictures 3,4,5 regarding the employment, participation in the GDP and in the export. The data concerns the period discussed above and is relevant for the culture sector and creative industries in relation to averaged values from other sectors for the whole economy. For the comparison purpose Great Britain economy was used.

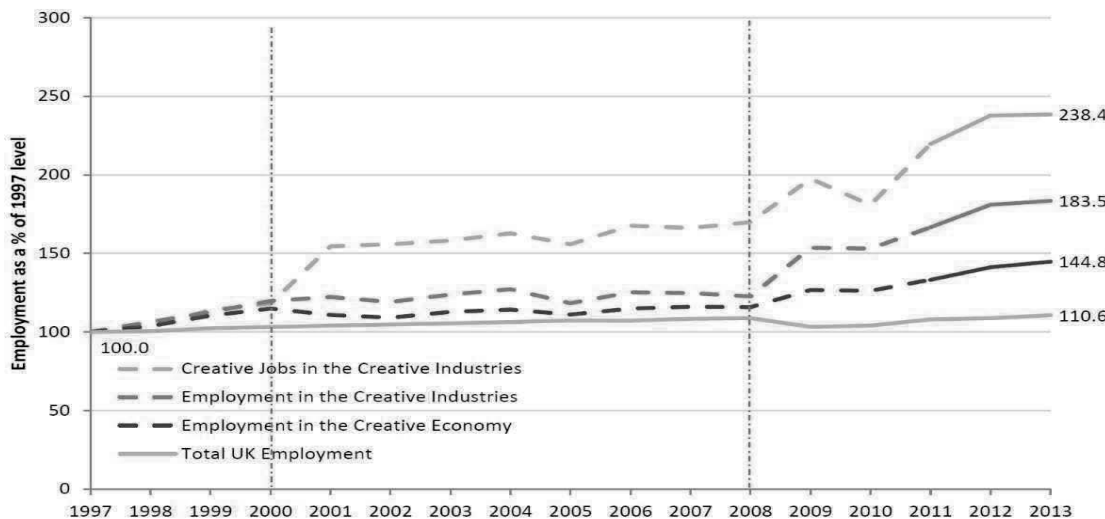


Figure 3. Change in creative employment indexed to 1997 = 100

Source, ONS Methodology Estimates and ONS Annual Population Survey. DCMS Creative Industries Economic Estimates 2015 Statistical Release, London 2015, p. 17.

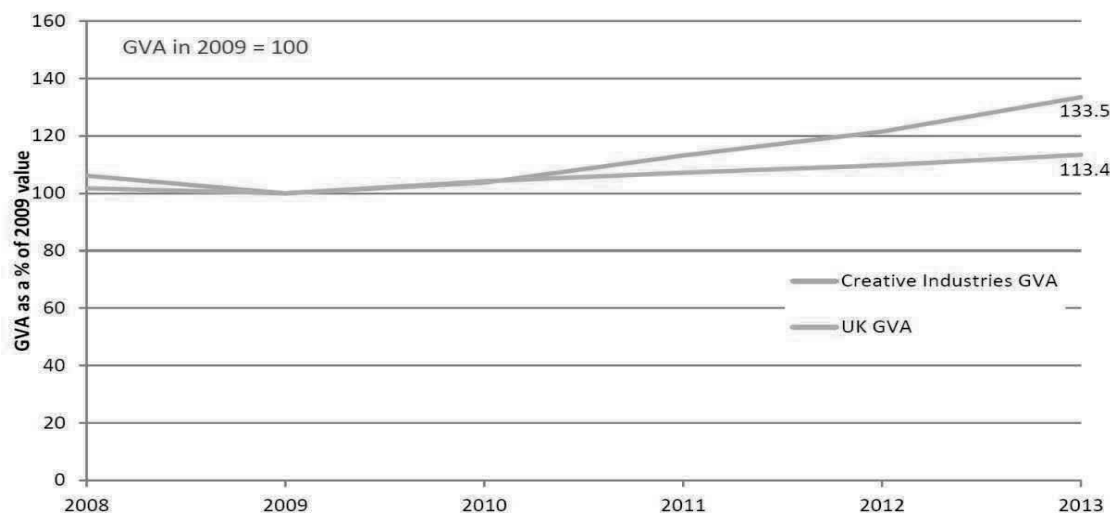


Figure 4. Changes in GVA indexed to 2009 = 100

Source, ONS Methodology Estimates and ONS Annual Population Survey. DCMS Creative Industries Economic Estimates 2015 Statistical Release, London 2015, p. 20.

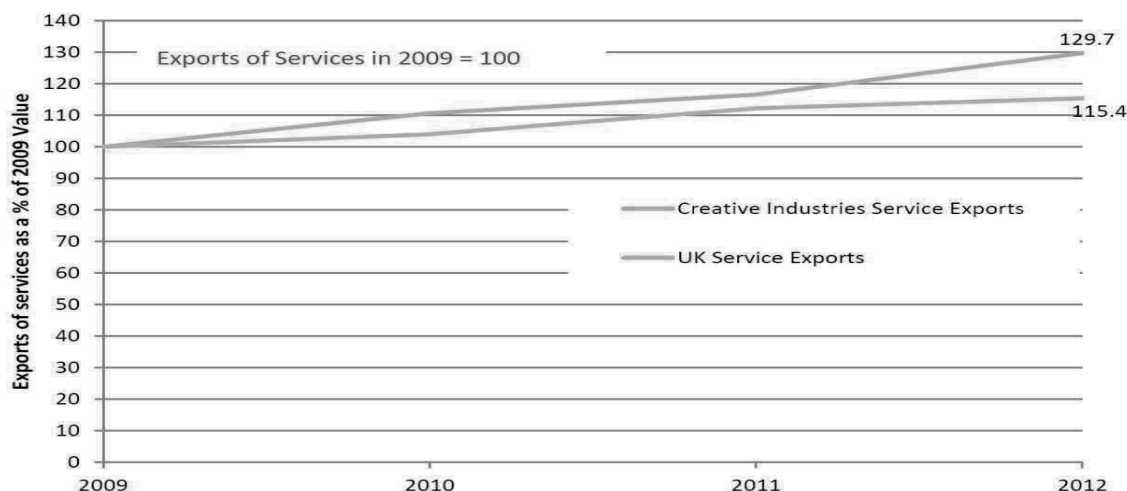


Figure 5. Changes in Exports of Services indexed to 2009 = 100

Source, ONS Methodology Estimates and ONS Annual Population Survey. DCMS Creative Industries Economic Estimates 2015 Statistical Release, London 2015, p. 27.

Looking at the statistical data, a visible growth in the number of employed in the culture sector and in the creative industries is visible after 2008 in UK. At the same time also the number of job offers has increased. This can indicate that a large number of people, that have lost their job in the respective fields of economy such as automotive or banking, took the initiative to create own businesses based on their individual element of creativity. The increased number of employed people together with the increase of businesses active in the culture sector and creative industries caused nearly 20-point increase in the gross added value(GVA) in the analyzed period that, is in the years 2008-2012. At the same time the export of products of culture sector and creative industries in Great Britain was almost 16% higher than the average value of export of products from other parts of the economy.

One can state that the presented data confirms the adopted thesis about the significant role of the culture sector and creative industries have on the European economy during the crisis in the 2008-2012.

Recapitulation

Conducted analysis of the changes in employment in professions and creative business of culture sector and creative industries show that creative sectors – especially production of multimedia contents and business connected with culture and entertainment – have the distinct potential to create work places, also in the time of recession or economy slowdown. Nevertheless, in order to use the potential of creating work places, during the time of coming out of the economy downturn, one needs to understand the uniqueness of how this sector functions and hence the dangers it brings.

First of all, the culture sector and creative industries suffer constant deficiency in access to development capital. Industries with large participation of the public sector are greatly dependent on the condition of the national budgets, hence their development is strongly connected with the macroeconomic situation of the given country. For the private entrepreneurs the low evaluation of the potential growth of the industry by the financial institutions effectively hinders the chance to obtain a credit. Another obstacle that can stop the development is the sector policy and legal regulations at the central level.

Full use of economy's creative potential requires cooperation of departments: Ministry of Culture and National Heritage, Ministry of Sport and Tourism, Ministry of Science and Higher Education, Ministry of Regional Development and others. Programs that are being realized

within the scope of one area may not be enough, and cross department disputes in interdisciplinary projects may hinder their realization and deployment of needed legal regulations. The market of creative economy cannot be perceived only through the scope of demand. Insufficient supply in highly qualified workers may be as well a serious blocker for development. What is more, this risk cannot be mitigated in short term as the requirements for these industries are quite specific.

A large part of creative professions require from the employee untrainable element of talent and individual born predispositions, that need to be aligned with hard skills and specific knowledge, for example, in the film industry, media, programming industry, architecture or journalism. The last issue that requires significant improvement is the introduction of commonly accepted legal solutions regarding the intellectual rights upon which many industries base their business model.

However, from the presented data it is clear that at the current state of the world economy there is no turning back from the creativity as the main element giving the advantage and the culture sector and the creative industries are the main "actors in this play".

References:

- Adorno T. W., Horkheimer M., *Dialectic of Enlightenment*. Trans. Edmund Jephcott. Stanford, Stanford UP, 2002.
- Adorno T. W., *Podsumowanie rozważań na temat przemysłu kulturowego*, [w:] tegoż: *Sztuka i sztuki*. Wybór esejów, oprac. K. Sauerland, Warszawa 1999.
- Creative Economy Report*, ONZ. New York 2010.
- Creating Growth. Measuring cultural and creative markets in the EU*. Ernst & Young Global Limited, Paris 2014.
- Creative Industries Economic Estimates 2015- Statistical Release*. DCMS, London 2015.
- Deleuze G., Guattari F.: *Kapitalizm i schizofrenia II : Tysiąc plateau*. Fundacja Nowej Kultury Wydawnictwo Bęc zmiana, Warszawa 2009.
- Florida R.: *Cities and the creative class*. Routledge, New York 2005.
- Klasik A.: *Sektor kultury i przemysły kreatywne w rozwoju regionu na przykładzie Aglomeracji Górnośląskiej*. Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach, Katowice 2009.
- Kotylak S., Michałowska M., Danielak W.: *Forming relationships on the e-commerce market as a basis to build loyalty and create value for the customer. Empirical findings*. *Management* Vol.19, No. 1. Zielona Góra 2015.
- Narodowa Strategia Rozwoju Kultury na lata 2004–2013: Ministerstwo Kultury i Dziedzictwa narodowego*, Warszawa 2004.
- Pasquinelli M.: *Animal Spirits: A Bestiary of the Commons*.: NAI Publishers, Institute of Network Cultures, Rotterdam 2008.
- Roberts J., Mc Gimsey F.: *Wieczna radość. Ekonomia polityczna społecznej kreatywności*, Fundacja Nowej Kultury Wydawnictwo Bęc zmiana, Warszawa 2011.

