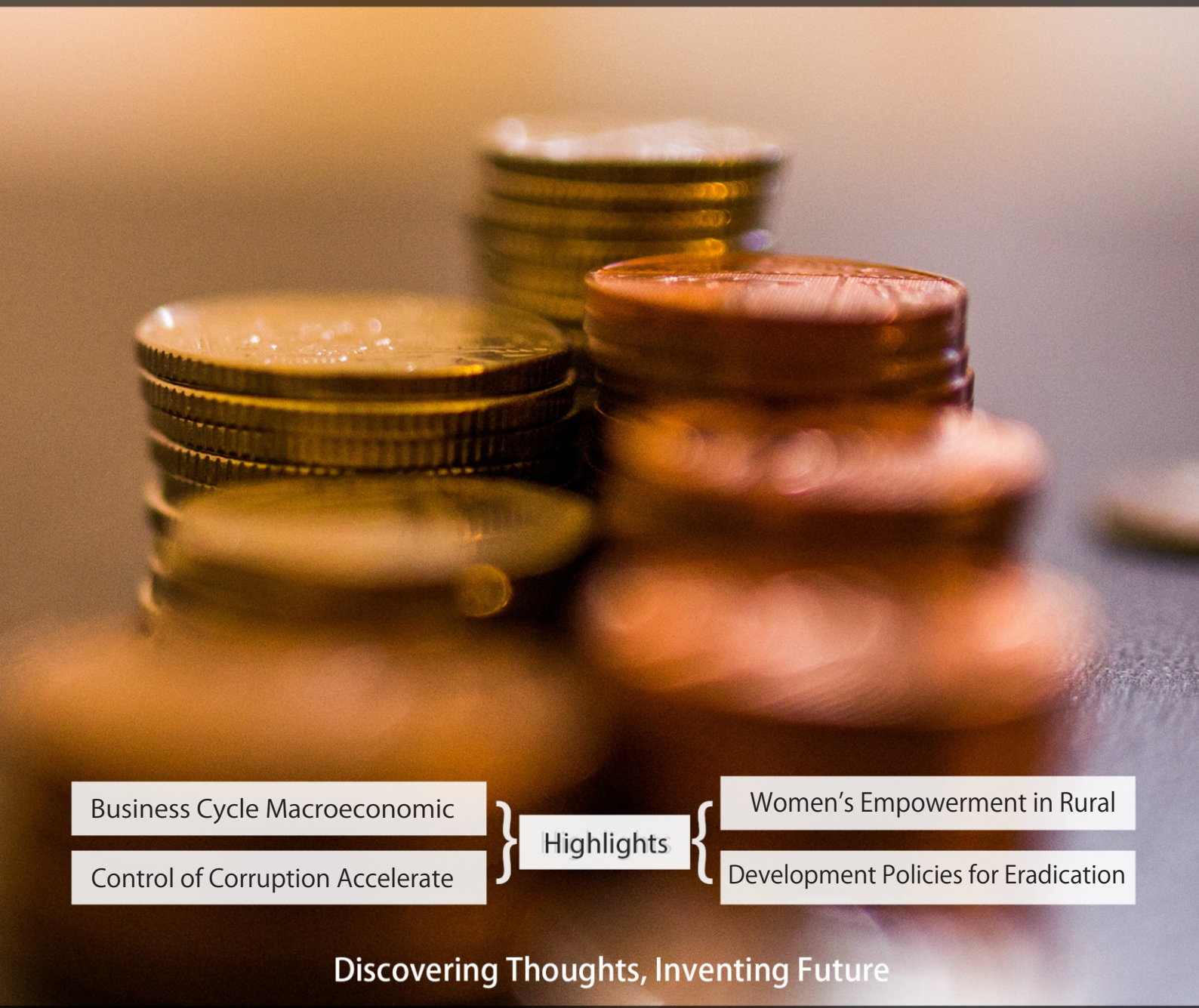
Online ISSN : 2249-460X
Print ISSN : 0975-587X
DOI : 10.17406/GJHSS

GLOBAL JOURNAL

OF HUMAN SOCIAL SCIENCES: E

Economics



Business Cycle Macroeconomic

Control of Corruption Accelerate

Highlights

Women's Empowerment in Rural

Development Policies for Eradication

Discovering Thoughts, Inventing Future

VOLUME 17 ISSUE 6 VERSION 1.0

© 2001-2017 by Global Journal of Human Social Sciences, USA

Volume 17 Issue 44 was originally issued as E6

Global Journal of Human-Social Science: E
Economics

Volume 17 Issue 44
Originally issued as E6

Global Journal of Human-Social Science: E
Economics

Volume 17 Issue 6 (Ver. 1.0)

Open Association of Research Society

© Global Journal of Human Social Sciences. 2017.

All rights reserved.

This is a special issue published in version 1.0 of "Global Journal of Human Social Sciences." By Global Journals Inc.

All articles are open access articles distributed under "Global Journal of Human Social Sciences"

Reading License, which permits restricted use. Entire contents are copyright by of "Global Journal of Human Social Sciences" unless otherwise noted on specific articles.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without written permission.

The opinions and statements made in this book are those of the authors concerned. Ultraculture has not verified and neither confirms nor denies any of the foregoing and no warranty or fitness is implied.

Engage with the contents herein at your own risk.

The use of this journal, and the terms and conditions for our providing information, is governed by our Disclaimer, Terms and Conditions and Privacy Policy given on our website http://globaljournals.us/terms-and-condition/menu-id-1463/

By referring / using / reading / any type of association / referencing this journal, this signifies and you acknowledge that you have read them and that you accept and will be bound by the terms thereof.

All information, journals, this journal, activities undertaken, materials, services and our website, terms and conditions, privacy policy, and this journal is subject to change anytime without any prior notice.

Incorporation No.: 0423089
License No.: 42125/022010/1186
Registration No.: 430374
Import-Export Code: 1109007027
Employer Identification Number (EIN):
USA Tax ID: 98-0673427

Global Journals Inc.

*(A Delaware USA Incorporation with "Good Standing"; **Reg. Number: 0423089**)*

Sponsors: Open Association of Research Society
Open Scientific Standards

Publisher's Headquarters office

Global Journals® Headquarters
945th Concord Streets,
Framingham Massachusetts Pin: 01701,
United States of America
USA Toll Free: +001-888-839-7392
USA Toll Free Fax: +001-888-839-7392

Offset Typesetting

Global Journals Incorporated
2nd, Lansdowne, Lansdowne Rd., Croydon-Surrey,
Pin: CR9 2ER, United Kingdom

Packaging & Continental Dispatching

Global Journals Pvt Ltd
E-3130 Sudama Nagar, Near Gopur Square,
Indore, M.P., Pin:452009, India

Find a correspondence nodal officer near you

To find nodal officer of your country, please email us at *local@globaljournals.org*

eContacts

Press Inquiries: *press@globaljournals.org*
Investor Inquiries: *investors@globaljournals.org*
Technical Support: *technology@globaljournals.org*
Media & Releases: *media@globaljournals.org*

Pricing (Excluding Air Parcel Charges):

Yearly Subscription (Personal & Institutional)
250 USD (B/W) & 350 USD (Color)

Editorial Board

Global Journal of Human-Social Science

Dr. Heying Jenny Zhan

B.A., M.A., Ph.D. Sociology, University of Kansas, USA Department of Sociology Georgia State University, United States

Dr. Prasad V Bidarkota

Ph.D., Department of Economics Florida International University United States

Dr. Alis Puteh

Ph.D. (Edu.Policy) UUM Sintok, Kedah, Malaysia M.Ed (Curr. & Inst.) University of Houston, United States

Dr. André Luiz Pinto

Doctorate in Geology, PhD in Geosciences and Environment, Universidade Estadual Paulista Julio de Mesuita Filho, UNESP, Sao Paulo, Brazil

Dr. Hamada Hassanein

Ph.D, MA in Linguistics, BA & Education in English, Department of English, Faculty of Education, Mansoura University, Mansoura, Egypt

Dr. Asuncin Lpez-Varela

BA, MA (Hons), Ph.D. (Hons) Facultad de Filolog?a. Universidad Complutense Madrid 29040 Madrid Spain

Dr. Faisal G. Khamis

Ph.D in Statistics, Faculty of Economics & Administrative Sciences / AL-Zaytoonah University of Jordan, Jordan

Dr. Adrian Armstrong

BSc Geography, LSE, 1970 Ph.D. Geography (Geomorphology) Kings College London 1980 Ordained Priest, Church of England 1988 Taunton, Somerset, United Kingdom

Dr. Gisela Steins

Ph.D. Psychology, University of Bielefeld, Germany Professor, General and Social Psychology, University of Duisburg-Essen, Germany

Dr. Stephen E. Haggerty

Ph.D. Geology & Geophysics, University of London Associate Professor University of Massachusetts, United States

Dr. Helmut Digel

Ph.D. University of Tbingen, Germany Honorary President of German Athletic Federation (DLV), Germany

Dr. Tanyawat Khampa

Ph.d in Candidate (Social Development), MA. in Social Development, BS. in Sociology and Anthropology, Naresuan University, Thailand

Dr. Gomez-Piqueras, Pedro

Ph.D in Sport Sciences, University Castilla La Mancha, Spain

Dr. Mohammed Nasser Al-Suqri

Ph.D., M.S., B.A in Library and Information Management, Sultan Qaboos University, Oman

Dr. Giaime Berti

Ph.D. School of Economics and Management University of Florence, Italy

Dr. Valerie Zawilski

Associate Professor, Ph.D., University of Toronto MA - Ontario Institute for Studies in Education, Canada

Dr. Edward C. Hoang

Ph.D., Department of Economics, University of Colorado United States

Dr. Intakhab Alam Khan

Ph.D. in Doctorate of Philosophy in Education, King Abdul Aziz University, Saudi Arabia

Dr. Kaneko Mamoru

Ph.D., Tokyo Institute of Technology Structural Engineering Faculty of Political Science and Economics, Waseda University, Tokyo, Japan

Dr. Joaquin Linne

Ph. D in Social Sciences, University of Buenos Aires, Argentina

Dr. Hugo Nami

Ph.D.in Anthropological Sciences, Universidad of Buenos Aires, Argentina, University of Buenos Aires, Argentina

Dr. Luisa dall'Acqua

Ph.D. in Sociology (Decisional Risk sector), Master MU2, College Teacher, in Philosophy (Italy), Edu-Research Group, Zrich/Lugano

Dr. Vesna Stankovic Pejnovic

Ph. D. Philosophy Zagreb, Croatia Rusveltova, Skopje Macedonia

Dr. Raymond K. H. Chan

Ph.D., Sociology, University of Essex, UK Associate Professor City University of Hong Kong, China

Dr. Tao Yang

Ohio State University M.S. Kansas State University B.E. Zhejiang University, China

Mr. Rahul Bhanubhai Chauhan

B.com., M.com., MBA, PhD (Pursuing), Assistant Professor, Parul Institute of Business Administration,
Parul University, Baroda, India

Dr. Rita Mano

Ph.D. Rand Corporation and University of California, Los Angeles, USA Dep. of Human Services, University of Haifa Israel

Dr. Cosimo Magazzino

Aggregate Professor, Roma Tre University Rome, 00145, Italy

Dr. S.R. Adlin Asha Johnson

Ph.D, M. Phil., M. A., B. A in English Literature, Bharathiar University, Coimbatore, India

Dr. Thierry Feuillet

Ph.D in Geomorphology, Master's Degree in Geomorphology, University of Nantes, France

Contents of the Issue

i. Copyright Notice
ii. Editorial Board Members
iii. Chief Author and Dean
iv. Contents of the Issue

1. Employment Opportunities and Export Earnings in the Philippine Garment Industry a Firm Level Analysis. *1-39*
2. Does Control of Corruption Accelerate Economic Growth in Botswana? *41-50*
3. Land-Related Tensions and Women's Empowerment in Rural Senegal. *51-60*
4. Estimation Bayésienne D'un Modèle DSGE Pour Une Petite Economie Ouverte: Cas de la RD Congo. *61-83*
5. Business Cycle, Macroeconomic Variables and Economic Growth in Nigeria (1986-2014); A Time Series Econometric Approach. *85-95*
6. Development Policies for Eradication of Street Begging in Bangladesh. *97-102*

v. Fellows
vi. Auxiliary Memberships
vii. Process of Submission of Research Paper
viii. Preferred Author Guidelines
ix. Index

Global Journal of HUMAN-SOCIAL SCIENCE: E
Economics
Volume 17 Issue 6 Version 1.0 Year 2017
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-460x & Print ISSN: 0975-587X

Employment Opportunities and Export Earnings in the Philippine Garment Industry a Firm Level Analysis

By Angelica Maddawin

Abstract- Historically, the Philippine garment industry was at its advantage in times of the Multifibre Arrangement (MFA), a period when there was an imposed quota of imports from the developing countries. The MFA quota regime has resulted to world's redistribution of garment production, shifting some production from strongest producers like China and Bangladesh to the other developing countries like the Philippines. As the MFA ended in 2005, the Philippines has consequently taken on initiatives toward preferential tariffs to remain competitive and gain market access to its biggest markets such as US and EU. However, the country is facing challenges in the pursuance of these initiatives which seems to have a sluggish progress and that threatens the Philippine garment firm owners to move out of the country. In this paper, an empirical analysis was done to show the relationship of trading activities and employment creation in the garment industry in support to the revival of the industry. Using firm-level pooled data of 231 garment firms from the enterprise survey datasets of 2009 and 2015,the regression results suggest that the garment exporter firms significantly contributes to job creation for all types of workers in the industry.