The impact of the Kingdom of Saudi Arabia's joining the World Trade Organization (WTO) on local marketing of national products

Najah Hassan Salamah

Department of Marketing

Faculty of Economic and Administration, King Abdul-Aziz University, KSA

Keywords

Local marketing, National products, Saudi companies, WTO, Saudi Arabia

Abstract

Saudi Arabia is one of the wealthiest nations per capita in the world, as well as an economic power through its possession of a large share of global oil resources. This study has been carried out to identify the benefits, which are likely to be enjoyed by Saudi Arabia after its accession into World Trade Organization. A total of 15 entrepreneurs completed questionnaires, which were designed on the basis of Likert scale. In order to analyze the outcomes, a descriptive statistics technique has been applied after data collection from the respondents. Most of the participants consider Saudi Arabia's joining the World Trade Organization as a beneficial decision for the Saudi market. This accession is advantageous as it helps to enhance the marketing and investment opportunities, as a consequence of which the economy of Saudi Arabia flourishes and the population rises. The marketing techniques are required to be established and adopted to manufacture high-quality products. The study outcomes are helpful for the policymakers and Saudi companies as it emphasizes the production of high-quality products, as well as the importance of implementing the strategies for more effective marketing of their products in the local market.

1. Introduction

To benefit from the opportunities of trade and perceived globalization, the Kingdom of Saudi Arabia (KSA) has made a strategic decision to join the World Trade Organization (WTO). The influence of global liaison has been observed to reach far beyond the openness of mere markets as well as introducing the measures of international competition. For the majority of the service and manufactured goods, Saudi Arabia is one of the largest markets in the world (Ramady and Mansour, 2006). The Saudi companies enjoy real opportunities to enter into an effective partnership with international companies, due to the joining of the KSA in World Trade Organization (WTO), in order to take advantage of their accumulative experience in trans-borders economy. In fact, there are different challenges that may confront small and medium companies, as a result of the joining of the KSA in WTO. This necessitates that these companies embark upon structural changes, enabling them to stand in the face of the competition from huge companies. Furthermore, marketing is considered as one of the most significant activities that will be affected by the joining of the KSA in World Trade Organization. The reason is that there are a number of matters that may weaken the capabilities and strengths of the marketing department or section to stand effectively, competitively and defiantly before the foreign products (Aldhomour, 2004). Saudi Arabia is skillful enough at using its economic and cultural strength to ensure that its trading arrangements are advantageous to itself. The KSA has decided to regulate private market-based economic activities. To achieve this objective, the Kingdom has joined World Trade Organization to enable itself to attain a bigger market share in the world (Ramady, 2010).

The impact of World Trade Organization on Local Marketing of national products and services can be observed through the example of Jordan. The average contribution of the Jordanian agricultural sector to GDP is only 4%, and it is one of the most important sectors, and it is the nucleus of development and income of the rural areas. The government of Jordan has

made effective efforts in the last years and raised the productivity of the agricultural production (Beblawi and Luciani, 2015). It has cut the subsidies, which were distorting trade in line with the World Trade Organization obligations (Hoekman and Mavroidis, 2015).

Saudi Arabia has been almost completely reliant on the oil-export revenues since the innovation of commercial oil in March 1938 at Dammam (Burton, 2016). The budget of Saudi Arabia is still dependent on oil revenues to the tune of ninety percent. Saudis needed a broad-based comprehensive economy, and the country requires that it creates additional opportunities that free it of its oil revenue dependency. The current situation is unsustainable and as a result the country has launched the *Vision 2030*, which aims to reduce unemployment by expanding the non-oil sector. This document has been planned to create 21st-century economy almost from scratch. *Vision 2030* is a step in the right decision no matter how it will achieve the goal since it is not bold enough on the field that matters most of the developing countries (Salameh, 2016).

1.1 Problem Statement

It is essential that the impact of joining of the KSA in WTO seems to have an economic impact on the country at a partial or comprehensive level, i.e. the level of state and individual. Hence, the primary emphasis is on answering the following question: What is the impact of joining of the KSA in World Trade Organization (WTO) on the local marketing of the national products?

1.2 Significance

The World Trade Organization has been considered as the first institutionalized framework for international free exchange. Therefore, it is expected that the outcomes and suggestions established through this study will lead to the following:

- Assist the local companies that are covered by this study to avert the negative aspects of joining World Trade Organization (WTO).
- Help the business sector lay the scientific foundation for marketing of products.
- Open new horizons for researchers in this field via continuing the study regarding the impact of joining of the KSA in WTO on the local marketing of the national products.

1.3 Research Objectives

The primary objectives of the study are mentioned below in detail:

1. To know the new marketing mechanisms, which have been imposed on the Saudi companies after joining of the KSA in World Trade Organization (WTO)
2. To specify the new means and techniques that assist in increasing the opportunities for local marketing of national products under the framework of joining of the KSA in World Trade Organization (WTO).
3. To propose certain recommendations and solutions that help eliminate or overcome the marketing problems that may confront the companies after the KSA joins into World Trade Organization (WTO), as well as utilize them to have a positive reflection on companies.

2. Methodology

As the study has been carried out to evaluate the impact of Saudi Arabia joining the WTO on the local marketing, the quantitative research design has been adopted. The data collection has been done through a structured questionnaire, designed on the basis of Likert Scale. There are five different ranges of Likert scale, which include Strongly Agree, Agree, Neutral, Disagree, and strongly disagree. The population of study includes entrepreneurs, who were the members of Chamber of Commerce and Industry of Jeddah city. A total of 15 entrepreneurs have been selected as study participants, through random sampling technique. The selected sample has been considered as the probable sample, which is appropriate to generate the study outcomes.

The statistical technique of descriptive statistics has been used to analyze the outcomes. The descriptive statistics establishes the association among variables of the study (Hopkins, 2008). The study has been classified into theoretical and field study.

2.1 Preamble

Taking into consideration the international law, it has been designed under the World Trade Organization (WTO) to favor a competitive outcome of the trade. Under this agreement, the countries should be penalized in the case if they attempt to use trade restrictions to extract the rents from their trade partners (Balistreri et al., 2015). In fact, the World Trade Organization (WTO) has been considered as an extension to General Agreement on Trade and Tariff (GATT); and that it has created to avoid the shortcomings of GAAT. The World Trade Organization is generally considered the only organization, which deals with the principles of international trading among countries. The primary function of World Trade Organization is to secure the process of trade flow among countries with due easiness, smoothness, and freedom (Jeddah Chamber of Commerce, 2016). Numerous advantages achieved by various sectors of the economy in Saudi Arabia resulted due to the joining (accession) of the KSA in World Trade Organization (WTO). These salient features are mentioned below in detail:

1. Develop the quality of goods and services in particular, and the performance of the Saudi economy in general, as a result of the pressures of international competition.
2. Make goods and services available for the residents of Saudi Arabia at competitive prices, which is appropriate for them according to their varying incomes.
3. Settle professionally commercial disputes and conflicts via the World Trade Organization (WTO) in a manner that retains for Saudis and their respective economic partners their due rights.
4. Achieve justice for all at the international markets without discrimination for any country at the expense of other, since that country is a member of WTO (Turkustani, 2005).
5. Encourage the World Trade Organization (WTO) to achieve international economic growth, let alone securing commercial opportunities at local and regional levels.
6. Confirm that joining WTO assists in developing commercial laws at international, transparent level.
7. Take advantage of commercial information possessed by international centers and organizations, such as International Trade Centre in Geneva.
8. Benefit from the technical consultations provided by WTO to the member states via International Trade Centre in Geneva (Department of Commerce, 2016).

The KSA has also been observed to face some negative aspects internally after becoming a member of World Trade Organization. Some of these aspects are mentioned below:

- 1- The increase in the prices of the commodities protected by intellectual property rights, such as computer programs (software), medication and genetically modified cereals. The foreign companies will have a strong presence at the local market. This, in turn, is negatively reflected on certain small local companies that will be compelled to exit the market due to their inability to compete effectively or vigorously.
- 2- The income of the state from customs duties will decrease, because the Trade Agreement on Commodities, one of the agreements of the Organization (WTO), holds the member state liable to reduce gradually their customs duties and cancel them totally at the end. Furthermore, the restrictions on the country's importation of modern technology will become more complicated under the framework of the agreements of WTO (Al-Jarf, 2006)

Besides this, the Saudi companies are also likely to face marketing challenges in the case as other countries enter into the World Trade Organization. Some of the marketing related challenges are mentioned as follows:

- Certain cheap products of other Asian countries threaten the national products when local producers desire to market their national products on the local or global basis.
- The national exports, which enjoy preferential characteristics treatment at foreign markets, will be affected by all such preferential characteristics treatment that was given to national products and exports will be canceled after getting into accession with WTO (Zaid, 2006).
- The foreign products that enter the local markets without the imposition of customs duties will be in a position to vigorously compete for the national products.
- The cost of virtual foreign commodities will increase for Saudi consumers because government subsidy ceases for foreign products at the source country.
- The competition of foreign products that enter the local markets increases due to the high quality of imported goods, when compared with national products.
- The ability to market national products at internal markets seems to weaken, due to the big difference in marketing experience between the foreign marketing department and the local one (Alaskar, 2005).

3. Discussions and Conclusion

3.1 Data Analysis

3.1.1 Descriptive Statistics

From the outcomes of descriptive statistics, it has been observed that 40% of sample members were less than, equal to, and more than 50 years of age. Moreover, 20% of the members belong to an age group of 30 to 40 years. It is conspicuous from Table 1 that the sample is represented at the different age groups, although the great portion of them is concentrated between 40 years to 50 years and more.

Age Bracket	Number	Percentage
18 to less than 30 years	-	-
30 to less than 40 years	1	20%
40 to less than 50 years	2	40%
50 years and more	2	40%
Total	5	100%

Table 1: Distribution of Sample according to Age Group

With respect to the qualification level of study participants, it has been examined through descriptive statistics that 60% of participants have a university qualification. On the other hand, a ratio of 40% participants holds secondary and intermediate school certificate, which can be observed from Table 2. The outcomes of Table 3 revealed that around 40% of participants have an experience of 10 to 14 years. Moreover, approximately 60% of the participants have work experience of 15 years and above. Table 3 provides a detailed descriptive analysis of working experience.

Educational Level Category	Number	Percentage
Elementary School Certificate	-	-
Intermediate School Certificate	1	20%
Secondary School Certificate	1	20%
University Certificate and above	3	60%
Total	5	100%

Table 2: Distribution of Sample according to Educational Level

Experience Years Category	Number	Percentage
Less than 5 years	-	-
From 5 to less than 5 years	-	-
From 10 to less than 15 years	2	40%
From 15 years and more	3	60%
Total	5	100%

Table 3: Distribution of Sample according to Years of Experience

3.1.2 Analysis of Exploration Data

When the respondents were asked whether the accession into World Trade Organization assist to confront the undesired change in the price of the product of markets, it has been reported by 60% of participants thought that joining into WTO does not assist in the undesired change in the price of the product of markets. On the contrary, approximately 40% of the participants responded that the accession assists to confront the undesired change in the price of the product by foreign products.