GJHSS-E Classification: *FOR Code: 149999*



Strictly as per the compliance and regulations of:

© 2017. Angelica Maddawin. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Employment Opportunities and Export Earnings in the Philippine Garment Industry a Firm Level Analysis

Angelica Maddawin

Abstract- Historically, the Philippine garment industry was at its advantage in times of the Multifibre Arrangement (MFA), a period when there was an imposed quota of imports from the developing countries. The MFA quota regime has resulted to world's redistribution of garment production, shifting some production from strongest producers like China and Bangladesh to the other developing countries like the Philippines. As the MFA ended in 2005, the Philippines has consequently taken on initiatives toward preferential tariffs to remain competitive and gain market access to its biggest markets such as US and EU. However, the country is facing challenges in the pursuance of these initiatives which seems to have a sluggish progress and that threatens the Philippine garment firm owners to move out of the country. In this paper, an empirical analysis was done to show the relationship of trading activities and employment creation in the garment industry in support to the revival of the industry. Using firm-level pooled data of 231 garment firms from the enterprise survey datasets of 2009 and 2015,the regression results suggest that the garment exporter firms significantly contributes to job creation for all types of workers in the industry. The empirical analysis builds on the models that show the relationship of export share, labor intensity, firm size, imports and foreign ownership to employment. The regression provides robust and significant result to the key variables contributing to the literature on export-orientation and employment. This paper concludes that the industry's revival is essential and should be supported by the government because of its potential contribution to job creation. Moreover, the Philippines may not be competitive on labor cost at par with China and Bangladesh, the country may compete on product design, hence, moving up the value chain and attract investors. Addressing the root cause of garment industry's competitive disadvantage such as reducing cost of doing of business andelectricity in the country could bring promising result to industry's competitiveness.

Chapter I

I. Introduction

a) Background

The Philippine garment industry has gone through transformations as the world goes through the evolution of international trade policies. Before the large factories of garments were constructed in the country, home sewing has been famous in the 1950s. It has beena typical source of livelihood of a low-income family with the mother usually the seamstress who purchase fabric and make it into uniforms, dresses, pants etc. and sell to the market. In the succeeding years, dressmaking in homes have shifted to garment production in the big factories that are located in some areas in Metro Manila and in export processing zones. Over the years, these companies employed many labourers and trained them with necessary skills in manufacturing of clothes. To some extent, companies provided housing to their migrant workers. To this date, some companies still exist and have sustained their operations while some have ventured into other type of businesses and others have totally closed their operations.

But despite a number of companies leaving the industry, today, the industry as a whole remains resilient and still keeping up from the global competitive pressures. Actions toward the improvement of the industry's performance are necessary to increase the industry's contribution to the economy through the jobs that it creates and growth in its exports contribution. Strategies toward competitiveness are necessary especially now thatthe garment firm owners are facing challenges and showing threats of moving out of the country due to international competitive pressures.

b) Objective of the Study

In the light of the revival of the Philippine garment industry, the study may provide support to the improvement of the industry's performance and competitiveness towards employment creation and export growth. Specifically, the study aims to:

1. Provide background of garment industry covering its historical events, cross country literature reviews of other countries' linkage of export and employment and the theoretical foundation (*Chapter I*)
2. Provide information on the Philippine garment industry's economic contribution *(Chapter II)*
3. Discuss the characteristics of the garment and textile industry using the World Bank Enterprise Survey and identify the factors affecting employment generation of the industry (*Chapter III*)
4. Perform regression analysis on the factors affecting employment generation and see the relationship of these factors affecting employment (*Chapter IV*)
5. Provide summary of key informant interview conducted with the representative from the Garment

Author: e-mail: aikamaddawin07@gmail.com

© 2017 Global Journals Inc. (US)

Business Association, a first-hand information on the industry's historical and present situation (*Chapter V*)

6. Provide conclusion and policy recommendation (*Chapter VI*)

i. *Multifiber Arrangement (MFA), 1974-1994*

In 1974-1994, the international trade in textiles and apparel industries were regulated by the Multifiber Arrangement (MFA), an agreement that was created under the system of the General Agreement on Tariffs and Trade (GATT). It was created to regulate the rapid imports of industrial countries on textile and apparel products that come from the developing countries. It was a protectionist measure of the industrial countries to keep their domestic apparel and textiles industries away from possible damages particularly on the cotton textiles, man-made fibers and wool. In order to protect these sensitive products, the import growth rate was capped to a certain level only at 6% annually, lower than the import growth rate prior to the MFA which is 15%. However, the MFA type of regulation is discriminatory in practice as it violates GATT rules. This had led to its termination starting 1995and creation of the WTO Agreement on Textiles and Clothing (ATC) as a replacement. The MFA's effect to the global trade includes altering of location of production, fragmentation of supply chain, increased in cost through quota rents, increased in production prices by taxing consumers, creation of market inefficiencies and discrimination to the other countries' comparative advantage (Vollrath and Gehlhar, 2008).

ii. *Voluntary Export Restriction*

What happened during the MFA was that each of the developed and developing countries went into an agreement called Voluntary Export Restrictions (VER) agreement. VER is a quota on trade committed by an exporting country as an assurance to continuously supply the foreign market each year while the MFA is in effect. Rather than completely losing their foreign market, VER has become the best option for the developing countries. Furthermore, the VER arrangement has proven with distortionary effect arising from income transfer from importing country to exporting country. Literature suggests that VER is beneficial for the exporter countries.

iii. *The Case of Cambodia*

In the case of Cambodia, bilateral trade agreements proved to be an effective mechanism in enhancing their garment sector's exports especially in the end of the MFA. Cambodia's bilateral agreements that were instrumental in their garment sector were GSP agreement with EU and the agreement with US we resigned in 1996 and 1997, respectively. Probably taking advantage of the rule of VER, US imposed quota on 12 product categories of Cambodian garments exports as Cambodia is performing stronger in exports to US. Cambodia's garment exports grew by more than 100 percent where majority of the exports, approximately 90 percent, was absorbed by the US market. Despite quotas imposed to Cambodian exports, exports continued to rise because garment factories produced more of the items that were not included from the restricted categories. Aside from concentrating on other product classification, Cambodian garment industry attracted FDI through relatively low labor cost. The garment industry's labor force is mostly composed of young and unskilled women who are migrants from the rural areas. Cambodian garment industry is characterized by foreign ownerships from mainland China, Hong Kong, Taiwan, Malaysia, Singapore, United Kingdom (UK), and Korea. These offshore owners also have subsidiary factories in other countries in the region, such as Vietnam, Sri Lanka, and China.

Besides lack of skilled labor, Cambodian garment industry is also characterized by shortage of raw materials for high-value production. Cambodia's garment industry is confined with "cut-make-trim" signifying minimal gain from the value chain. Their garment industry has not yet diversified fully into upstream production because their textile manufacturing faces the same problem like that of the Philippine garment industry. They suffer from high cost of electricity and problems with physical infrastructure leaving few companies investing in the textile sector, such as Manhattan Textile Company, owned by American-Taiwanese investors. Despite inability to invest in high-value production, Cambodia garment industry is not at a competitive disadvantage. The benefits from the cut-make-trim became enough for Cambodia's garment industry to be competitive. Apart from international competitiveness, Cambodia's garment industry also contributes to poverty reduction through remittances. Garment factories are dominant employers of rural migrants where 13 percent of total household income from the rural areas is covered by remittances of garment factory workers in the urban. The way remittances helped the rural household is through investments in the agricultural sector considering that the families of the migrant workers are mostly farmers. The remittances are usually used to buy seeds, pesticides, fertilizers and pumping machines for irrigation. As a result, famers can raise income and may afford to send their children to school.

iv. *Agreement on Textiles and Clothing (ATC), 1995-2004*

The period of 1995-2004 was a progressive implementation of the ATC. The process went on four stages of integrating the products that have been previously restricted by quota into the list of GATT products that are turning to be quota-free. Integration process is therefore a process of removal of quota for the products that are listed in the GATT. Some of the

© 2017 Global Journals Inc. (US)

examples of the products that are subject to the removal of quota are tops and yarns, fabrics, made-up textile and clothing. The procedure was done in a gradual process to give time to both the importers and exporters to adjust in the process since they have been restrained by the MFA for 20 years long. Table 1.1 illustrates a step by step increase of import growth rate limit on each stage of the integration process and its corresponding percentage of products that are to be integrated into the GATT list. This integration process is applicable to developed countries such as EU countries, US and Canada. This means that they can now import relatively more products at a higher import limit from developing countries as the integration process goes on.

Table 1.1: Transition of MFA to ATC, 1995 – 2005

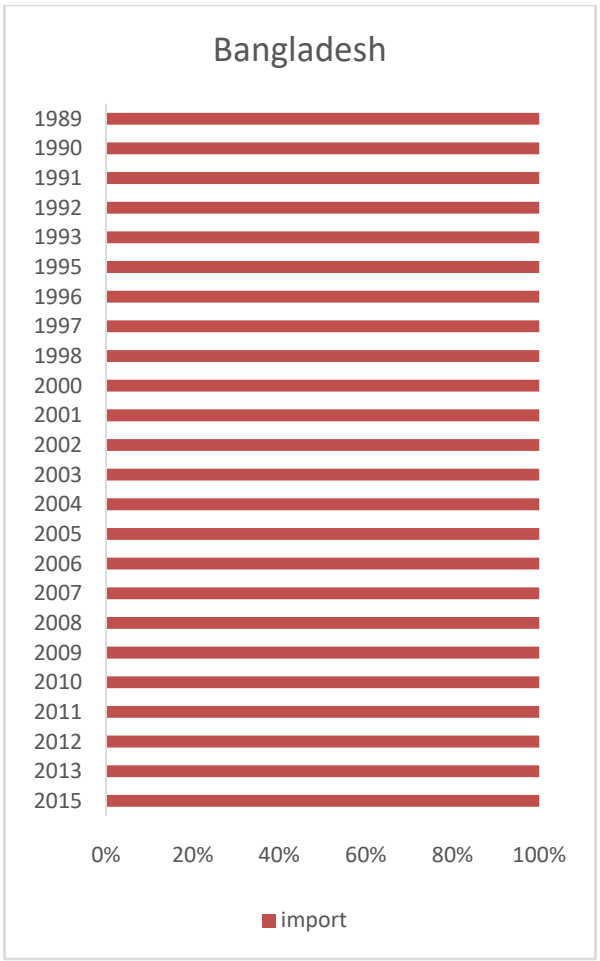
STEP	Percentage of products integrated in GATT	Import limit per year
Step 1: Jan 1, 1995 to Dec 31, 1997	16% (taking 1990 imports as base)	6.96%
Step 2: Jan 1, 1998 to Dec 31, 2001	17%	8.7%
Step 3: Jan 1, 2002 to Dec 31, 2004	18%	11.05%
Step 4: Jan 1, 2005	49% (maximum)	No quotas left