Responses	Frequency	Percentage
Strongly agree	2	40%
Agree	1	20%
Neutral	-	-
I don't agree	1	20%
I strongly don't agree	1	20%
Total	5	100%

Table 4: Joining (Accession) of World Trade Organization (WTO) and Undesired change in the price of product by Foreign Products

Taking into consideration whether some particular cheap products of Asian countries threaten local products, 60% of the participants responded that certain commodities threaten local products, when there is a desire to market the products internationally or locally. On the other hand, certain cheap products of Asian countries do not threaten local products of Saudi Arabia, when there is a desire to market products on the local or global basis. The frequency of responses about this phrase can be observed from Table 5.

Responses	Frequency	Percentage
Strongly agree	3	60%
Agree	1	20%
Neutral	-	-
I don't agree	1	20%
I strongly don't agree	-	-
Total	5	100%

Table 5: Threat of Cheap Commodities of other Asian Countries for Local Products

When the respondents have been asked regarding the use of new techniques for marketing, the outcomes demonstrate that all participants showed a positive response. A total of 60% participants strongly agree; whereas, the remaining 40% agree that the Saudi companies should emphasize on adopting new marketing techniques after joining the World Trade Organization. Table 6 revealed the outcomes for usage of marketing techniques.

Responses	Frequency	Percentage
Strongly agree	3	60%
Agree	2	40%
Neutral	-	-
I don't agree	-	-
I strongly don't agree	-	-
Total	5	100%

Table 6: Usage of New Marketing Techniques

It has been observed through results that all participants agreed that the Saudi companies are required to develop their products continuously. Table 7 shows the frequency of responses obtained through statistical analysis.

Responses	Frequency	Percentage
Strongly agree	4	80%
Agree	1	20%
Neutral	-	-
I don't agree	-	-
I strongly don't agree	-	-
Total	5	100%

Table 7: Development of National Commodities to cope with Openness

The response rate of participants has been evaluated regarding the launch of innovative products by Saudi companies; it has been identified that all participants agree with this statement. Thus, it can be said that the countries that join the WTO necessitate launching innovative promotional campaigns, enabling to confront foreign competition. Table 8 represents the response rate of study participants.

Responses	Frequency	Percentage
Strongly agree	4	80%
Agree	1	20%
Neutral	-	-
I don't agree	-	-
I strongly don't agree	-	-
Total	5	100%

Table 8: Launching of Innovative Promotional Campaigns to confront Foreign Competition

Taking into consideration the concept that Saudi companies after joining the WTO should emphasize on the manufacturing of high-quality products with reasonable prices, 20% of the members responded that it is not essential to manufacture high-quality products. On the other hand, approximately 80% participants reported that Saudi companies are required to produce high-quality products at reasonable selling prices. This production is beneficial for them to reach the level of international competition. Table 9 provides the detail of responses obtained through outcomes.

Responses	Frequency	Percentage
Strongly agree	4	80%
Agree	1	20%
Neutral	-	-
I don't agree	-	-
I strongly don't agree	-	-
Total	5	100%

Table 9: Manufacturing of High-Quality Products with reasonable Selling Prices

The respondents have also been asked whether entering into World Trade Organization is one of the reasons for rising prices of national products. From the results, it has been revealed that 60% participants reported the rising prices of national products as a reason for joining the WTO. The price of national products are enhanced because of an increase in the cost of raw materials. Moreover, 40% of the participants disagree with this statement, as they do not consider it as one of the major reasons for rising costs. Table 10 illustrates the percentage of responses obtained for this question.

Responses	Frequency	Percentage
Strongly agree	-	-
Agree	2	40%
Neutral	-	-
I don't agree	2	40%
I strongly don't agree	1	20%
Total	5	100%

Table 10: Increase in the Prices of certain National Products

Concerning the design of high quality of products, it has been the indication by 80% of the participants that Saudi companies are required to design their products similar to the foreign products with a view to coping with openness. But a sample of almost 20% participants disagrees that there is no need to imitate the design of foreign products. The response rate for this question can be observed from Table 11.

Responses	Frequency	Percentage
Strongly agree	2	40%
Agree	2	40%
Neutral	-	-
I don't agree	1	20%
I strongly don't agree	-	-
Total	5	100%

Table 11: Design of High-Quality Products

Another question showed that all participants agreed with the statement that innovation and development in production techniques enhance the capability of the company to market its product more efficiently. The percentage of respondents about this query can be observed from Table 12.

Responses	Frequency	Percentage
Strongly agree	3	60%
Agree	2	40%
Neutral	-	-
I don't agree	-	-
I strongly don't agree	-	-
Total	5	100%

Table 12: Development and Innovation in Production Techniques

When the respondents have been asked regarding the required marketing mechanisms, it has been identified that all participants reported the creation of internet sites by Saudi companies as an essential medium of marketing. Hence, the outcomes of Table 13 demonstrate that Saudi companies should emphasize on providing the information of their products on internet sites in an attractive and engaging manner. This medium serves as one of the most fundamental mechanisms for marketing.

Responses	Frequency	Percentage
Strongly agree	2	40%
Agree	3	60%
Neutral	-	-
I don't agree	-	-
I strongly don't agree	-	-
Total	5	100%

Table 13: Creation of Internet sites for Saudi Companies

From the outcomes of Table 14, it can be observed that Saudi companies are not sufficiently capable of marketing their products within the domestic markets due to the difference in the experience of marketing. On the contrary, almost 40% of the participants disagree with this statement. They do not think that the difference in marketing experience of local and foreign marketing departments is the reason for the weakness of Saudi companies.

Responses	Frequency	Percentage
Strongly agree	1	20%
Agree	2	40%
Neutral	-	-
I don't agree	2	40%
I strongly don't agree	-	-
Total	5	100%

Table 14: Weakness in ability of companies in Marketing of their Local Products

Taking into consideration the creation of opportunities regarding marketing and investment, it has been evaluated from the outcomes of Table 15 that all participants agreed with this statement. According to the study participants, entering into the WTO is beneficial for the Saudi companies to generate new investment as well as marketing opportunities.

Responses	Frequency	Percentage
Strongly agree	-	-
Agree	-	-
Neutral	-	-
I don't agree	4	80%
I strongly don't agree	1	20%
Total	5	100%

Table 15: Creation of New Investment and Marketing Opportunities

Another important question asked of the respondents is that entering into WTO results in the flourishing of the Saudi market. The outcomes of Table 16 demonstrate that all participants showed a positive response towards this query. It has been reported by the participants that results that increase the opportunities for marketing and investment are beneficial for the economy of Saudi Arabia.

Responses	Frequency	Percentage
Strongly agree	-	-
Agree	5	100%
Neutral	-	-
I don't agree	-	-
I strongly don't agree	-	-
Total	5	100%

Table 16: Flourish of the Saudi market

3.2 Discussion

Through detailed analysis, it has been evaluated that the joining/accession of the country into WTO does not assist in confronting the undesired change in the price of the product of markets by foreign products at a ratio of 60%. Moreover, certain cheap products of other Asian countries threaten local Saudi products, when there is a desire to market products on the local or global basis. Another study findings is that the accession of the country for World Trade Organization necessitates that Saudi company should focus towards using new marketing techniques. The accession of Saudi Arabia to the WTO seems likely to have a profound impact on different industrial sectors of the country, particularly on high-tech industries. With respect

to the marketing of new products on the global basis, the production of high-quality products is essential, and Saudi companies should emphasize on promoting these products through promotional campaigns. These promotional campaigns are beneficial for the companies to confront the foreign competition. The country's joining the World Trade Organization (WTO) may well lead to the creation of new investment and marketing opportunities. Hence, it can be said that the accession of Saudi Arabia to the WTO results in an expectation of a general flourishing of the Saudi market, which leads to enhanced opportunities for marketing and investment. This ultimately results will augment the Saudi Arabia's economy.

3.3 Limitations of the study

The primary limitation of the study was to restrict the impact of joining the World Trade Organization to Saudi Arabia only. The study has been conducted with the entrepreneurs of KSA, particularly the Saudi nationals.

4. Recommendations

Taking into consideration the aforementioned outcomes of the study, some suggestions have been provided. These recommendations will lead the Saudi companies to progress further regarding the local marketing of their products with a view to coping with the openness and competition by joining (accession) of the KSA for the World Trade Organization (WTO).

- It is essential to establish a national centre that is concerned with the affairs of WTO and renders relevant technical consultations, whether these be economic, legal, administrative or marketing. The centre will also help the private sector in dealing with the laws and regulations of WTO, particularly those about conflict resolution issues and marketing undesired change in the price of product ones, conducting of specialized studies on various agreements of WTO on commercial activities in the Saudi business market.
- It is necessary to develop marketing services and create new marketing techniques and to take advantage of modern technology that is reflected on the quality of products and transformation to electronic establishments. Moreover, it is also essential to adopt presentation of electronic commerce solutions, whenever they are possible, so as to enhance the competitive position of company at the market. Besides this, it also increases the market share of the company, augments the consumer's confidence in the company's products, and concentrate on the items acceptable at the market, so as to cover a greater segment of consumers.
- It is worthy to mention that we take advantage of the openness of Saudi market in a manner that companies become more competent and capable of confronting the challenges imposed by imports. Moreover, it is also advantageous, as we benefit from the marketing opportunities of respective products of the companies via securing due qualification for marketing personnel. This seems to help the marketing personnel to reach the desired level by encouraging them to attend various training programs and courses, as well as specialized workshops, in addition, to read freely rich, useful, and informative and relevant literature.

Acknowledgement

The author is very thankful to all the associated personnel in any reference that contributed in/for the purpose of this research. Further, this research holds no conflict of interest and is not funded through any source.