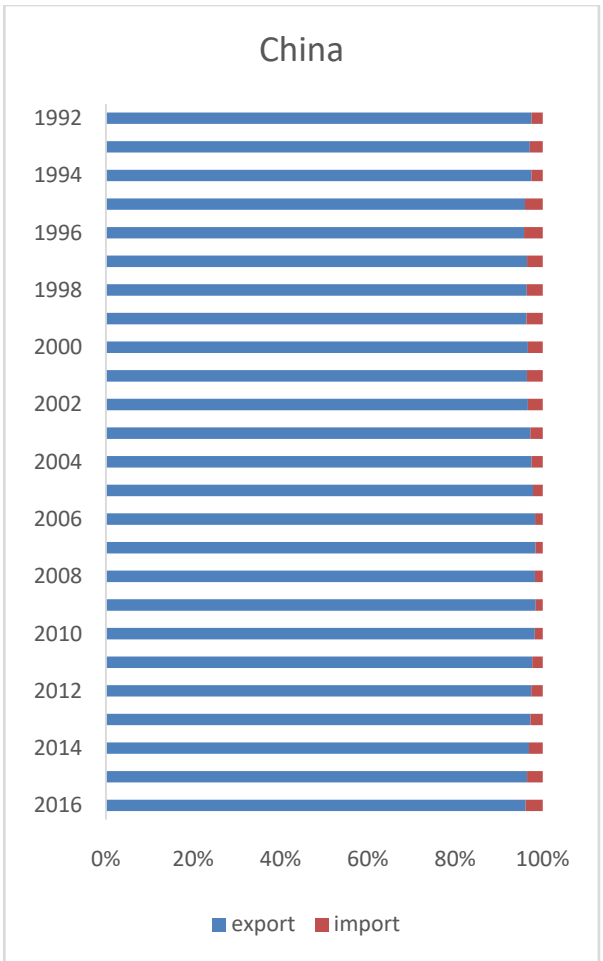
Source: World Trade Organization (WTO)

v. *Developing Countries Trade in Garment duringthe Transition Period*

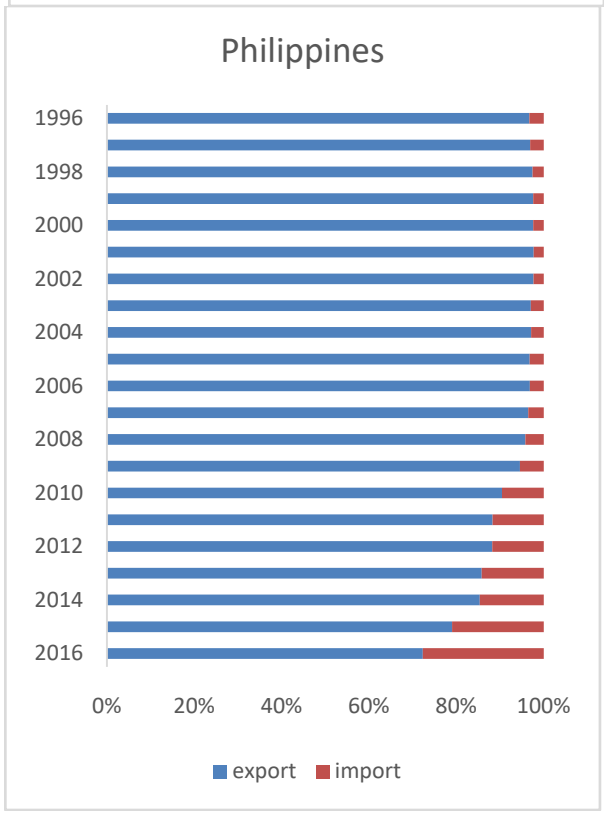
While the world trade in garment is under the transition period of slowly removing the quota restriction over the years from the developing countries, the developing countries' world trade of garment shows that the countries have exported garment more than imported. Figure 1.1 shows the garment export dominance over imports for Bangladesh, China, Vietnam, Philippines, Cambodia and Sri Lanka. Philippines follows the usual trend for developing countries, that is, they export more than they import garment, however, when compared with the magnitude of trade export in garment, Philippines relatively export less than Bangladesh, China and Vietnam. This implies that Philippines has been efficient in absolute terms but relative to other countries like Bangladesh, China and Vietnam, it has not been competitive. If it was not only because of the quota restriction, the country could not have the chance to flourish its exports. Also Philippine export trend is declining during the MFA to ATC transition while Vietnam export trend was increasing in that period. Looking at Cambodia's and Sri Lanka's exports, it seems that Philippines has comparative advantage in garments during the MFA to ATC transition period.

© 2017 Global Journals Inc. (US)

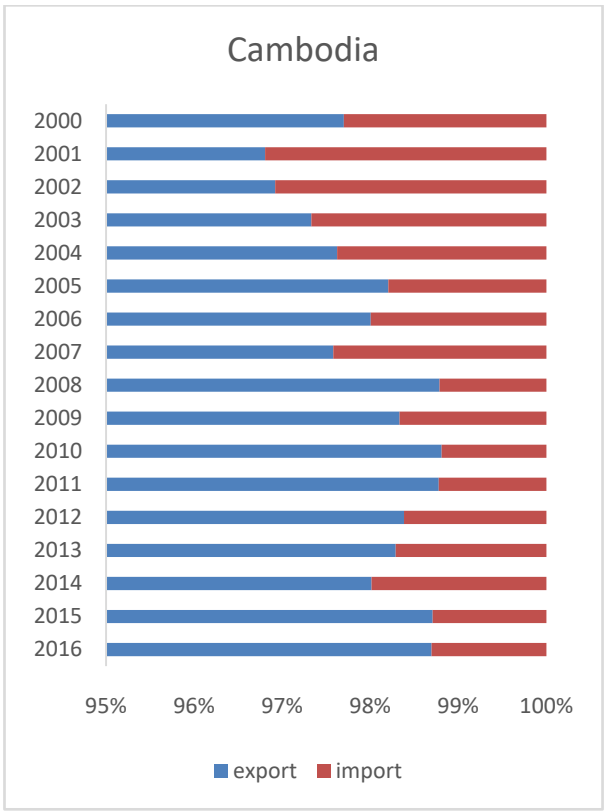


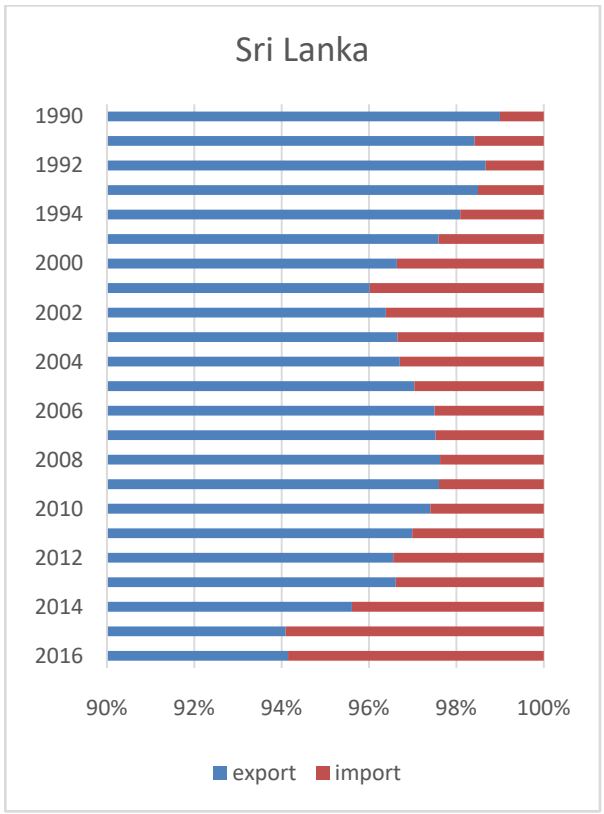






© 2017 Global Journals Inc. (US)





Source: UN COMTRADE

Note: Exports and Imports of HS codes 61 and 62. 61 – Articles of apparel, accessories, knit or crochet, 62 – Articles of apparel, accessories, not knit or crochet

Figure 1.1: Trade Distribution in Garment Sector in Selected Countries

vi. *Garment and Textile Export Board (GTEB) in the Philippines, 1982 – 2004*

While the international trade is transitioning from the MFA to ATC, there were also domestic initiatives designed to ensure that the Philippine garments and textile industries remain competitive internationally as it evolved. The country has created a Garment and Textile Export Board (GTEB) in 1982 through an Executive Order (EO) No. 823 with functions such as negotiation, administration, allocation and monitoring of the garments and textile export quota. But the GTEB came to an end as the MFA also ended. After more than two decades, it was eventually phased-out through EO 285 in 2004. During its existence, an enhancement plan was laid out which embodies a strategy towards the industries' competitiveness in the international market. The plan includes four components targeted to maximize the opportunities of the industry's export and at the same time ensures transparency and respect for law. The four components are the following:

1. The Responsible Apparel Production Principles or the GTEB Accreditation Program
2. The Quota Rule Enhancement
3. Administrative reforms or the partial re-organization of the GTEB
4. The Foreign Policy Orientation program

Quota allocation of the GTEB to the garment manufacturersis given on the basis of the size of the firm that is also based on 3-year sales performance. However, from the analysis of GTEB, the most valued garment product categories have the most highly critical quota restrictions. These product categories are (1) *Knit Shirts Made of Cotton,* (2) *WG Trousers/Slacks/Shorts Made of Cotton,* (3) *MB Trousers/Slacks/Shorts Made of Cotton*and(4) *MB Shirts (Blouses) Not Knit Made of Cotton.* To be able to earn revenues, GTEB offered quota of these product categories through a public bidding. To conclude, quota allocation was not efficient because the existing supply of quota is not sufficient to meet the demand of the whole industry.

vii. *Philippines – US Save Our Industry Act, 2008*

In the succeeding years, various initiatives have been proposed to continue and encourage trading activities in the garment industry. In 2008, a preferential trade bill for textiles and apparel between the US and the Philippines, called "Save Our Industry Act" was proposed at the US congress. It describes an innovative win-win trade legislation because of the jobs that it could create to both the US and Philippines. The agreement basically allows the Philippine apparel products that are manufactured domestically to enter to the US market with duty free market access but on a condition that the apparel products should be made

© 2017 Global Journals Inc. (US)

with US fabrics. This could also mean creation of jobs in US textile sector giving pressure to the US textile manufacturers to export fabrics in the Philippines.

viii. *Philippines – EU Generalised Scheme of Preference Plus (GSP+), 2014*

In December 2014, a Generalised Scheme of Preference Plus (GSP+) by the European Union was formally announced to take place. It is a special incentive trade arrangement which offers zero duties for the Philippine exports to any of the 28 member countries of the EU. This covers more than 6,000 products including coconut and marine product, processed fruit, prepared food, animal and vegetable fats and oils, textiles, garments, headwear, footwear, furniture, umbrellas and chemicals.

c) Review of Literature

Several studies have been conducted on the relationship of export-oriented industry to industry's employment most especially in China because of its remarkable transformation to world's industrial powerhouse. A compilation of the studies that are significant to the analysis this paper varies in time periods and the industry coverage. One empirical analysis is done by Mao (2009) who showed the significant impacts of FDI and export on employment in the manufacturing industries in China based on the panel data of 329 manufacturing industries from 1999 to 2007. Hu and Liu (2007) also did an empirical study on industry-wide impact of trade on employment in China from 1998 to 2003. Using samples of 32 industries, the impact analysis suggests that a 1% increase in the share of export results to increase in the labor demand by 0.19%. Yu (2012) focused specifically on labor-intensive industries covering 24 sub-sectors of manufacturing industries in Wenzhou economic and technological development zone and proved that exporting results to positive impact on labor income and employment. While Wei (2011) specifically focused on textile industry's export and employment in China for 1980-2007 and provided long-term and short-term estimates of export relationship to textile industry's employment. The results are 0.68% increase in employment in the long-run and 0.48% increase in employment in the short-run for 1% increase of export in the textile industry. Yu (2008) made an empirical study that looked into the whole employment effects of manufacture product trade and as well as sect oral employment effect based on 34 industries panel data from 1996-2006. The author found out that export has positive effect on employment as a whole but import has negative effect on employment.

Based on CGE model, a simulation analysis was done by Lu and Li (2011) to show the effects of change in the China exports on the employment under the scenarios of global economic growth and China's economic stimulus plan to international financial crisis in the second half of 2008. The results show that one percentage increase in the exports leads to employment growth in the non-agriculture by 0.08 percentage. While L in (2013) used the input-output table for 1988-2007 and analyzed China's foreign trade influence on domestic employment. In this study, the author analyzed the net trading effects to employment of labor-intensive and labor-capital intensive industries separately. The results show a difference between the two types of industries' trade on employment. The net influence of labor-intensive commodities trade on domestic employment has the most absolute quantity and proportion while the net influence of labor-capital intensive commodities trade on employment has the minimum absolute quantity and proportion. A quite similar study is also done by Turco and Maggioni (2013) who investigated the impact of importing and exporting or two-way trade of Turkish manufacturing to employment. The authors concluded that larger employment expansion is experienced by high trade intensity firms and the employment creation effect further leads to large positive impact on firm production scale. Also, they said that high intensity, with emphasis on exporting firms, promotes workforce skill upgrading.

In a macro setting, Felbermayr, Prat and Schemer (2011) did empirical study on the association of trade openness and structural rate of unemployment and checked the robustness of their estimates using both panel data from 20 OECD countries and cross-sectional data of set countries. The regression for the panel data controls for the unobserved time variant variables whereas in the cross-section regression, openness variable is instrumented by geographical variable. For both regressions, business cycle effects, institutional and geographical variables were added. The regression results are robust to various definitions of unemployment rates and openness measures and at the benchmark, their result suggests a 10-percentage point increase in total trade openness reduces aggregate unemployment by about three quarters of one percentage point.

Gender equality-related studies are gaining popularity and significance in trade and industry development policy research. When it comes to women employment effect of the export-oriented industries, literatures suggest that women employment effect of export is more evident in countries like Turkey and Bangladesh. One example is Basle vent (2004) who analyzed the impact of export-oriented growth strategy on female labor force participation and employment in the urban Turkey and found out that long-term economic growth driven exportation has significant positive effect on both labor force participation and employment of women. Ozler (2000) also investigated the relationship of export orientation to female share of employment in the Turkish manufacturing sector on the onset of export-led industrialization policies in 1983-85

© 2017 Global Journals Inc. (US)

and found out that female share of employment increases with the export-total output ratio while controlling for workers' skill. Majumder and Begum (2000) evaluated gender differences in conditions of employment and work environment among export-oriented garment industry and concluded that in Bangladesh, women's employment in export-oriented industry has narrowed the gender gap in labor force participation, social prestige, control over income and decision making.

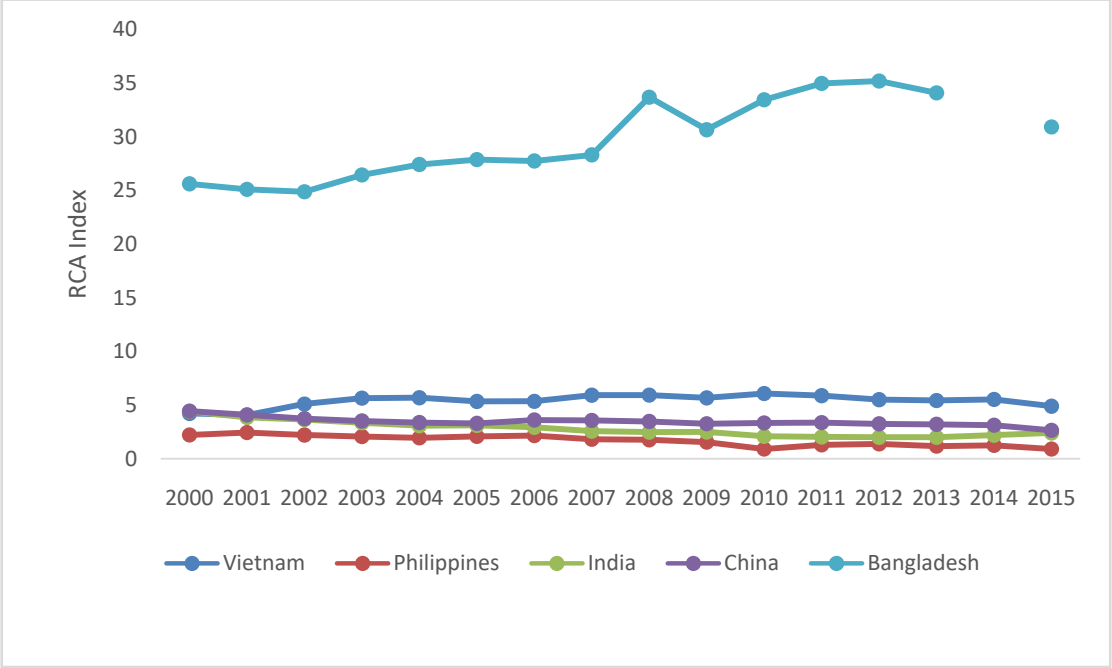
d) Theoretical and Conceptual Framework

Based on David Ricardo model of comparative advantage, countries could gain from trade if they export the commodity in which they have comparative advantage. Balassa (1965) introduced an index of revealed comparative advantage computed as the ratio of a product's share of exports in country's total exports to its share in world exports. RCA indices can be calculated at any degree of disaggregation. In this paper, we follow the RCA index formula below:

$$RCA_k^i = \frac{X_k^i / X^i}{X_k / X}$$

where X_k^i is country *i*'s exports of garment*k*, $X^i = \sum_k X_k^i$ its total exports, $X_k = \sum_i X_k^i$ world exports of garment*k* and $X = \sum_i \sum_k X_k^i$ total world exports. The selected country *i*'s are world's strongest producers of garments such as China, Bangladesh, India and Vietnam. Their RCA indices will be compared to the Philippine RCA index (Figure 1.2). A value of RCA above one in good (or sector) *k* for country *i* means that *i* has a revealed comparative advantage in that sector.

Since the transition period of MFA to ATC to the present times, China, India, Bangladesh, Philippines and Vietnam have demonstrated comparative advantage in the garment sector as illustrated by their RCA index (Figure 1.2). Bangladesh has the highest RCA index among those countries.



Note: RCA Index for sum of products with HS codes 61 and 62.
61 - Articles of apparel, accessories, knit or crochet
62 - Articles of apparel, accessories, not knit or crochet

Source: UN COMTRADE

Figure 1.2: RCA Index for Selected Countries, 2000-2015

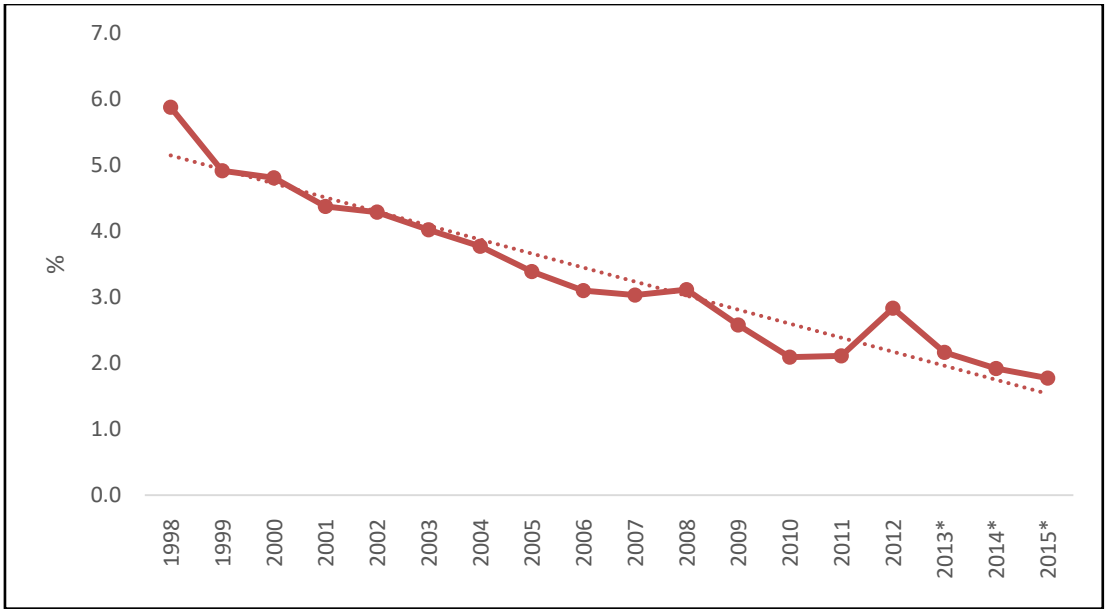
Chapter II

II. Economic Contribution

a) Gross Value Added Share

The gross value added (GVA) share of wearing apparel in the manufacturing sector ranged from 2% - 6 % since 1998 to 2015 (Figure 2.1). In 1998, wearing apparel have reached 5.9% GVA which is the highest recorded within the period of 1998-2015.The GVA trend is declining in the transition period of MFA to ATC. From 1998, the GVA had dropped down to a little less than 2% after 7 years. Although there are observable peaks in the post MFA such as years 2008 and 2012, these peaks could be attributable to the effects of post MFA and some to other factors.

© 2017 Global Journals Inc. (US)



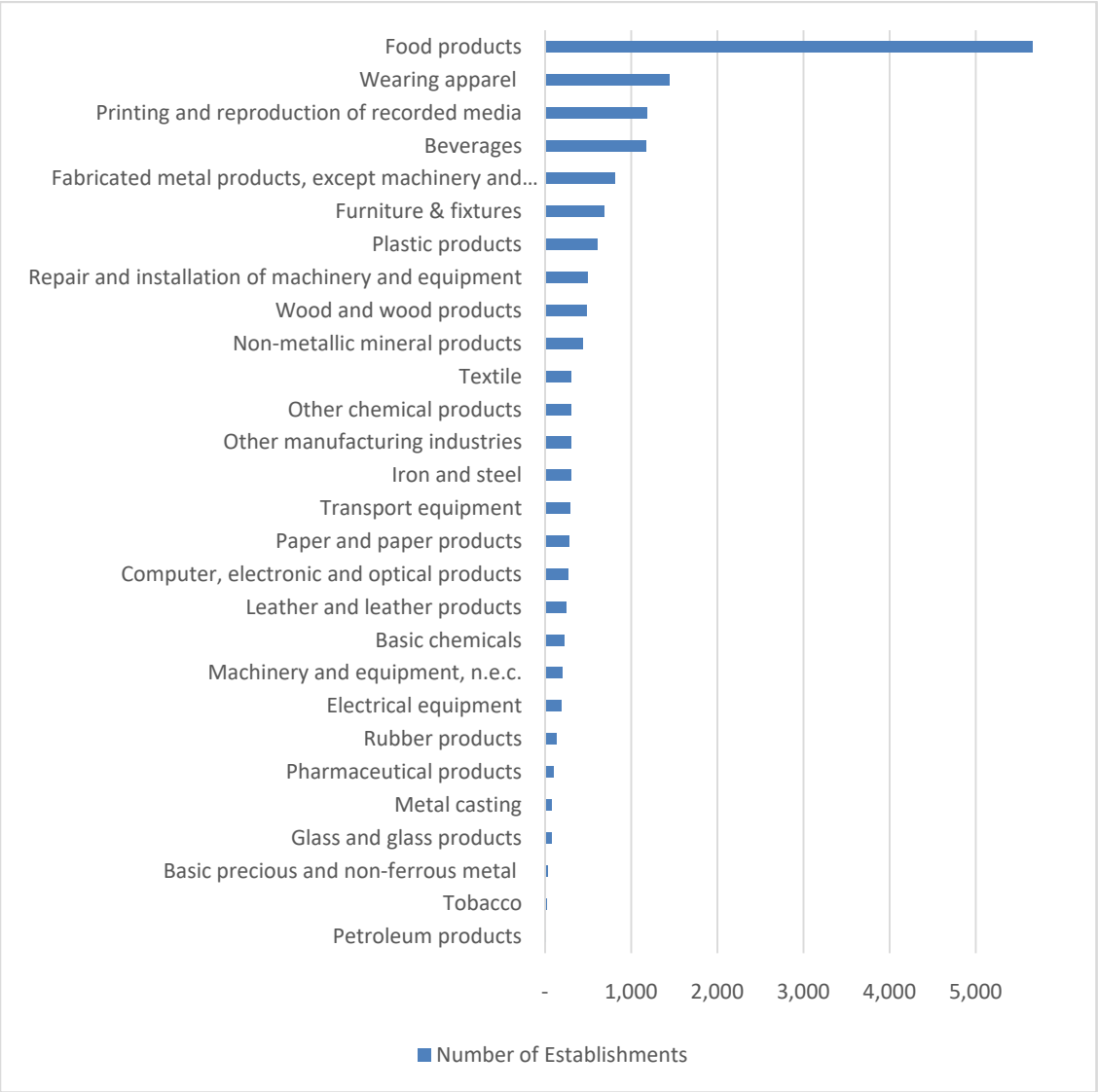
**as of June 2016*
Source: Philippine Statistics Authority

Figure 2.1: Wearing Apparel Gross Value Added in Manufacturing (1998-2015)

b) Establishments and Employment

In terms of the number of establishments, wearing apparel has the second largest number of establishments among the manufacturing industries according to the 2010 Annual Survey of Philippine Business and Industry (ASPBI), see Figure 2.2.This demonstrates sustainability to several garment investors operating in the county. Whether some establishments are new entrants, or some other establishments expanded or that other have sustained their operations for long a time, this proves high priority of investments and preference for the garment sector.