References

- Alaskar, A.E., 2005. KSA and World Trade Organization (WTO), *Al-riyadh newspaper*, N. 13659.
Aldhomour, H.H., 2004. Service marketing, Amman, Dar Wael for publication and distribution

- Aljarf, M.S., 2006. 101 question on the joining (accession) of the KSA for World Trade Organization (WTO), Jeddah, *Dar Al-Khuzami for Publication and Distribution*, 1427H, First Edition, pp. 21-22-26.
- Balistreri, E.J., Kaffine, D. and Yonezawa, H., 2015. Optimal environmental border adjustments under the General Agreement on Tariffs and Trade. *CER-ETH-Center of Economic Research at ETH Zurich, Economics Working Paper Series*, 16, p.235.
- Beblawi, H. and Luciani, G. eds., 2015. *The Rentier State*. Routledge.
- Burton, E., 2016. *Business and Entrepreneurship in Saudi Arabia: Opportunities for Partnering and Investing in Emerging Businesses*. John Wiley & Sons.
- Department of Commerce, 2016. Chamber of commerce and industry, World Trade Organization (WTO) and the possible effects on the Saudi economy, Riyadh. Retrieved from: www.commerce.gov.
- Hoekman, B.M. and Mavroidis, P.C., 2015. *World Trade Organization (WTO): Law, Economics, and Politics*. Routledge.
- Hopkins, W.G., 2008. *Quantitative Research Design*.
- Jeddah Chamber of Commerce, 2016. Retrieved from: www.jcci.org.sa.
- Ramady, M.A. and Mansour, M., 2006. The impact of Saudi Arabia's WTO accession on selected economic sectors and domestic economic reforms. *World Review of Entrepreneurship, Management and Sustainable Development*, 2(3), pp.189-199.
- Ramady, M.A., 2010. Saudi Arabia and the WTO. In *The Saudi Arabian Economy* (pp. 289-320). Springer US. Doi: 10.1007/978-1-4419-5987-4_10.
- Salameh, M. G., 2016. *Saudi Arabia's Vision 2030: A Reality or Mirage*.
- Turkustani, H.M., 2005. *International marketing*, Jeddah, *I'lam Dar for Publishing and Distribution*, 1426AH, pp. 15 and 65.
- Zaid, I.A., 2006. Annual report, Jeddah, Jeddah chamber of commerce and industry, 1427H, pp. 9-41.

Appendix

Questionnaire

Question 1: Please tick with (√) the box that expresses most your point of view.

Clause	I strongly agree	I agree	I am neutral	I don't agree	I strongly don't agree
1- The joining "accession" of the country for World Trade Organization (WTO) doesn't assist in confronting the undesired change in the price of product of markets by foreign products					
2- Certain cheap products of other Asian countries threaten local Saudi products when there is a desire to market products locally or internationally					
3-The joining "accession" of the country for World Trade Organization (WTO) necessitates that Saudi companies should use new marketing techniques					
4- The joining "accession" of the country for World Trade Organization (WTO) necessitates Saudi companies to continuously develop their products with					

a view to coping with openness					
5-The joining "accession" of the country for World Trade Organization (WTO) necessitates that Saudi companies should launch innovative promotional campaigns so as to confront the foreign competition					
6- The Saudi companies should manufacture high quality products with reasonable prices with which they can reach international competition					
7-The joining "accession" of the country for World Trade Organization (WTO) may be a reason in the increase of prices of certain national products due to the increase in the cost of raw materials					
8-The Saudi companies should design high quality products that imitate foreign products in order to cope with openness					
9-Development and innovation in production methods increase the ability of the company for marketing its products					
10-The creation of Saudi companies for Internet sites for provision of information about the company and its products in an attractive manner is considered one of the essential marketing mechanisms					
11-There is weakness in the ability of companies in marketing local Saudi products at domestic markets due to the huge difference between local and foreign marketing departments					
12-The joining "accession" of the country for World Trade Organization (WTO) leads to the creation of new investment and marketing opportunities					
13-The joining "accession" of the country for World Trade Organization (WTO) leads to - at the percentage of 100%- the flourish of the Saudi market, an act that leads to increasing the investment and marketing opportunities that augment the economy in the KSA					

Question 2: Please tick with (√) for the choice that suits you well.

- 1- **Age:** 18 to 29 years 30 to 39 years 40 to 49 years 50 years and above
- 2- **Educational Level:** Elementary School Intermediate Secondary University
- 3- **Years of Experience:** Less than 5 years 5 to 9 years 10 to 14 years 15 years and above

Impact of economic development on quality of life and human happiness: a study on urban socio economic classes of suburban Mumbai

Debjani Banerjee

Vivekanand Education Society's Institute of management Studies and Research
Mumbai, India

Keywords

Economic development; Quality of Life; Human happiness; Consumption. Gross Domestic Product

Abstract

This paper emphasizes that for a nation to revitalize in terms of development, not only does it need to evaluate in terms of GDP growth rate, but also has to consider the Quality of Life of its citizen and their human happiness. There is strong correlation between macro-economic development parameters like health, education, GDP growth rate and Quality of Life Index, expressed through HDI. It also has correlation with subjective quality of life based on the perception of urban socio economic classes, as measured in this study. The subjective quality of life is studied through five parameters like Quality of house, education, health care, transportation and recreation facilities. Human happiness is evaluated through the perception of respondents towards change in their financial conditions and consumption expenditure influencing their quality of life.

This empirical research through spearman's rank correlation tried to establish the relationship between macro-economic indicators with the quality of life parameters as perceived by people.

The study was conducted in Mumbai, and its suburban areas with a sample of 850 respondents taken through structured questionnaire, during 2012-13. It was observed from A. T. Kearney's GRDI report that India was ranking between first five positions, consistently in terms of Modern Trade Retail Business since 2000.

The managerial implication of the study highlights the association of quantitative economic development with larger aspect of human development, for the policy makers to understand the various areas which needs to be taken care to cater towards revitalizing the development of the nation

1. Introduction

Historically it has been observed through cross country research, that economic development enables societies to improve their quality of life. The past 50 years lessons indicates that different parameters of economic development provides a wider picture reflecting its influence on quality of Life and Human happiness. In-order to revitalize, every nation needs to evaluate the quality of life of their human capital understanding their perception and expectation of betterment to attain happiness in life. This would facilitate the public policy makers to understand the need to fulfill attainment of a wider approach of development which is both quantitative and qualitative in nature.

Human Development reflects the position of citizens of a country who are the back bone of a nation. An exploratory study by Srikant Devraj, Sushil Sharma, Michael Hicks and Dagny Faulk, (2014) had brought out its scope, which was much beyond the Human Development Index (HDI). The HDI confines this to healthy life, good education, and a decent standard of living. But it does not encompass various other important dimensions like political freedom, guaranteed human rights, and self-respect. (Ranis, Stewart, and Samman, 2006). Porter (1989) finding which stated that poor quality of human capital resulted in poor economic performance of Italy. Singapore's remarkable economic development being an outcome of human

development, as studied by Aahad M.Osman-Cani et al (1998). Mexico's study by Pedro Flores-Crespo (2007), who applied Amartya Sen's Capability Approach and observed economic development to have strong relation resulting from improvement in human development.

The Human Development Report has been commissioned by United Nations Development Program (UNDP) since 1990 with an objective of encouraging government, different international organizations and policy makers. This index enables to understand the need of the human capital and measures needed to be adopted to address the different statistical indicators of human development and thus exhibit the relative socio-economic progress of the nation. The dimension of HDI reports have changed over the years, yet the three parameters of health, education and living standard had always remained the focus area (Alkire,2002, 2010).

The 1990 *Human Development Report* gave the clear and fundamental articulation of the concept of human development. It was the only report to date to focus on the concepts and measures of Human Development, hence provides the richest introduction of any of the reports. The first Chapter of that report, entitled "*Defining and Measuring Human Development*", opens with the idea that, the real wealth of the nation are its People. The basic objective of development should be creation of an environment which would enable its people to live Long, Healthy and Meaningful creative life. This simple truth gets overlooked with the accumulation of financial wealth and commodities (**HDI Report 1990**).

Human development brings forth the usage and expansion of human capabilities, in the process of production and distribution of commodities. The focus goes on choices about what people should do, have and be, to determine their own livelihood. Human development is, not only concerned with fulfillment of basic needs and satisfaction obtained out of it but also, observe human development as a participatory and dynamic process. There is no difference in its application to less developed and highly developed countries. Sen-Fittoussi commission, and the OECD taxonomy on efforts to measure the progress of societies, echo this similar observation(Alkire,2010).

HDI has an association with the economic development of a nation. Studies have also shown that the perception of people towards anticipation in their change in financial condition over a period of time also influences their consumption. Thus economic development, an anticipation of improved financial condition and better quality of life creates a state of happiness in the mind of the people. Quality of life and people's perception of human happiness has a strong correlation with the quantitative growth of the nation measured through the gross domestic product (GDP) of any country. In India 67% of GDP comprises of Consumption and that is influenced by people's standard of living

This analysis extends the literature in the following ways: First, this paper uses the HDI of India for a period of 10 years and correlates with the quantitative development statistics given by GDP of the nation for the same period. Then the perception towards the quality of life enjoyed by the urban socio economic classes of Mumbai is studied through five parameters like i) the quality of house they live in, ii) the quality of education facility they get, iii) the quality of health care facility available to them, iv) the quality of transportation facility they can avail, v) the means of recreation facility that can be obtained by them. These population's perception towards their change in consumption and change in financial situation is also studied to understand their quality of life and happiness as perceived by them.

2 A Brief Review of Literature

The concept of Quality of Life (QOL) was developed by Ferrans Carol and Powers in (1984) to measure quality of life in terms of satisfaction of life. The study identified the QOL being expressed as a state of Happiness or unhappiness of an individual from various aspects of day to day living. Thus the basic objective of human development and quality of life is to link all

those external aspects which influences the perception of happiness within an individual. Different studies had taken different approaches to conclude the concept of human well-being. John Finnis as in Alkire(2002) had considered the set of dimensions identified by the Sarkozy Commission on the Measurement of Economic Development and Social Progress led by Stiglitz, Sen and Fitoussi, the Gross National Happiness Index of Bhutan, the categories identified in *Voices of the poor*, and the categories identified by Ranis, Samman and Stewart as being relevant to measures aspects which were beyond human development.

The history of development research has many distinction between growth and development. Sen(2000) gives one of its most articulate rationales and states that role of wealth is important in influencing living condition and quality of life. But development needs to consider parameters beyond income related variables. Hence it needs to consider other day to day aspects of life to understand the broader picture of human development.

The concept of human development was established in the United Nation Development Programme's *Human Development Reports*. The specific purpose of this body was to establish a broader and complete picture of development which helps in the achievement of growth. It extended this through obtainment of healthy human capital- with good education, health and standard of living. These are the tools through which a person can live happily and add on to the country's progress.

Development, according to the UN, should have as its basic objective the creation of an environment that would enable its people to live long, healthy and creative lives. The Human Development programme of 1990 also emphasised on the fact of enlarging people's choice to remain happy.

World-wide every nation's development is expressed through GDP which is considered to be the measuring yard stick of quantitative growth of the nation, but scholars like Sen (1980) believes that health of a nation lies in the well-being of its human mass. Clark's report, (Clark, 1980) , was based on the "capability approach" of Sen, which explained that the well-being of an individual has focus upon the significance that an individual gives towards capability of achieving the kind of life they have reason to value. Thus it has divergence from the concept of subjective well-being which has utilitarianism or resources as the base of evaluation of good life enjoyed by people. Clark (1980) proposed a life's capability to be good based on the set of valuable 'beings and doings' like being in good health or having loving relationships with others to which they have real access. Subjective Well-Being (SWB) was defined by Diener,(2009) as the general evaluation of one's quality of life. The concept has been conceptualized as the three components: (1) a cognitive appraisal that one's life was good (life satisfaction); (2) experiencing positive levels of pleasant emotions; (3) experiencing relatively low levels of negative moods.