© 2017 Global Journals Inc. (US)

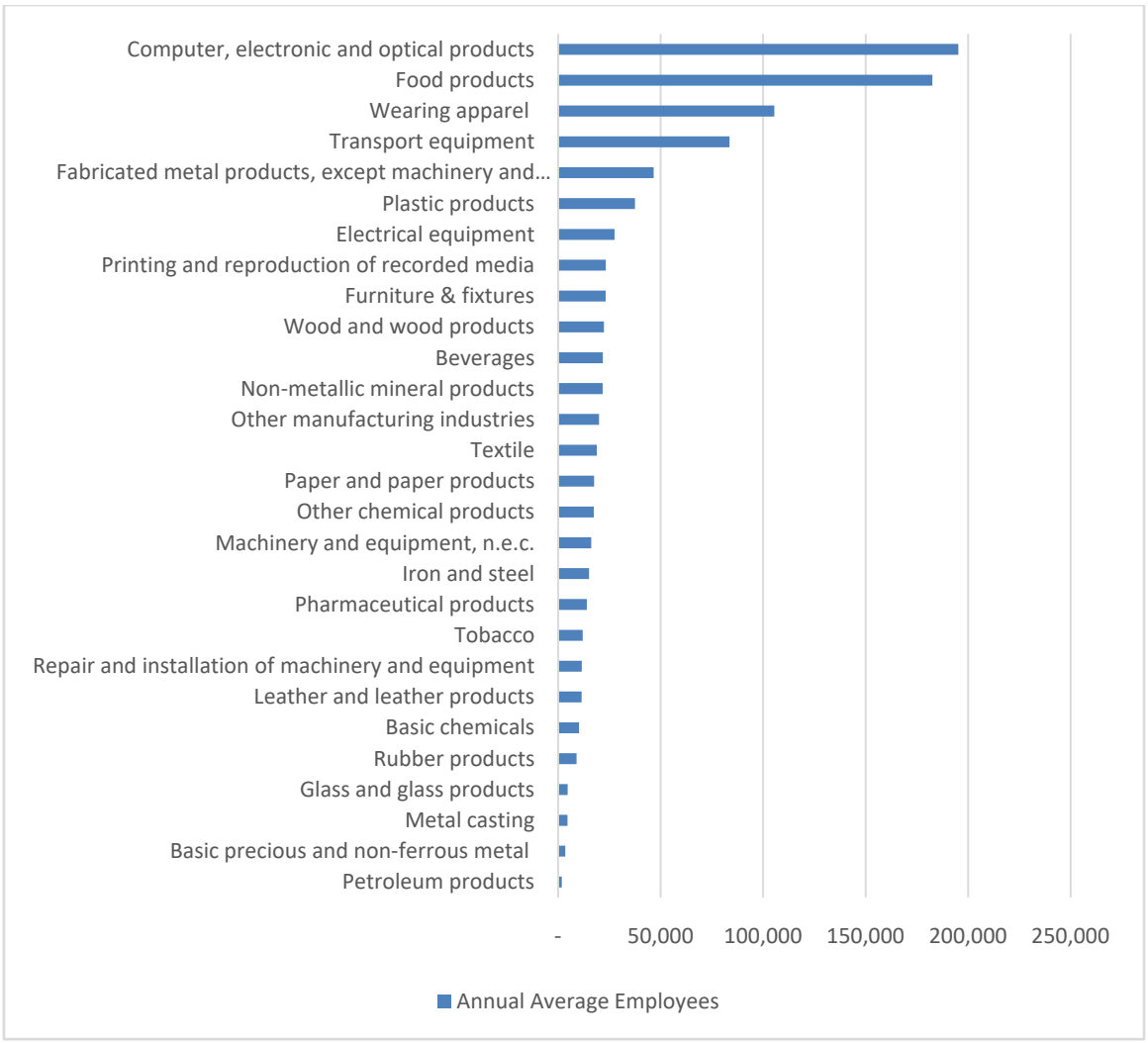


Source: 2010 Annual Survey of Philippine Business and Industry, Philippine Statistics Authority

Figure 2.2: Number of Establishments by Industry

Wearing apparel has also ranked high at 3rd in the highest number of employees next to the food industry (Figure 2.3). This implies a labor intensive industry acquiring more labor in the production process. As with the computer, electronic and optical products, manufacturing of garments also requires abundant manpower to sew the fabric/cloth to make it as a dress, trousers, shirts, etc.

© 2017 Global Journals Inc. (US)



Source: 2010 Annual Survey of Philippine Business and Industry, Philippine Statistics Authority

Figure 2.3: Number of Employees by Industry

c) *Investments*

Some parts of garment production come from domestic production of textiles. Textile industry is noted with significant investments on durable equipment. This is because textiles machineries are specialized machineries that depends on product designs that the marketplace is asking for. Data on the gross domestic capital formation which consists of gross fixed capital formation[1] and change in stocks[2] for the 2008-2013 is shown in Table 2.2. The gross domestic capital formation for textiles machinery is increasing from 2008 to 2013.

[1] Refers to outlays on construction, durable equipment and breeding stocks, orchard development and intellectual property products.
[2] Refers to the difference between ending and beginning inventories.

© 2017 Global Journals Inc. (US)

Table 2.2: Gross Domestic Capital Formation in Durable Equipment
(In million pesos: at constant 2000 prices)

Type of Equipment	2008	2009	2010	2011	2012	2013
Durable Equipment	476,092	452,560	567,833	583,225	624,112	720,937
Machinery specialized for particular Industries	119,248	99,824	130,776	150,788	158,872	165,113
1. Agricultural machineries	958	942	1,226	1,652	2,161	2,460
2. Tractor other than steam	298	193	167	195	332	383
3. Mining and construction machineries	13,596	11,393	13,550	14,511	23,616	25,721
4. Textile machineries	1,297	1,136	1,281	1,417	1,504	1,577
5. Sawmill & logging machineries	0.3	93	12	4	2	-
6. Sugarmill machineries	9,203	63	160	68	165	319
7. Pulp and paper machineries	1,457	1,063	1,880	1,832	2,005	1,832
8. Metal working machineries	5,151	4,451	5,305	7,751	8,327	7,716
9. Telecommunications & sound recording/reproducing equipment	57,480	57,952	75,050	83,279	70,794	73,090
10. Other special industrial machineries	29,808	22,541	32,145	40,079	49,965	52,015

Source: Philippine Statistics Authority

d) Exports

Garment export is the third top exports in the manufacturing industries, next to electrical and electronic equipment and machinery and transport equipment which are definitely high in terms of FOB value in million USD. Table 2.3 shows exports by commodity group in 2009 to 2015.

Table 2.3: Philippine exports by major commodity group 2009 to 2015
(F.O.B. value in million U.S. dollars)

	2009	2010	2011	2012	2013	2014	2015
Agro-Based Products	1,612	2,212	3,159	2,771	3,300	3,535	2,842
Other Agro-Based Products	529	710	856	808	948	1,125	845
Forest products	33	28	50	58	92	86	48
Mineral products	1,470	1,929	2,840	2,337	3,412	4,038	2,853
Petroleum products	293	371	648	465	843	446	314
Manufactures	33,058	44,694	39,320	44,260	47,025	51,607	50,808
Elect. & elect'l equipment/parts & telecom	23,600	32,552	25,243	25,037	20,121	29,767	32,066
Machinery & transport equipment	1,945	2,568	2,806	5,310	3,763	5,318	5,150
Garments	1,525	1,701	1,896	1,573	1,580	1,854	1,459
Textile yarn/fabrics	147	169	184	170	188	247	199
Footwear	22	8	12	16	34	35	33
Travel goods and handbags	66	71	40	60	176	266	429
Wood manufactures	821	1,029	1,683	2,159	3,086	2,963	2,805
Furniture and fixtures	138	152	165	180	251	370	324
Chemicals	969	1,567	1,924	1,937	2,852	2,754	1,878

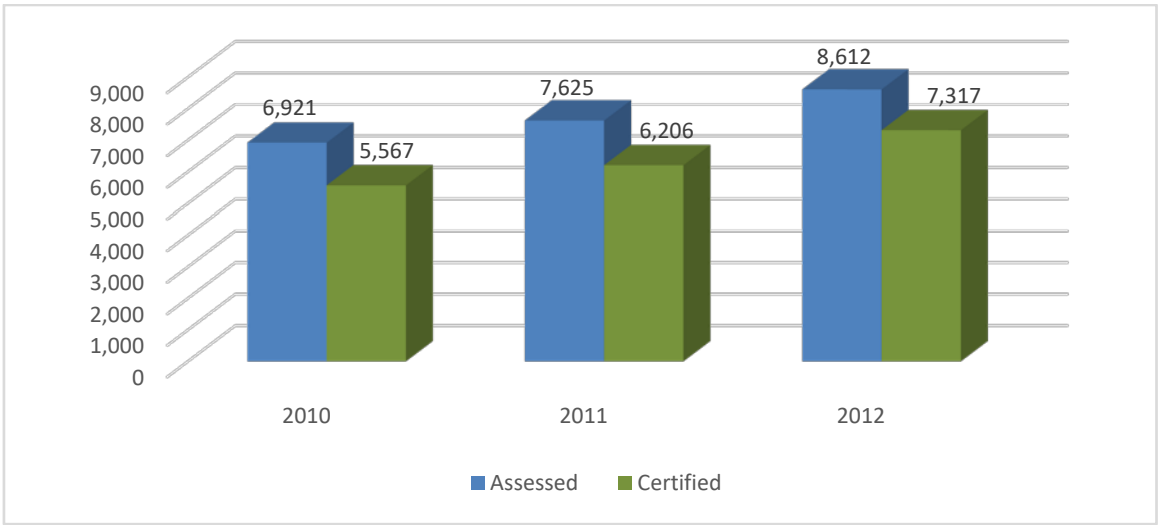
© 2017 Global Journals Inc. (US)

Non-metallic mineral manufactures	156	162	177	145	204	327	176
Processed food and beverages	851	932	1,035	1,104	1,482	1,449	1,163
Iron and steel	119	155	200	253	159	108	99
Baby carr., toys, games and sporting goods	128	168	188	239	329	291	321
Basketwork, wickerwork & oth articles of plaiting mat'ls	38	43	46	43	50	49	57
Misc. manufactured articles, nes	291	337	423	1,534	558	688	603
Others	2,244	3,079	3,298	4,500	5,659	5,121	4,044
SPECIAL TRANSACTIONS	1,440	1,553	1,432	1,401	1,077	1,265	1,116
RE-EXPORTS	688	612	672	369	194	282	143
TOTAL EXPORTS	38,436	51,498	48,305	52,100	56,698	62,102	58,827

Source: Philippine Statistics Authority

e) Skilled Labor

Skilled labor in the garments sector is also gaining significance over the years as illustrated by Figure 2.4. The number of persons assessed and certified for skills in the garments sector is increasing at 80.4 percent in 2010 to 85 percent in 2012 according to Technical Education and Skills Development Authority (TESDA).



Source: Technical Education and Skills Development Authority

Figure 2.4: Number of Persons Assessed and Certified for Skills in Garments Sector

f) Backward and Forward Linkages

The computed indices of the backward and forward linkages of the textile and wearing apparel based from the 120x120 Input-Output table 2006 are 1.08 in textiles and 1.13 in wearing apparel for forward linkages and 1.70 in textiles and 0.61 in wearing apparel for backward linkages. IO table describes the technological relations between the physical inputs and outputs in the production process expressed in money terms. It gives the amount the industries purchase from the other industries. In this paper, the backward and forward indices were computed from the given sector inverse matrix by first getting the sum of every rows and columns of the sector and the overall sum of the sector in its inverse matrix form. The overall sum of the sector in its inverse matrix form is divided to the number of sectors (in this case, the number of sectors is 120). Lastly, each of the rows and columns sums was divided to the resulting ratio of the overall sum of the sector inverse matrix to the number of sector. The resulting ratios give us the indices of backward and forward linkages for each of the sectors. Refer to Table 2.4.