Human Development is about expanding the choices human beings have, to lead life that they value. Which are reflected through various capability sets and are expressed through their quality of living parameters. Different numerical value is given by different country which expresses the rank that the country occupies with respect to others Gaertner & Yonhsheng (2008). Gough et al (2006) stated this concept of Human Development through well-being relating to what people have notionally been able to do and be and what they have actually been able to do and be. Eric, (2008), the philosophical literature refers to the simple notions of well-being, as has been perceived by a person like benefit, advantage, interest, prudential value, welfare, happiness, flourishing, eudemonia. Shin & Johnson(1978) have defined well-being to be a form of happiness as an individual's quality of life from their own chosen criteria.

Quality of life has also been stated by Emerson (1985) as the satisfaction of an individual's values, goals and needs expressed through their actualization based on abilities or lifestyle. This definition is consistent with the conceptualization that satisfaction and wellbeing

stem from the degree of fit between an individual's perception of their objective situation and their needs or aspirations as observed by Felce & Perry (1995). The World Health Organization observation on Quality of life as stated by Oort (2005) is based on an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment.

Quality of life is a broad concept that incorporates all aspects of life and has been used in a variety of disciplines such as: geography, philosophy, medical sciences, social sciences, health promotion, and advertising. (Oort, Visser, & Sprangers, 2005) Rerrell, (1995) who has carried out a large research programme on pain and quality of life, defined quality of life as well-being covering four areas: quality of life in physical, mental, social and spiritual well-being.

The new Socio Economic Class (SEC) was defined by Market Research Society of India (MRSI) in May 2011 for both, Urban and Rural area of India and were categorized under different SEC based on two variables.

- i) The education of the Chief Wage Earner (CWE)
 - ii) The number of "Consumer Durables" owned or used by the family out of 11 items predefined, ranging from Electricity connection to owning of Agricultural land.
- Thus 12 Grades have been identified from A1 to E3 based on their educational qualifications and possession of the consumer durables.

All the above mentioned items asked uniformly to every respondent as a standard list of items were used for both cities and villages. An item might appear irrelevant, or too ordinary to be asked but in order to maintain same parity of evaluating parameters all inputs were given equal weightage by this new classification.

The advantage of this new SEC was that it had more discrimination as compared with current systems and comprised of a single system for urban and rural India. The new classification became less subjective- as occupation of the CWE was no longer used. Thus it became simple -easy to answer, not very time consuming, hence easy to classify.

The challenge for this classification is that it needs to be better prepared to handle minor changes to the system, because "consumer durables" penetration will change faster than education or occupation. This will give a wider scope to the marketers in expanding their market share in various product category.

Economic Development

Economic development as stated by Sheffrin and Sheffrin (2003) aims toward a policy intervention endeavor for a nation which intends economic and social wellbeing of its people. Economic development is a sustained and concerted action of policy makers striving towards promotion of better living standard and economic health of the nation. The scope of it thus extends towards political economic and social well-being of its population.

The European and Asian proponents have argued economic development to be, government contribution towards transportation, housing, education and health care. Thus the concern of Economic development was towards expansion of people's entitlement and their corresponding capabilities with the different socio economic indicators like, morbidity, nourishment, literacy, and education, (Todaro and Smith 2011).

Since long the economic development was evaluated with the rising per capita GDP or GNP, which was considered to be the best index to measure the nation's economic well-being. It was believed that the other basic needs like education and health care would be taken care as a by-product of GDP or GNP growth. But different studies of Morris (1979) Ram 1982, Burket 1985) have changed this approach. Their studies stated that economic growth in national

accounting terms cannot cover the broader picture of quality of human life. Better economic growth creates an environment in which people develop their full potential, to lead a creative and productive lives as per their needs and choice. Thus human development enlarge's choice of people, which enables them to expand the accessibility of opportunities to have a long and healthy life, and avail a decent standard of living to lead a life which they value. Their perception towards betterment of financial status increases their consumerism and they feel happy to attain better and higher standard of living.

The QOL index has been developed by Carol ,Ferrans and Powers (1984) also on the basis of satisfaction and importance of the various aspects of life. Which emphasized on five broad parameters, and the over-all satisfaction towards life as perceived by an individual. The different areas were health and functioning domain, psychological/ spiritual domain, economic/social domain and that with family. So it can be said that researcher who emphasizes on human development, feels that the satisfaction aspect of an individual towards their life acts as the yard stick to measure their perception towards QOL and not the economic worth alone. HDI is thus a summary which measures and assessing the long-term progress in three basic dimensions of human development:

- i) a long and healthy life,
- ii) access to knowledge and
- iii) a decent standard of living.

In this research I have tried to find an association of GDP and HDI, to observe type of correlation that exists between economic development measured through GDP (which indicated the material well-being) and HDI which takes human well-being. Apart from that the research included five components of life, like house they live-in, education facility they can avail, health care facility that can be availed by the sample population, transportation facility available to them and the access to means of recreation available to them. The expense budget of an average consumer are made towards house, health care, education, transportation and recreation once their basic needs are fulfilled, as they obtain better satisfaction with these consumption expenditure which has been observed from the various studies done by Deaton and Muellbauer(1980);Pollak and Wales (1978); Phaneuf, Kling, and Herriges(2000); Kockelman(2001);Blanciforti, Green and King (1982); Mann (1980). These increased consumption signifies movement towards higher needs and attainment of better standard of living, which happens to be the third parameter of HDI identification, influencing Quality of living of an individual. Similar correlation has been found in this study also. The variables studied in the above researches enables to identify the five areas this paper would be focusing to understand quality of life of people.

3. Research Methodology-

In this study the researcher has focused on an exploratory research, based on convenience sampling technique. The objectives were framed based on reviewed literature of past researches across globe and the published data set provided by various bodies like NCAER, ICRIER, CII, KPMG, CRISIL, Mckinsey, Ernst & Young, and the data published on economic development and Human development Index,by Government of India, between 2000 and 2010. Thus hypothesis were formulated to have new interpretation of existing facts. This study focused on these variables to understand to understand the current economic condition, their expectations and perception towards quality of life

- (i) Mode of transportation for regular shopping.
- (ii) Has the financial condition of household changed within a year.
- (iii) Expectation of change of financial status of household within a year.

- (iv) Perception of QOL from perspective of housing, education, health care facility, transportation facility, access to recreation.
- (v) Perception of correlation of individual living condition with economic development.
- (vi) Perception of association of economic growth with social welfare.

Hypothesis Framing

Relationship of Economic Development with Quality of Life i.e Human Happiness

- H01 : There is no relationship between economic development and quality of life
- Ha1 : There is positive correlation between economic development and quality of life.
- H02 : There is no relationship between economic development and human happiness
- Ha2 : There is positive relationship between economic development and human happiness.

4. Analysis and Findings

H0 : There is no relationship between economic development and quality of life

Ha1: There is positive correlation between economic development and quality of life.

In order to prove the relationship between Economic development and Quality of life, First the secondary data obtained from GDP indicator for analyzing economic development is taken and its correlation is tested with HDI data which indicates QOL through three approaches, Health, Education and Standard of living.

Majority of the correlations are found significant (Except for GDP world bank and GDP Per Capita Current). Majority correlations are also showing strong positive correlations between variables. Hence it can be concluded that there is positive correlation between Economic Development and QOL.

Table 1: Correlation of GDP and HDI

		HDI_INDIA
MPCE	Pearson Correlation	.903(**)
	Sig. (1-tailed)	.007
	N	6
Food	Pearson Correlation	.779(*)
	Sig. (1-tailed)	.034
	N	6
Nonfood	Pearson Correlation	.962(**)
	Sig. (1-tailed)	.001
	N	6
GDP_GF	Pearson Correlation	-.671
	Sig. (1-tailed)	.072
	N	6
GDP_RBI	Pearson Correlation	.425
	Sig. (1-tailed)	.171
	N	7
GDP_WBank	Pearson Correlation	.172
	Sig. (1-tailed)	.356
	N	7
GDP_PC_Current	Pearson Correlation	.907(**)
	Sig. (1-tailed)	.002
	N	7
GDP_PC_2000	Pearson Correlation	.951(**)
	Sig. (1-tailed)	.000
	N	7
GDP_PC_PPP	Pearson Correlation	.955(**)
	Sig. (1-tailed)	.000
	N	7

** Correlation is significant at the 0.01 level (1-tailed).

* Correlation is significant at the 0.05 level (1-tailed).

Thus it's proved that there is positive and strong association with economic development expressed through quantitative approach of GDP and the quality of life as estimated through HDI. Hence the null hypothesis is rejected and alternative hypothesis accepted.

To identify if economic development has positive association with human happiness. -17, 18, 22, 24,

In order to study the relationship between Economic growth and Social welfare, the variables which measures the Economic growth are identified as Q17 (How is the financial situation of your household now, compared to what it was 12 months ago?) Q18 (How do you think the financial position of your household will change over the next 12 months?) Q 22 Up to what extent is the increase in your consumption directly proportional to the increase in your earnings? Q 24 ((Do you agree that quality of life with reference to living conditions has improved with the improvement in Indian Economy?) The Social Welfare is measured from Quality of life which is measured from five variables- with individual respondents perception towards their own quality of life as the feel from the house they live in, education facility, health care facility available, transportation facility prevailing and the means to recreation available.

H₀₂ : There is no relationship between economic development and human happiness

H_{a2} : There is positive correlation between economic development and human happiness.

The correlation between Q 17 (How is the financial situation of your household now, compared to what it was 12 months ago?) and Q 18 (How do you think the financial position of your household will change over the next 12 months?) and (Quality of life shows positive correlation correlation. Hence as the financial situation of the household increases their quality of life also increases.

The Q 22 and Quality of life have negative correlations. It indicates that whenever the consumption pattern increases in direct proportions their quality of life also increases.

The Q 24 and Quality of life have positive correlations. It indicates that whenever the agreement on quality of life with reference to living conditions has improved with the improvement in Indian Economy increases from strongly agree to strongly disagree, the QOL increases from poor to good

Table 2: Correlation of Economic Development and Quality Of Life

			Quality of house you live in	Quality of Educational facility	Quality of available health care facility	Quality Of access to transportation facility	Quality of access to recreation
Spearman's rho	Q17	Correlation Coefficient	.079*	.031	.024	.066	.072*
		Sig. (2-tailed)	.022	.370	.476	.056	.035
	Q18	Correlation Coefficient	.069*	.051	.011	.000	.034
		Sig. (2-tailed)	.046	.139	.741	.988	.316
	Q 22	Correlation Coefficient	-.024	-.008	-.015	.030	-.060
		Sig. (2-tailed)	.490	.818	.669	.379	.082
	Q24	Correlation Coefficient	.138**	.133**	.154**	.142**	.236**
		Sig. (2-tailed)	.000	.000	.000	.000	.000

5. Discussion and Summery

Economic development enormously influences living standard of people but as suggested by Sen (2000) GDP or GNP cannot act as an end in itself. On the contrary the means generated through this should be utilized for things people value. The relationship of economic development and advancement of living standard is greatly based on how public revenue is utilized keeping in mind social cause.

Quantitative and qualitative growth needs to go hand in hand and facilitate each other, this study focused to find out this association. Hence the quantitative data of economic development from GDP was studied to observe its association with HDI data. Similarly to understand the perception of people towards their living condition, five aspects of living was studied. When the perception of the respondents was analyzed, observation showed that 54.9% of the sample respondents believed that their financial position had improved within a span of 12 months and 64.1% expressed that they expected yet more improvement in the next 12 months span. 74.6% of the respondents either agreed or strongly agreed that their QOL had changed in 12 months span. In terms of their living standard as measured through their quality of house they lived in, 73.2% of population expressed it to be good and 26.1% sample felt it was moderate. 79.9% of respondents expressed that they had good education facility, 21.9% found it to be moderate. 71.6% of the respondents found their health care facility to be good, while 25.4 found it to be of moderate level. 61.4% of the population expressed transportation facility to be good, while 32.5% observed this facility of moderate standard. 40.4% of the respondents expressed access to recreation facility to be good, while 47.8% observed it to be of moderate quality. Consumerism is an outcome of increased income and observed in nations having healthy development. Almost 84% of the population sample also indicated that they consider consumption to be important to improve quality of life. It has been observed that consumption was more compared to increase in income, so they were more disproportional in correlation to increase in income. 60.8% of the sample population expressed that their quality of life with reference to living standard has improved with the improvement in Indian Economy.

The study thus established that as a nation develops in terms of material wealth expressed through GDP, it creates a positive impact in influencing the human development. India observed a rising trend in its GDP and its HDI index also went on rising showing positive association. The sample population had positive expectation from this development as they expressed their living standard to go up with the development of the nation. Even their current living condition in terms of the five variables studied showed positive association with economy's development.

6. Further Scope Of Research

Based on the findings of the study, future research may replicate the same model using a different data set of other metro and tier two cities to observe if any change occurs with the change of SEC (Socio Economic Class). It will be interesting to test the same model using data on other states.

Future research may also consider using different indicators like environment, observe impact due to access of Information technology, wealth, technological diffusion, and environmental quality in addition to other indicators to capture the human development construct.

More over this study was done during 2012-13, the period when India was ranking within first five position as per A.T.Kearney's Global Retail Development Index (GRDI) report. The scenario has changed hence a further study can understand what new changes in policy implementation is required.

References

- Angus, D., 1992. *Understanding Consumption*. Oxford: Oxford University Press.
- Blanciforti A. Laura, G. D. R. a. k. A. G., 1986. " US Consumer behaviour, over post war period an Almost Ideal Demand System Analysis". *Giannini Monograph*, Volume 40, pp. 123-137.
- Clark, D. A., 1980. " *The Capability Approach: Its Development, Critiques and recent Advances*", UK: Economic and Social Research Council.

- Devraj, S., Sharma, K., Hicks, M. & Faulk, D., 2014. " The Human Development Index of Indiana Counties- An Exploratory Study". *International Journal of Business and Economic Development*, 2(1), pp. 102-113.
- Diener, E., 2009. " Subjective Well being". " *The Science of Well Being*", pp. 11-26.
- Emerson, E., 1985. " Evaluating the impact of deinstitutionalization on the lives of mentally retarded people,". *American Journal of Mental Deficiency*, Volume 90 (3), pp. 277-282.
- Eric, A., 2008. " *The Philosophical foundations of Subjective Measures of Well-Being*. s.l.:Oxford University Press.
- Felce, D. & Perry, J., 1995. " Quality of Life: Its Definition and Measurement,". *Research in Developmental disabilities*, Volume 16 (1), pp. 51-74.
- Ferrans, E., Carol, A. & Powers, M., 1984. *Quality of Life Index (QLI)*. [Online] Available at:
<http://qli.org.uic.edu/>[Accessed 2012].
- Gaertner , W. & Yonhsheng, X., 2008. " A General score rule on Human Development,". *Journal of human Development and capabilities*, January, 9(3), pp. 389-400.
- Gough, I., Mcgregor, A. J. & Camfield, L., 2006. " *Well Being in Developing Countries- Conceptual Foundations of the WeD Programme*", s.l.: E.S.R.C.
- John, M., 1980. "An Almost Ideal Demand System,". *American Economic Review*, 70(3), pp. 312-320.
- Kockelman, K. M., 2001. " A Model for Time and Budget-Constrained Activity Demand Analysis". *Transportation Research*, 35B (3), pp. 255-69.
- Mann, J., 1980. "An Allocation Model for Consumer expenditure". *Agricultural Economics Research*, Volume 32, pp. 12-24.
- Market Research Society of India , 2011. *The New Socio Economic Classification*, Delhi: MRSI.
- Oort, F., 2005. " Using Structural equation Modeling to Detect Response Sheet and True Change." . *Quality of Life Research*, Volume 14 (3), pp. 587-598.
- Oort, F., Visser, M. & Sprangers, M., 2005. " An application of structural equation modeling to detect response shifts and true change in Quality of Life data from cancerpatients undergoing invasive surgery". *Quality of life Research*, Volume 14 (3), pp. 599-609.
- Phaneuf, D. J., Kling, C. L. & Herriges, J. A., 2000. "Estimation and Welfare Calculations in a Generalized Corner Solution Model with an Application to Recreation Demand. *Review of Economics and Statistics*, 82(1), pp. 83-92.
- Pollak, R. A. & Terrence, J. W., 1969. " Estimation of the Linear Expenditure System". *Econometrica*, 37(4), pp. 611-28.
- Ram, R., 1982. "Composite Indices of Physical Quality of Life, Basic Needs Fulfilment, and Income, A Principal Component Representation,". *Journal of Development Economics*, Volume 11, pp. 227-47.
- Ranis, G., Stewart, F. & Samman, E., 2006. Human development: Beyond the human development index. *Journal of Human Development*, 7(3), pp. 323-358.
- Rerrell, B., 1995. " The impact of pain on quality of life. A decade of Research.. *The Nursing Clinics of North America*, Volume 30 (4), p. 609.
- S, A., 2002. Dimensions of human development. *World Development*, 30(2), 181-205.. *World Development*, 30(2), pp. 181-205.
- Sabina, A., 2010. " *Human Development: Definitions, Critiques and Related Concepts*",*Human Development Research Report Paper 2010/01*, s.l.: United Nations Development Programme..
- Sen, A., 1983. Development: Which Way Now?. *Economic Journal*, 93(372), pp. 745-762.
- Sen, A., 1985. " *Commodities and capabilities*. Holland: North-Holland Publishing Co.,

-
- Sen, A., 2000. Social Justice and the Distribution of Income in Handbook of Income Distribution., Oxford: Elsevier Science, Volume 1, pp. 59-85.
- Sheffrin, A. & Sheffrin, S., 2003. " *Economics: Principles in Action*". Upper saddle Road, New Jersey: Pearson Printice Hall..
- Shin, D. & Johnson, D. M., 1978. " The Satisfaction with life Scale". *Journal of Personality Assessment*, pp. 479-492.
- Stiglitz., J. E., Sen, A. & Fitoussi, J.-P., 2009. "Report by the Commission on the Measurement of Economic Performance and Social Progress,". [Online] Available at:
http://www.insee.fr/fr/publications-et-services/dossiers_web/stiglitz/doc-commission/RAPPOR & http://library.bsl.org.au/jspui/bitstream/1/1267/1/Measurement_of_economic_Performance_and_social_progress.pdf [Accessed Jan 2013].
- Todaro, M. P. & Stephen, S. C., 2011. " *Economics of Development*", Addison-wesley: Pearson Publication..
- UNDP, 1998. "Human Development Report" , New York: Oxford University Press.
-

International Journal of Business and Economic Development (IJBED)

www.ijbed.org

General Author Information

The Scope of the Journal

As a publisher **The Academy of Business & Retail Management (ABRM)** has substantial experience of journal publishing and pioneering new journals.

Our philosophy is to map new frontiers in emerging and developing business areas in research, industry and governance, and to link with centres of excellence world-wide to provide authoritative coverage in specialist fields.

Our goal is to foster and promote innovative thinking in business, economics and management fields. We collaborate with numerous fields rather than segment into specific areas of research. Hence, our objectives are to build new links, networks and collaborations between the global communities of researchers in order to stimulate and enhance creativity.

Our continued success lies in bringing together research dimensions to encourage industry and public sector growth throughout the world. Thus, research on global businesses and economics are highly within the areas of our interest. Similarly, expert opinions and professional commentaries are also published in order to set collaborative directions for the future researchers.

ABRM therefore prides itself in ensuring the high quality and professional standards expected of its journals by pursuing a full double-blind refereeing process for all articles submitted to it for publication.

Formal conditions of acceptance

1. Papers will only be published in English.
2. Each manuscript must be accompanied by a statement that it has not been submitted for publication elsewhere in English.
3. Previous presentation at a conference, or publication in another language, should be disclosed.
4. All papers are refereed, and the Chief Editor reserves the right to refuse any manuscript, whether on invitation or otherwise, and to make suggestions and/or modifications before publication.
5. **IJBED** only accepts and publishes articles for which authors have agreed to release under the terms of the Creative Commons Attribution Licence (CCAL) version "CC BY 3.0". Please note that authors retain ownership of the copyright for their article, but authors allow anyone to download, reuse, and reprint, modify, distribute, and/or copy articles in **IJBED**, so long as the original authors are source are cited. No permission is required from the authors or the publishers.
6. **IJBED** shall furnish authors of accepted papers with proof for the correction of printing errors. The proof shall be returned within 14 days of receiving the suggested corrections. **IJBED** shall not be held responsible for errors which are the result of authors' oversights
7. **IJBED** is committed to publish all full text articles online for immediate open access to readers and there is no charge to download articles and editorial comments for their own scholarly use.

Peer review process

IJBED places great emphasis on the quality of the articles it publishes; and therefore, a full double - blind reviewing process is used in which:

- Subject to the condition that the paper submitted is in line with the guidelines provided for authors the editor will review its suitability given the aims and objectives of the journal.
- If the outcome is positive the paper will be sent for blind reviews to two reviewers.
- Decision will be taken as to the acceptability of the paper on the basis of the recommendation of the reviewers.
- Should further revision be found necessary it will be communicated to the author accordingly.
- Based on the outcome of above the date of publication will be decided and acceptance letter to be issued to the author(s).
- For papers which require changes, the same reviewers will be used to ensure that the quality of the revised article is acceptable.