When the industries are ranked in terms of their indices, we can infer that the textiles and wearing apparel have high indices of backward and forward linkages. This would mean that the two industries are

© 2017 Global Journals Inc. (US)

linked to other industries or to one another. High indices are observed especially for textiles manufacture which ranked 13th out of the 120 sectors according to its index for the backward linkage while the wearing apparel is at 69th. For the forward linkages, the textiles manufacture ranked 47th while the wearing apparel ranked higher at 39th (Table 2.4). High indices also mean that increase in the demand for these sectors translate to increase of investments on the industries. Moreover, the sum of every row of the sector inverse matrix gives us the output multiplier effect of the demand for each sector. This means that one percentage increase in the demand for textiles give us the increase of the total output by - 3.43 percent, other things held constant. While a one percentage increase in the demand for wearing apparel increases the total output by 1.22 percent, other things held constant.

Table 2.4: Backward and Forward Linkages

Sector	Forward Linkages	Industry Rank (out of 120 sectors)	Backward Linkages	Industry Rank (out of 120 sectors)	Increase in total output for every 1 Million increase in the demand
Textile	1.08	47th	1.70	13th	3.43 Million
Garment	1.13	39th	0.61	69th	1.22 Million

Data Source: Input Output Table 2006, Philippine Statistics Authority
Note: Computed

In terms of export shares to the total output, wearing apparel and textiles manufactures ranked 7th and 16th respectively in the 60 x 60 industry classification of the I-O table (see Table 2.5). Other industries in the higher rank are mostly from mining and quarrying and transport, storage & communication and trade and repair of motor vehicles and motorcycles.

Table 2.5: Top 20 Industry with Highest Export Shares to Total Output

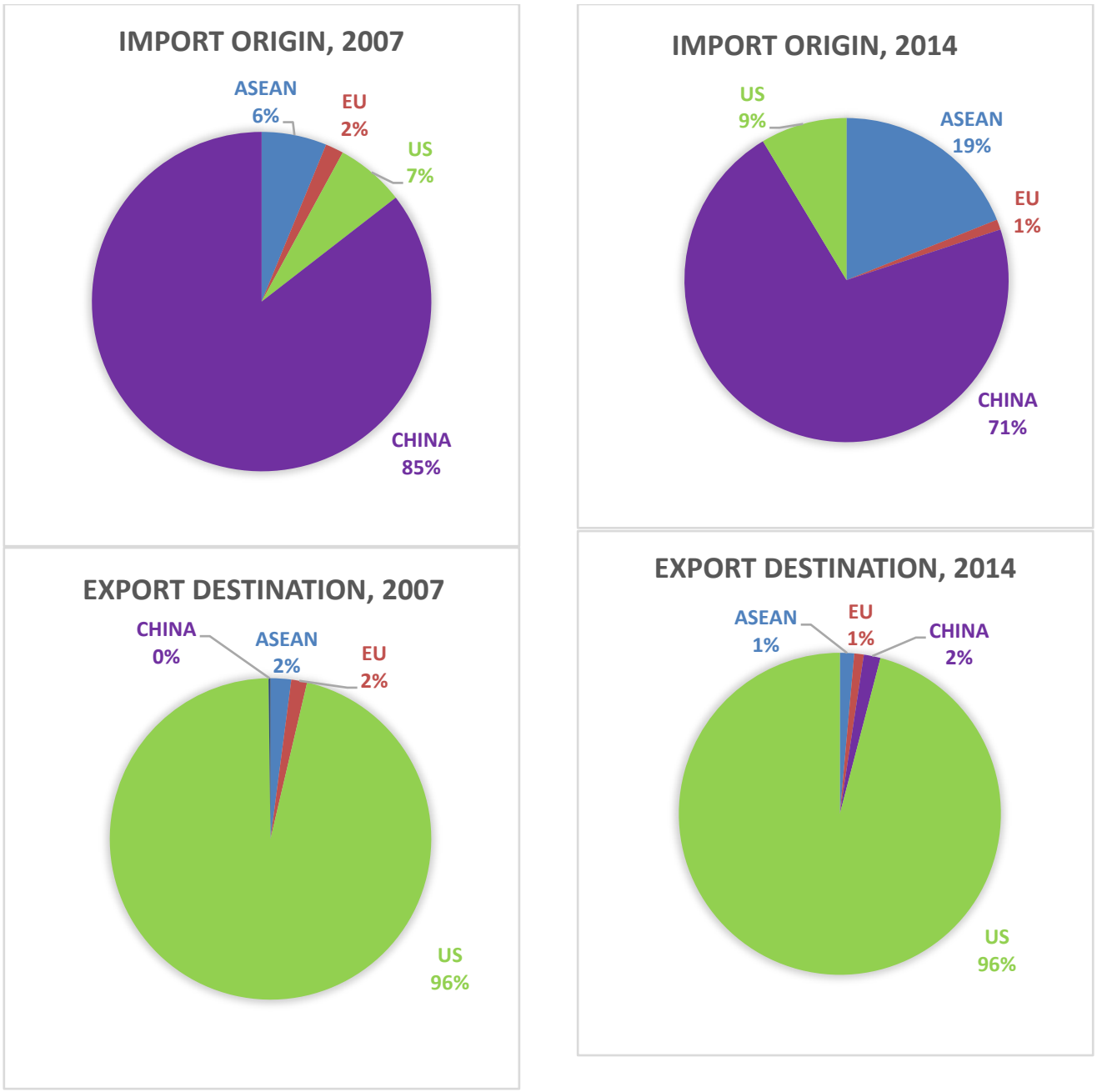
Rank	Industry	Export Share to Total Output
1	Other metallics	87.89
2	Chromium mining	83.34
3	Radio, television and communication equipment and apparatus	81.95
4	Nickel mining	75.40
5	Machinery and equipment except electrical	71.09
6	Basic metal industries	69.24
7	Wearing apparel	63.70
8	Banana	62.61
9	Electrical machinery and apparatus	61.50
10	Fabricated metal products	56.11
11	Transport equipment	51.65
12	Footwear and leather and leather products	40.91
13	Miscellaneous manufactures	38.80
14	Wood, bamboo, cane and rattan articles	36.02
15	Rubber and plastic products	30.91
16	Textile manufactures	25.73
17	Non-metallic mining and quarrying	25.15
18	Furniture and fixtures	24.61
19	Petroleum and other fuel products	24.28
20	Paper and paper products	24.04

Data Source: Input-Output Table 2006, Philippine Statistics Authority

g) Foreign Trade

Looking at the country origin and destination of imported and exported garment and textile products to the regions and countries where the Philippine has engaged in integration process and partnership agreements, Figure 2.5 shows that Philippine garment and textile products mostly originates from China in 2007. In 2014, still China dominates Philippine imports of garments and textiles. But the top destination of the country's exports on garments and textiles is US since 2007 and after 7 years in 2014. The interesting progression is the more than triple increase of ASEAN' shares in the country's imports of garments and textile from 6% in 2007 to 19% in 2014.

© 2017 Global Journals Inc. (US)

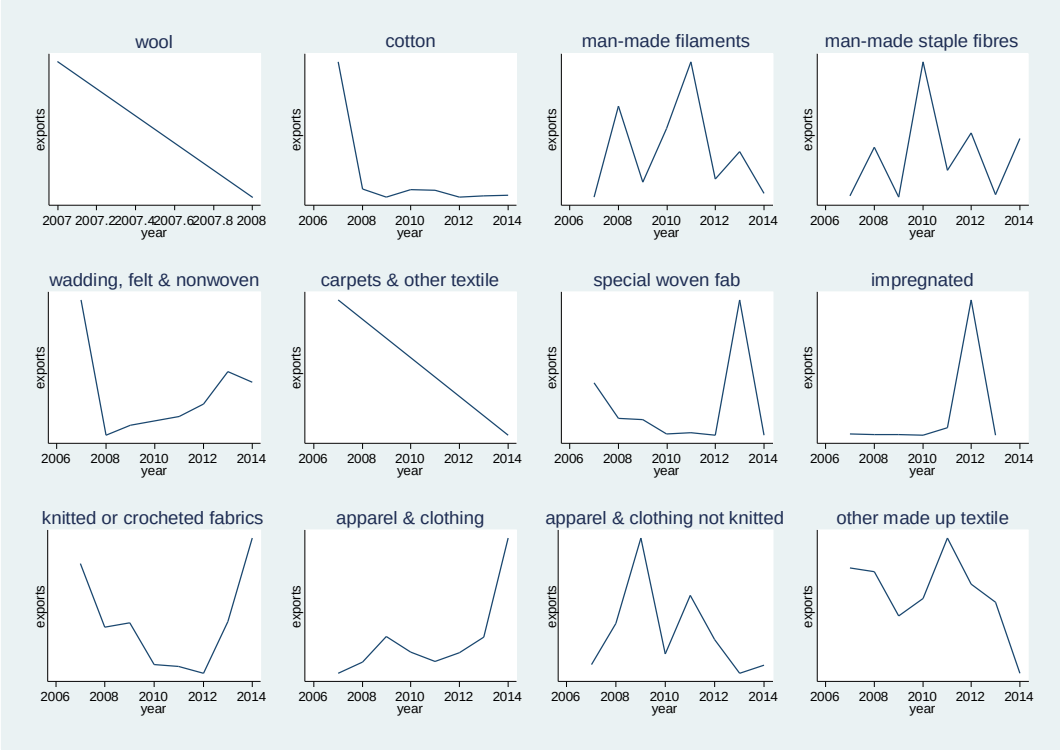


Data Source: Foreign Trade Statistics, Philippine Statistics Authority

Figure 2.5: Import Origin and Export Destination of Philippine Garment, 2007 and 2014

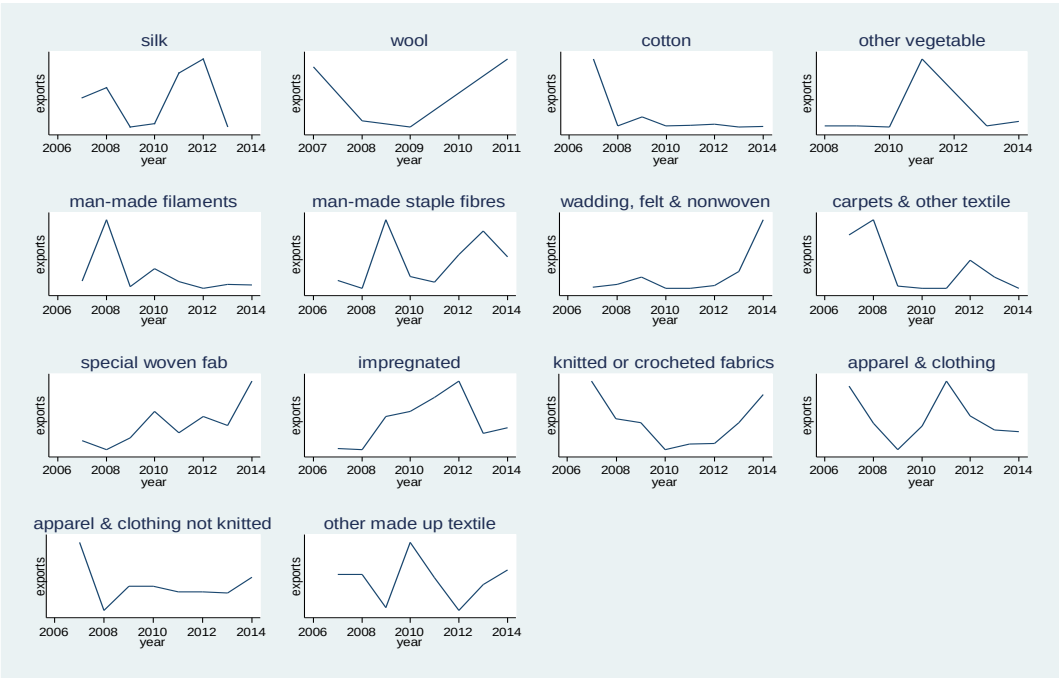
Figures 2.6 – 2.8 shows the trends of exports of garments and textiles by product type to ASEAN, APEC and EU. Products with increasing trend of exports to ASEAN are only few such as knitted or crocheted fabrics and apparel and clothing. For the exports to APEC, we can observe several products increasingly exported such as wool, wadding felt and nonwoven, special woven fabrics, knitted or crocheted fabrics, apparel and clothing not knitted and other made up textiles. We can see that the trends are upwards for wadding felt & nonwoven, knitted or crocheted fabrics and other made up textile exports to EU. Other products are declining in exports to EU.