Copyright Policies for Open Access Journal

The Academy of Business & Retail Management Research is fully committed to transparency in regards to the issue of copyright and copyright ownership. Authors who submit papers to the **International Journal of Business and Economic Development (IJBED)** retain ownership of their original material. Although as part of the open access process authors permit other individuals, organisations and institutions to access the said material. Whilst other parties may well access materials if they quote from them they are expected to fully credit the author/authors. It is important to remember that the rights of authors are granted and apply only to articles for which you are named as the author or co-author. The author's rights include the following:

- The right to make copies of the article for your own personal use (including in the course of academic teaching and other scholarly endeavours)
- The right to reproduce and distribute copies of the article (including in electronic form) for personal use
- The right to present the article at conferences and meeting and distribute copies at such gatherings
- You have patent and trademark rights to any process or procedure described in the article that was formulated by the author/authors
- The right to include the article in full or in part in a thesis or dissertation provided that this is not published commercially
- The right to prepare other derivative works, to extend the article into book-length form, or to otherwise reuse portions or excerpts in other works, with full acknowledgement of its original publication in the journal

Copyright Notice

Authors who submit papers that are submitted and accepted for publication in the journal agree to the following:

- Authors retain copyright and grant the journal right of first publication with the work simultaneously licensed under a [Creative Commons Attribution License version "CC BY 3.0"](https://creativecommons.org/licenses/by/3.0/) (this allows others to share the work with an acknowledgement of the work's authorship and the place of first publication)
- Authors are perfectly entitled to enter into separate contract arrangements for on-exclusive distribution of the journal's published version of the work providing there is an acknowledgement of its initial place of publication

- Once submitted and accepted papers can post-print provided they are in the same format as it appeared in the journal, however, pre-prints are not permitted.
- Authors may use data contained in the article in other works that they create
- Authors may reproduce the article, in whole or in part, in any printed book (including a thesis) of which the author, provided the original article is properly and fully attributed
- Authors and any scholarly institution where they are employed may reproduce the article, in whole or in part, for the purpose of teaching students

Open Access rights and Permissions for our Open Access

Articles can be distributed under the terms of the Creative Commons Attribution (CC-BY) licence. Authors retain full ownership of the copyright for their article, but undertake to allow anyone to download, reuse, reprint and distribute the article.

Authors are permitted to post the final, published PDF of their article on a website, institutional repository or other free public server, immediately upon publication, provided, a link is included between the web page containing the article and the journal's website.

Manuscript Submission Procedures

Authors are invited to submit original research papers, case studies, reviews, work in progress reports, abstracts, student's papers or research proposals within the broad scope of the Journal.

The following guidelines must be adhered to when submitting the papers:
No manuscript will be accepted without the Required Format. All manuscripts should be professionally proofread before the submission

1. Introduction

- 1.1 Manuscript should be written in English and should be submitted to the Editor-in-chief electronically through the online system as e-mail attachment to editor@abrmr.com
- 1.2 If electronic media is not available, the original paper may be submitted on standard CD to the Editor by using full postal address which is, **The Academy of Business & Retail Management, Talbot House, 204-226 Imperial Drive, Harrow, Middlesex HA2 7HH.**
- 1.3 Manuscripts are to be submitted as **MS Word** documents for Windows. Other formats will not be accepted.

2. General Manuscript Guidelines

- 2.1 **Margin:** Set the paper size to A4 with One (1) inch on all sides (Top, bottom, left, right)
- 2.2 **Font size and type:** The fonts to be used are **Book Antiqua** in 12-point pitch. Main headings-14 and subheadings-12. Please use **BOLD** for paper title.
- 2.3 Major and secondary headings must be **BOLD**, left-justified and in lower case.
- 2.4 **Spacing and punctuation:** Space once after commas, colons and semicolons within sentences. The body of the papers should be single spaced.
- 2.5 **Line spacing:** Single spaced throughout the paper, including the title page, abstract, body of the document, tables, figures, diagrams, pictures, references and appendices.
- 2.6 **Length of the Paper:** The paper length should not exceed 15 pages' maximum including figures, tables, references and appendices.
- 2.7 **Paragraphing:** A blank line between paragraphs should be left without indent.

3. Structure of the Manuscript

3.1 Cover page

The front page of the manuscript must be organised as follows:

- (i) **Title of the Article** –Paper title to be centered on the page, uppercase and lowercase letters, Font size 14, bold

- (ii) **Author (s) name (s):** Uppercase and lowercase letters, centered on the line following the title, font size 12, bold
- (iii) **Institutional affiliation:** name of the institute and country, Uppercase and lowercase letters, centered on the line following the author(s) name, font size 12
- (iv) **Authors note:** Provide information about the author`s departmental affiliation, acknowledgment for any financial and non-financial assistance, mailing address for correspondence, email addresses for all co-authors
- (v) **Key words:** Maximum 6 key words, font size 11

3.2. Abstract: The abstract is self-contained summary of the most important elements of the paper

- (i) **Pagination:** The abstract begins on a new page
- (ii) **Heading:** Upper and lower case letters with 12 font size bold and align text to the left.
- (iii) **Length and format:** Abstract should be the summary of the paper, not more than 300 words, abstract should include purpose of the paper, design/methodology employed, findings, practical implications and originality statement. Font size 11.

3.3. **Body of the manuscript**

From the second page the rest of manuscript should be included the introduction/background, main body of the paper which can be divided into section and sub-sections. Section and sub-section should be numbered and should be typed in BOLD. The manuscript should be organised as follows:

1. The Introduction
2. Main body of the paper with sections and sub-sections
3. Discussions and conclusions
4. Research limitations and direction for further research
5. References
6. Appendices (if any)

3.4. **Use of Table, Figures and Equations**

- (a) All tables are to be centered and numbered sequentially, with their title centered below the table.
- (b) All figures must be reproduced black and white. A good quality graphic software to be used and figures are to be centered with the caption to be centered below the figure
- (c) All equations must be typeset with the same word processor and type in Math type (please visit the website at www.mathtype.com for free limited trial).

4. **References**

The Harvard System of referencing should be used for all manuscript(s) submitted to ABRM`s Conferences and Journals for **all** sources. All sources should be listed together; there should not be separate lists for books, journal articles and electronic sources. Making a list of what you have used must be appropriate to the type of source used; the **details you need to record will vary according to the source.**

Call for Papers

Journal of Business & Retail Management Research

ISSN (Print) 1751-8202 ISSN (Online) 2056-6271

The JBRMR, a scholarly and refereed journal, provides an authoritative source of information for scholars, academicians, and professionals in the fields of business and retail management and is published twice a year. The journal promotes the advancement, understanding, and practice of business & retail management. It is peer reviewed and is the main research platform of The Academy of Business & Retail Management (ABRM). Scholars across borders are encouraged in advancing the frontiers of management education, particularly in the area of retail trade. Contributions should therefore be of interest to scholars, practitioners and researchers in management in both developed and developing countries targeting a worldwide readership through both print and electronic medium.

Although broad in coverage, the following areas are indicative and nurture the interests of the Academy with a "retail" underpinning:

- » Business Ethics and Legal Issues
- » Business Environment
- » Business Policies, Strategies, and Performance
- » Business and Retail Research
- » Business Security and Privacy Issues
- » Consumer Behaviour
- » Emerging Advances in Business and its Applications
- » Innovation and Product Development
- » International Business Issues
- » Management and Retail Marketing
- » Marketing Management and Strategies
- » Relationship Management
- » Risk Management
- » Retail Management and Communication
- » New Venture Start-up
- » Retail Buying
- » MIS and Retail Management
- » Demographics and Retail Business
- » HRM and Retail Business
- » Innovation in Retail Management

Preference will be given to papers which are conceptually and analytically strong and have empirical relevance. All papers will be reviewed according to the Journal's criterion. The Journal's website is www.jbrmr.com. For further information, please write to Editor via editor@abrmr.com

This journal is indexed by SCOPUS, ProQuest, EBSCO Host, Cabell's Directory, J-Gate and ISI

Call for Papers

INTERNATIONAL JOURNAL OF BUSINESS & ECONOMIC DEVELOPMENT
(Print) ISSN 2051-848X (Online) ISSN 2051-8498

The IJBED, a scholarly and refereed journal, provides an authoritative source of information for scholars, academicians, and professionals in the fields of business and economic development and is published four times a year. The journal promotes the advancement, understanding, and practice of business & economic development. It is peer reviewed and is the main research platform of The Academy of Business & Retail Management (ABRM). Scholars across borders are encouraged in advancing the frontiers of management education, particularly in the area of economic development. Contributions should therefore be of interest to scholars, practitioners and researchers in management in both developed and developing countries targeting a worldwide readership through electronic medium.

Authors are invited to submit their original research papers, case study, review, work in progress, reports, abstract, students' papers or research proposals within the broad scope of the journal. Although broad in coverage, the following areas are indicative and nurture the interests of the Academy with an "economic development" underpinning:

- Agriculture and development
- Demography and development
- Disaster management
- Diversification and business performance
- FDI, Free trade – theory and practice
- Gender and socio-economic development
- Geopolitics of development
- Globalisation, liberalisation and development
- Health service management
- Industry sectors and development
- Information technology and business performance
- Institutions, business and development
- Jobless growth, Labour relations and business
- Land reform – theory and practice
- Macroeconomic parameters and growth
- Microfinance and development
- Multinational enterprises and business strategy
- Natural resources and their internationalisation as leverage factors
- Natural resources and their internationalisation as leverages
- NGOs and entrepreneurship development

Preference will be given to papers which are conceptually and analytically strong and have empirical relevance. All papers will be reviewed according to the Journal's criterion. The Journal's website is www.ijbed.org. For further information, please write to Editor via editor@abrmr.com

CALL FOR PAPERS FOR THE FORTHCOMING CONFERENCES

6th ICBED-2017, New York-USA

10-11th April 2017
6th International Conference on Business and Economic Development (ICBED)

2nd ICBESI-2017, Alexandria, Egypt

22nd-23rd May 2017
2nd International Conference on Business & Entrepreneurship, Supply Chain management & Information Systems (ICBESI)

7th ROGE-2017, Said Business school, University of Oxford, UK

3-4th July 2017
7th International Conference on Restructuring of the Global Economy (ROGE)

8th ITARC-2017, Paris, France

28-29th August 2017
8th International Trade & Academic Research Conference (ITARC)

3rd ILTTL-2017, London, UK

7-8th November 2017
3rd International Conference on Institutional Leadership, Teaching & learning (ILTTL)

Authors are invited to submit original research papers, case studies, review, work in progress reports, abstracts, students' papers or research projects within the broad scope of each conference. All papers should be professionally proofread prior to submission. These conferences will be jointly organised by the *Academy of Business & Retail Management* and the *Journal of Business & Retail Management Research*.