© 2017 Global Journals Inc. (US)



Source: Foreign Trade Statistics, Philippine Statistics Authority

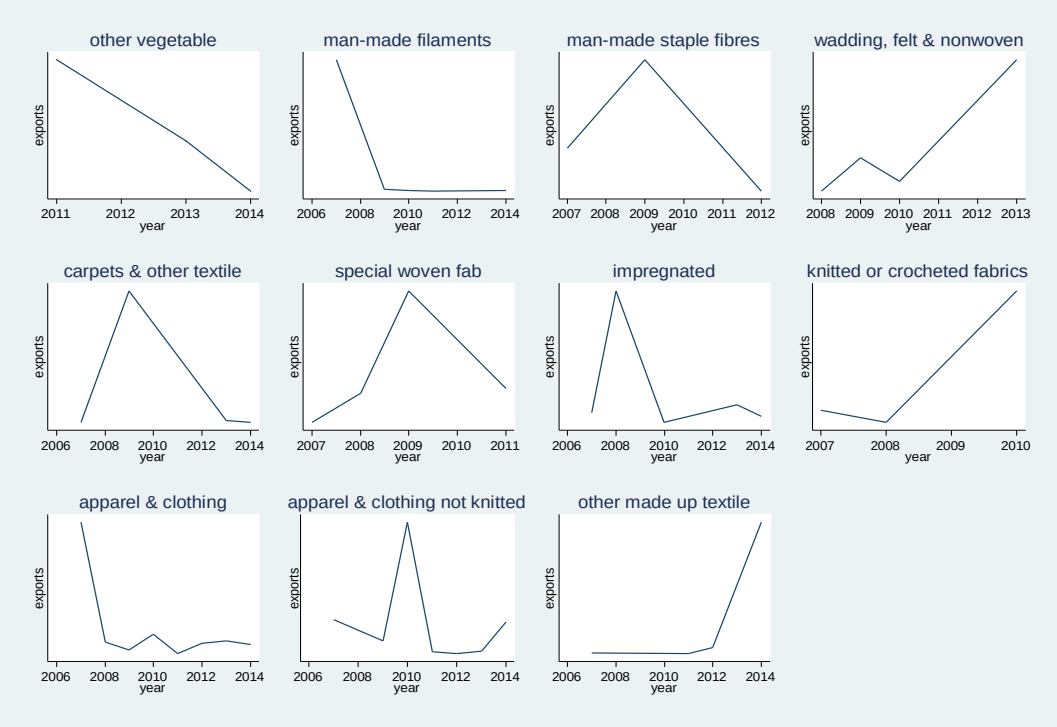
Figure 2.6: Philippine exports of Garments and Textiles to ASEAN (exports value in million USD)



Source: Foreign Trade Statistics, Philippine Statistics Authority

Figure 2.7: Philippine exports of Garments and Textiles to APEC (exports value in million USD)

© 2017 Global Journals Inc. (US)



Source: Foreign Trade Statistics, Philippine Statistics Authority

Figure 2.8: Philippine exports of Garments and Textiles to EU (exports value in million USD)

Chapter III

III. Data

a) Enterprise Survey Dataset

The paper uses a nationally representative firm level data of the World Bank enterprise survey extracting only the garment firms. A total of 231 samples of garment firms are pooled from the survey years of 2009, 2014, 2015 and 2016, see Table 3.1.

Table 3.1: Number of Establishments Surveyed

Survey Year	Number of Garment Firms	% Share
2009	104	45.0
2014	14	6.1
2015	67	29.0
2016	46	19.9
Total	231	100

Source: World Bank Enterprise Survey Dataset

Table 3.2 shows that many of the garment firms (47.2%) still import raw materials directly and indirectly from the other countries instead of sourcing it domestically. This adds to some other factors explaining why textile industry is not expanding despite the country's abundance in fiber such as abaca, silk etc. Most garment firms in the country prefer to import raw materials because it is cheaper to use imported raw products than the ones that are domestically supplied by the textile manufacturers in the country.

Table 3.2: Share of Garment Firms that Import Inputs

Type of Importing Activity	% Share of Garment Establishments
Direct import	31.6 %
Indirect import	15.6 %
Total	47.2 %

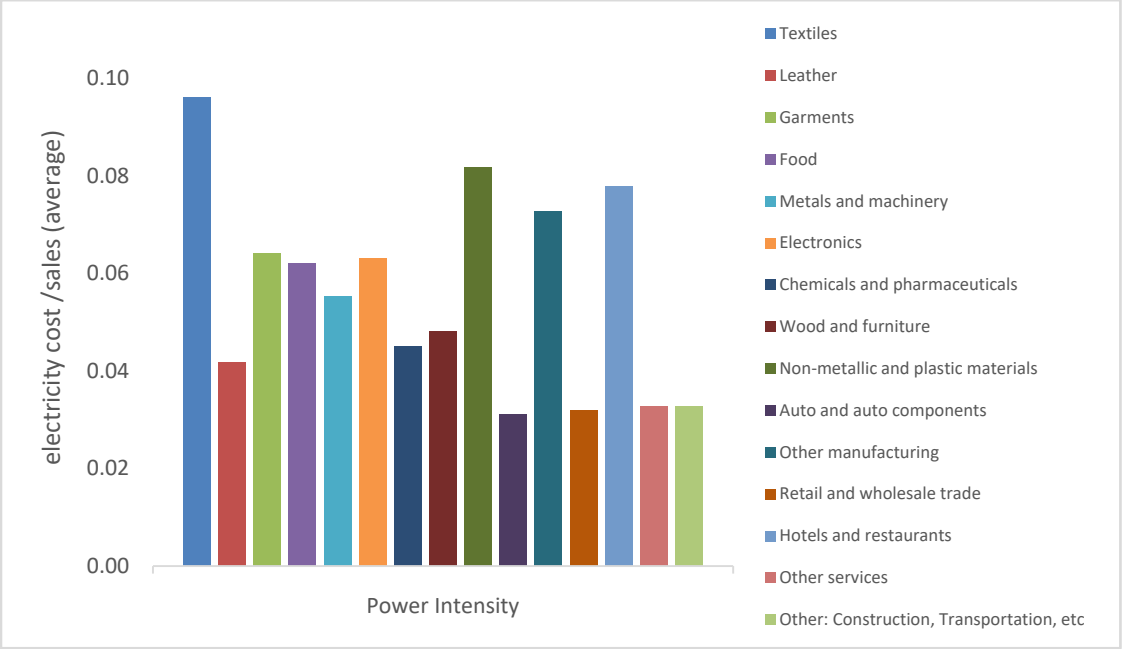
Source: World Bank Enterprise Survey Dataset

According to the interview conducted with the director of the Garment Business Association, it is more expensive to produce textiles in the Philippines relative to other countries because of the high cost of electricity in the Philippines. The industry is heavily dependent on electricity in their production of synthetic fibers such as polyester and lycra which are chemically processed using specialized machines. These fibers are the ones usually used in the manufacturing of popularly known us jeggings or skin-tight denim jeans that are worn by most women in the Philippines and other countries especially in the US.

Figure 2.1 shows how power intensive the textile industry in comparison with the other sectors. Using the data on electricity cost from the survey, an indicator for power intensity is calculated by the ratio of the given electricity cost to the firm's reported sales. The calculated ratio gives the estimate of electricity cost for every 1 dollar sale of the firm. The figure below provides the mean power intensity of all firms within each of the given sectors in the manufacturing sector and some other services sector. As illustrated in the figure, textile

© 2017 Global Journals Inc. (US)

has the highest mean power intensity of 0.10 which means that for every 1 dollar sale of the average textile firms, 10 cents is invested for electricity. This is higher compared to the average mean power intensity of all firms across sectors which is 0.06. It is also higher than the other sectors having above average power intensity estimate which are also expected to be power intensive like the non-metallic and plastic materials (0.08) and hotels and restaurants (0.08).

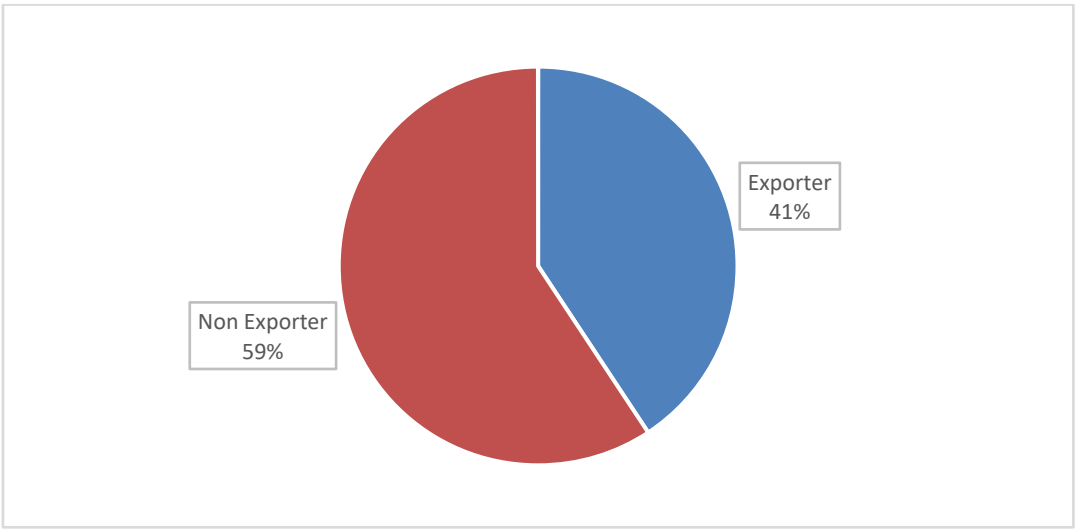


Source: World Bank Enterprise Survey Dataset

Figure 3.1: Average Firm Power Intensity by Sector

b) Exporter and Non-Exporter Firms

Looking now into the overall characteristics of the combined samples of the textile and the garment firms, the dataset tells us that there are more non exporter firms (59%) than the exporter firms (41%). See left side of the Figure 3.2. In this paper, the exporter firms are identified as those firms having a share of exports sales from the firm's total sales while the non-exporter firms are those that totally do not report sales from exports. Figure 3.2 left side shows that although the division between exporter and non-exporter firms is nearly equal, the sample is still dominated by non-exporter firms which means that most firms cater to the domestic market.



Source: World Bank Enterprise Survey Dataset

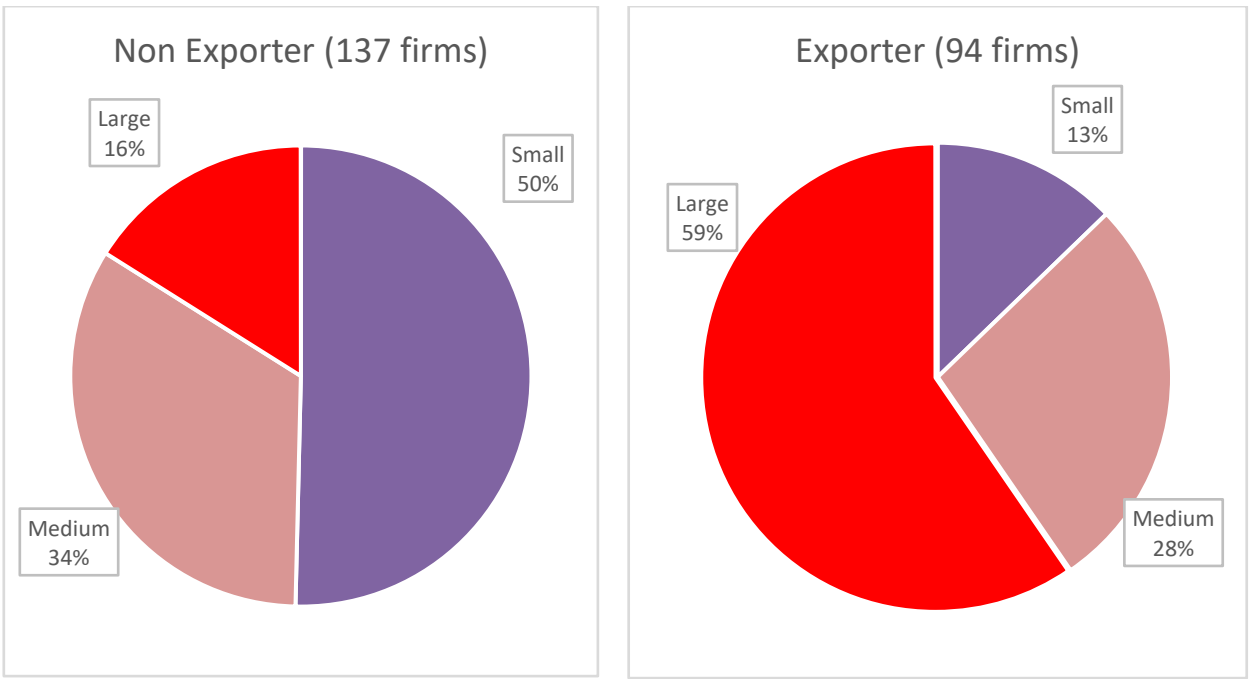
Figure 3.2: Exporter and Non-Exporter Garment Establishments

© 2017 Global Journals Inc. (US)

c) *Firm size as indication of exporting activity*

Examining more closely in terms of the distribution of the size of the firms separately in each exporter and non-exporter firm groups, we see in the Figure 3.3 that the non-exporters are dominated by small firms. 50% of the non-export firms are small firms. On the other hand, exporter firms are dominated by large firms, 59%. These dominances are illustrated by the huge portions of small firms and large firms in the pie chart at the left and right side of the Figure 3.3, respectively. The charts suggest that firm size can be an indication of exporting activity because small-sized and medium-sized firms are lesser in number in the exporter firm group than non-exporter firm group, whereas, large-sized firms are greater in number in the exporter firm group than non-exporter firm group.