For further detail please visit: <http://abrmr.com>

CALL FOR PAPERS

International Journal of Higher Education Management (IJHEM) (Print) ISSN 2054-984 (Online) ISSN 2054-9857

Aims and Objectives

IJHEM is a peer reviewed journal and is a research publication platform for international scholars. Their research can be in any aspect teaching & learning covering the interests of developed and emerging countries alike. The Journal seeks to reach a worldwide readership through print and electronic media. The main aims of the Journal are:

- Publish high quality and scholarly empirical based research papers, case studies, reviews in all aspect of teaching & learning, education management and leadership with theoretical underpinnings.
- Offer academics, practitioners and researchers the possibility of having in depth knowledge and understanding of the nature of teaching and learning practices and.
- Create a forum for the advancement of education management research for the High Education sector.

Subject coverage

- λ Educational policy and Policy impacts on education
- λ Management of education and Relations between lecturers and students
- λ Psychology of education, Psychology of student and teacher/lecturer
- λ Quality of education and Improvement method
- λ Global education and Its challenges and opportunities
- λ E-teaching/E-learning, Educational software and multimedia for education
- λ Teacher education
- Distance education and Education quality
 - Methodology of educational research, Adult and continuing education
 - Special education, Gender, diversity and difference, Vocational education
 - Assessment processes and mechanisms
 - Language Education, Listening and acoustics in education environment
 - Education History
 - Innovative teaching and Learning methodologies; Multi-virtual environment
 - Application of educational technology
 - Education reforms and Practical teaching reform

Frequency:

Twice a year: February & August

Review process: Blind peer review

Indexing with: Ebesco Host, ProQuest, Open J-Gate, Cabell's Directory

Preference will be given to papers which are conceptually and analytically strong and have empirical relevance. All papers will be reviewed according to the Journal's criterion. The Journal's website is www.ijhem.abrmmr.com . For further information, please write to Editor at editor@abrmmr.com or call on +44(0)2088689883

CALL FOR PAPERS

INTERNATIONAL JOURNAL OF BUSINESS & CYBER SECURITY (IJBCS)
(Print) ISSN 2059-660X (Online) ISSN 2059-6618

IJBCS is a scholarly and refereed journal that provides an authoritative source of information for scholars, academicians, policy makers and professionals regarding business and cyber security. It is peer reviewed journal that is published twice a year and serves as an important research platform. IJBCS is committed to publishing articles that provide insight and informs best practice. Contributions should therefore be of interest to scholars, policy makers, practitioners and researchers internationally. The Editors and Editorial Board of the IJBCS are committed to championing original academic papers that demonstrate academic rigor, originality and integrity. IJBCS seeks to minimise cyber-risk through insight and vigilance.

Authors are invited to submit their original research papers, case study, review, work in progress, reports, abstract, students' papers or research proposals within the broad scope of the journal. Although broad in coverage, the following areas are indicative and nurture the interests of the Academy with an "cyber security" underpinning:

- Business & Cyber Security; Risk awareness & mitigation
- eCrime and Cyber Terrorism
- Identity Fraud & Access Management; Information hemorrhage
- Cryptosystems and Data Protection
- Compliance, Legal Safeguards and Obligations
- Foresight Leadership and Planning; Industrial Espionage & Counterfeiting
- Critical Infrastructure Protection; Building and maintaining cyber resilience
- Security architecture and network defense
- Vigilance and scrutiny; Attitudinal change
- Knowledge transfer & training; Addressing the skills deficit
- Brand Protection; Pre-transaction customer verification
- Customer protection, reassurance and recovery
- Information Risk Management & Governance
- Digital Forensics, Evidence and Intelligence
- Costing cyber-attacks; Ethical Hacking
- Financial Analysis & Control Systems
- Privacy, Surveillance and Control; Identity, Trust and Trustworthiness
- Security Economics, Incentives and Liabilities

Preference will be given to papers which are conceptually and analytically strong and have empirical relevance. All papers will be reviewed according to the Journal's criterion. The Journal's website is www.ijbcs.abrmr.com . For further information, please write to Editor via editor@abrmr.com

International Journal of Business & Economic Development (IJBED)
Editorial Review Board

Atchara Sriphan Naresuan University, Phitsanuloke, Thailand	Ayat Yehia Arab Academy for Science, Technology and Maritime Transport, Egypt	Cengiz Kahraman Istanbul Technical University, Istanbul, Turkey
Tanuja Sharma Management Development Institute, Gurgaon, India	Julia Gordeeva Plekhanov Russian University of Economics, Russia	Nelson Takon Cross River University of Technology, Calabar, Nigeria
Samar M. Baqer Kuwait University, Kuwait	Ahmad Bello Ahmad Bello University, Nigeria	Nagaraja Nanje Gowda University of Mysore, India
Visvanathan Naicker University of the Western Cape, South Africa	Juan Carlos Botello Osorio Universidad Popular Autonoma del Estado de Puebla, Mexico	Muhammad Azam St. Patrick's International College, United Kingdom
Shekh Usman Hassan Ahmadu Bello University, Nigeria	Badreddine TALBI High National School of Statistics and Applied Economics, Algeria	Eman Mohamed Abd-El-Salam Arab Academy for Science and Technology and Maritime Transport, Egypt
Ayambila Sylvester University of Ghana, Ghana	Khalid Kisswani Gulf University for Science & Technology, Kuwait	C. Michael Wernerheim Memorial University of Newfoundland, Canada
Mohamed Karim Kefi Ecole Supérieure de Commerce et de Marketing, Prism Sorbonne, France	Nattachet Pooncharoen Naresuan University, Thailand	Sandeep Goel Management Development Institute, Gurgaon. India
Beenish Bashir NUST Business school, National University of Science and Technology, Pakistan	Duarte Xara-Brasil Instituto Politécnico de Setúbal, Portugal	Ha Viet Nguyen University of New South Wales, Australia
Adhi Baskara University of Indonesia, Indonesia	A. Jayakumar Periyar University, India.	Rasheed Olajide Alao Adeyemi College of Education, Nigeria
Micheletti Patrick Kedge Business School, France	Sarat Chandra Das U Asia, United Kingdom	Cletus O. Akenbor Federal University, Nigeria
Fon Sim, Ong The University of Nottingham, Malaysia	Rachid Toumache High National School of Statistics and Applied Economics, Algeria	Khaled ROUASKI High National School of Statistics and Applied Economics, Algeria
Heba Sadek Arab Academy for Science, Technology and Maritime Transport, Egypt	Gabriela Marinescu University of Medicine and Pharmacy "Gr.T.Popa" Iasi, Romania	Hossein Mombeini Islamic Azad University, Dubai Branch, Dubai, UAE
Eiman Negm Arab Academy for Science, Technology and Maritime Transport, Egypt	Odoh Patrick Abutu The Federal Polytechnic University, Nigeria	Des Raj Bajwa Haryana, Panchkula Kurukshetra University, Kurukshetra
Waisu Iliyasu Umaru Musa Yar'adua University, Katsina, Nigeria	Abdelali Hajbi Hassan 1st University, Morocco	Hifza Mahmood Rana Iqra University, Islamabad, Pakistan
Joseph Teryima Benue State University, Makurdi, Nigeria	Sazib Murtaza Iqra University, Islamabad, Pakistan	

Luiz Albzzto Alig Santos Institute Matropolitano of Angola, Republic of Angola	Mansour Esmaeil Zaei Panjab University, India	Idris Zakariyya Kiri Jigawa State College of Education
Manolis I. Skouloudakis University of Macedonia, Greece	Jatin Pancholi Middlesex University, United Kingdom	Vienda A. Kuntjoro 17 Agustus 1945 University, Indonesia
Anita Mathew Institute of Management Technology, Ghaziabad India	Ricardo Peters University of the Western Cape, South Africa	Isaac S.R. Butswat National Open University of Nigeria, Jos, Nigeria
Hideyuki Ishiozaka Osaka Sangyo University, Japan	Neha Purushottam University of South Africa, South Africa	S. Rangnekar Indian Institute of Technology, India
Radhika Lobo Birla College of Arts, Science and Commerce, Kalyan, India	Latha Krishnadas Mazumder Al Khawarizmi International College, Abu Dhabi, United Arab Emirates	Kanokkan Vichasilp Rajamangala University of Technology Isan, Thailand
Antoine Trad Webster University, Switzerland	Chiloane-Tsoka Germinah University of South Africa, South Africa	Mahwish Waheed International Islamic University, Pakistan
Hemant C Trivedi Pandit Deendayal Petroleum University, India	Ruth Marciniak Glasgow Caledonian University, United Kingdom	Abasilim Angela Nneka Wesley University of Science and Technology, Ondo, Nigeria
Huseynov Khatira The Academy of Public Administration under the President of the Republic of Azerbaijan	Şeyda Akyol Lecturer in Marmara University, Istanbul, Turkey	Rania A.M. Shamah Ahram Canadian University, Cairo, Egypt
Ssouhaila A Saeed AL-Zytoonah University, Jordan	Louise Van Scheers University of South Africa, South Africa	Muhammad Jahangir National University of Modern Languages, Pakistan
Lothar Auchter University of Applied Sciences Kaiserslautern, Germany	Michael Chattalas Kean University, New York, USA	Sandeep Puri IMT, Ghaziabad, India
Mudrajad Kuncoro Gadjah Mada University, Indonesia		

International Journal of Business and Economic Development (IJBED)

International Journal of Business and Economic Development (IJBED) is approved for listing in
DOAJ, EBSCO Host, ProQuest, J-Gate, and CABELL'S DIRECTORY of Refereed Publications



Archiving In



PORTICO



Open Access rights and Permissions for our Open Access

Articles can be distributed under the terms of the Creative Commons Attribution (CC-BY) licence. Authors retain full ownership of the copyright for their article, but undertake to allow anyone to download, reuse, reprint and distribute the article. Authors are permitted to post the final, published PDF of their article on a website, institutional repository or other free public server, immediately upon publication, provided, a link is included between the web page containing the article and the journal's website

International Journal of Business & Economic Development

Volume - 4 Number - 3 November 2016

www.ijbed.org

Articles

The impact of operational closure and reflection on juncture systems
Benjamin Kuch

Informal economy in emerging economies: not a substitute but a complement!
Deepraj Mukherjee

An enhanced artificial neural network for stock price predications
Jiixin Ma; Silin Huang; S. H. Kwok

Promoting gender equality in access to microcredit through flexible lending approaches of female targeting MFIs: Evidence from Duterimbere MFI of Rwanda
Liberata Mukamana; May Sengendo; Edith Okiria

How does procurement capability maturity affect e-Procurement adoption and leverage purchasing in supply chain
Pongpanga Pongsuwan

The economic role cultural and creative industry in Europe in the years of crisis 2008-2012
Sławomir Kotylak

The impact of the joining of Kingdom of Saudi Arabia for World Trade Organization (WTO) on local marketing of national products
Najah Hassan Salamah

Impact of economic development on quality of life and human happiness: a study on urban socio economic classes of suburban Mumbai
Debjani Banerjee