Moreover, since firm size is categorized in terms of firm's number of employees, we can infer from the data presented in the chart below that the exporter firms employ more workers than the non-exporter firms because they are dominated by large firms. Large firm is defined as those firms having at least 100 employees and over. Medium firms have at least 20 to 99 number of employees. Small firm are those that have less than 20 employees. Therefore, large textile and garment firms are already established and more stable to employ more workers than the small and medium firms. Furthermore, they have the capacity to venture into export market more than the small and medium firms.



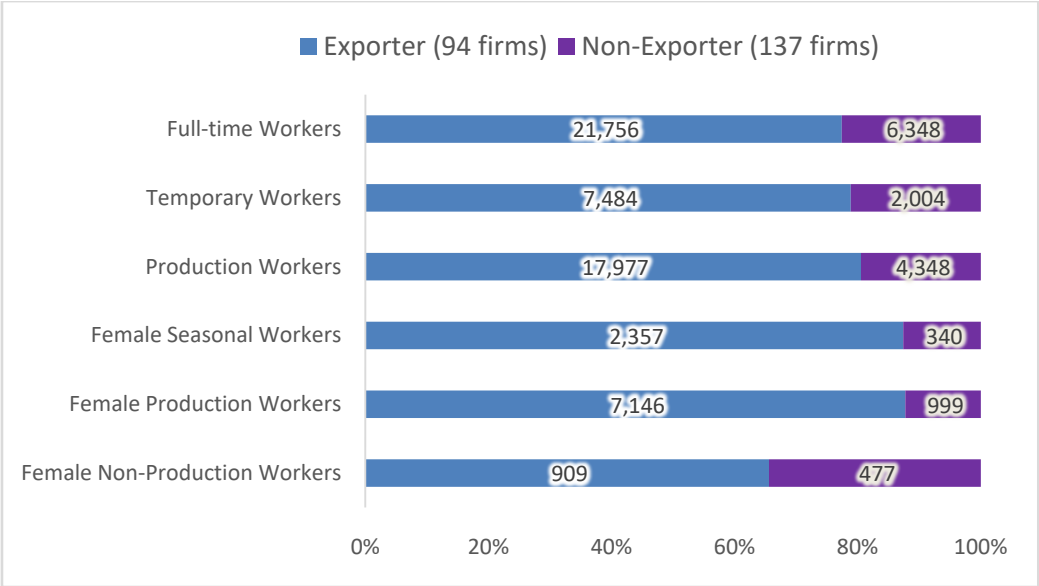
Source: World Bank Enterprise Survey Dataset

Figure 3.3: Firm Size of Exporter and Non-Exporter Firms

d) *Employment in Exporter vs. Non-Exporter Firms*

Exploring directly the employment composition of the exporter and non-exporter firms, Figure 3.4 shows the share of exporter and non-exporter firms to the total number of workers in the sample data. The figure below presents the sum of firms' workers distinguishing between exporter and non-exporter firms and showing comparison of their respective employment contribution. Across all types of workers such as full-time, temporary, full-time adjusted for temporary, production, female seasonal and female production workers, exporter has higher share of employment than non-exporters for all types of workers. This supports the argument mentioned above that exporter firms employ more workers than non-exporter firms. About 65%-85% share to the total employment are employed by exporter firms from full-time to temporary and seasonal workers.

© 2017 Global Journals Inc. (US)



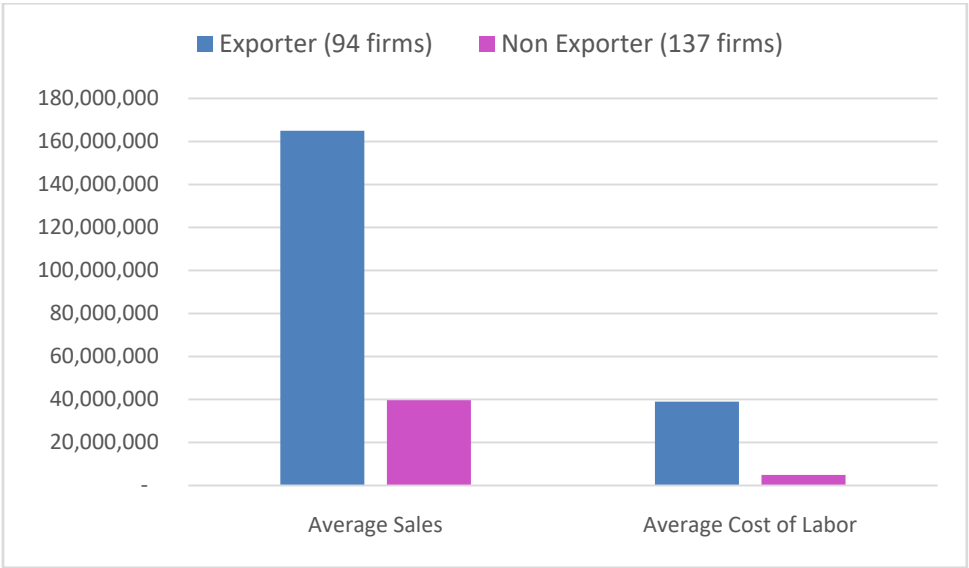
Source: World Bank Enterprise Survey Dataset

Figure 3.4: Workers in Exporter and Non-Exporter Firms
(Total number and % share)

e) Firm Performance of Exporter vs. Non-Exporter Firms

Presenting more of the difference between exporter and non-exporter in terms of firm performance and economic contribution, Figure 3.5 shows comparison of exporter and non-exporter in terms of their average sale and labor intensity. Despite smaller in number, exporter firms show greater average sales than the non-exporter firms. This is due to the fact that they have a bigger market as compared to the non-exporter which basically caters the domestic market. This leads us into assumption that however smaller exporter firms in number as compared with the non-exporter firms in our given sample, the exporter firms perform better and contributes to employment higher than non-exporters.

This is further proven by labor intensity indicator whereas exporter firms seem to be more labor intensive than the non-exporter firm based on the average cost of labor. The average cost of labor is higher in exporter firms which suggest greater employment contribution as exporter firms invest largely on labor in their production. The labor cost data covers wages, salaries and bonuses that firms provide to the workers. Higher cost of labor and number of workers indicates greater employment contribution.



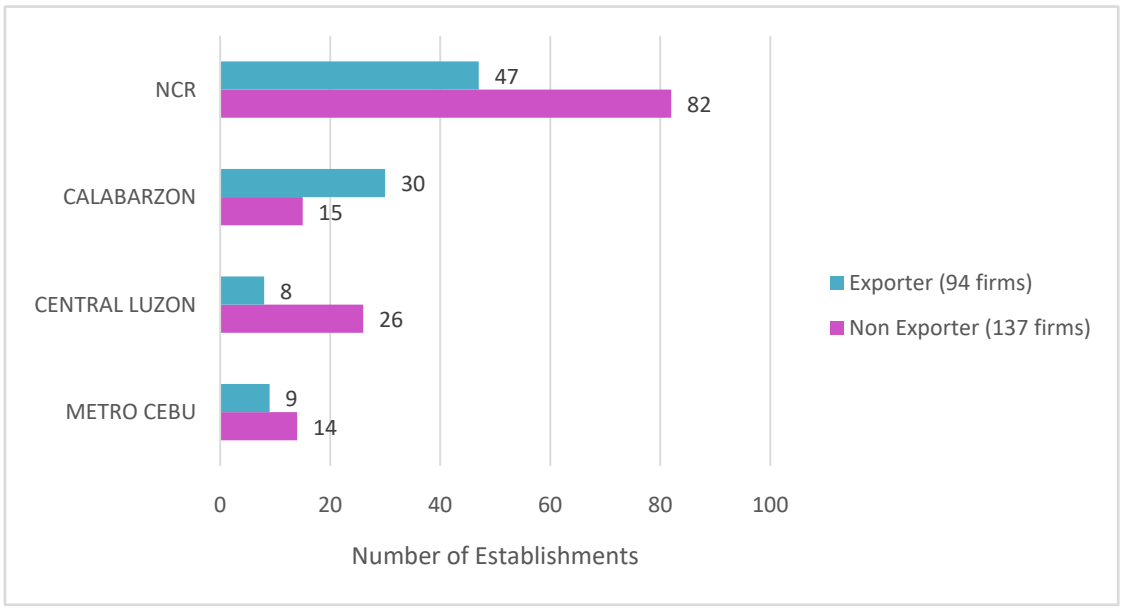
Source: World Bank Enterprise Survey Dataset

Figure 3.5: Average Sale of Exporter and Non-Exporter Firms

© 2017 Global Journals Inc. (US)

f) Location: Exporter vs. Non-Exporter Firms

In locating where the garment and textile manufacturers operate across the country, Figure 3.6 shows that the majority of the establishments are found in the National Capital Region (NCR). The figure shows the distribution of firms' location distinguishing between exporter and non-exporter firms and it shows that exporting and non-exporting firms are also highest in NCR. The other garment and textile manufacturers are located in CALABARZON, Central Luzon and Metro Cebu. We can observe from the figure that non exporters are greater in number than the exporters across all regions except for CALABARZON wherein there are more exporter firms than non-exporter firms.



Source: World Bank Enterprise Survey Dataset

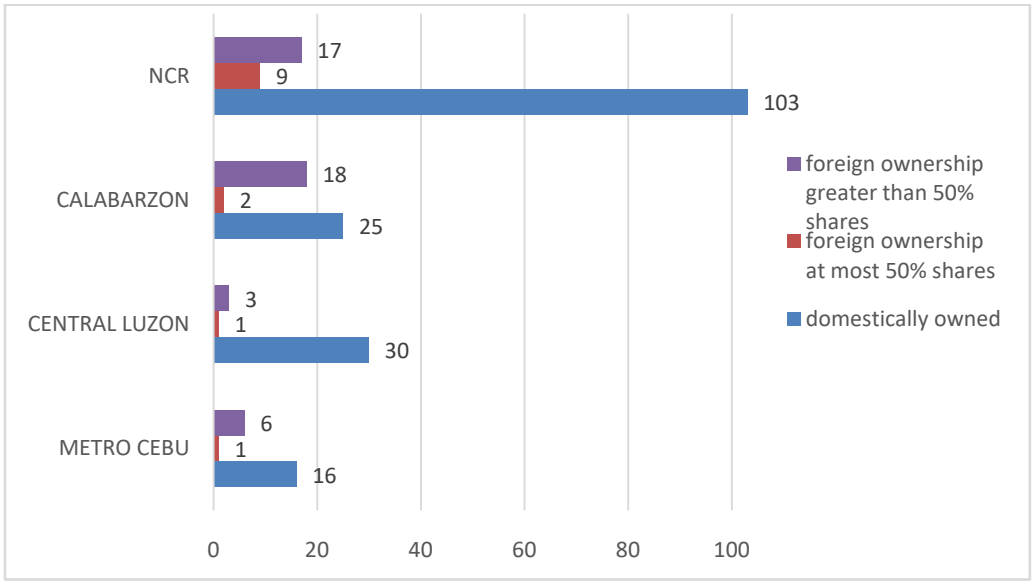
Figure 3.6: Location of Garment and Textile Firms, Exporter and Non Exporters

g) Foreign Ownership

Figure 3.7 shows that foreign owned firms are mostly located in the CALABARZON and NCR. Fortunately for the foreign investors, garment industry is not included in the Philippine Foreign Investment Negative List which would mean that there are no restrictions for interested foreign investors of to invest in the Philippine garment manufacturing. One factor that might explain the preference of the foreign owned firms to operate in CALABARZON is the presence of the Export Processing Zone in Cavite where they can enjoy tax and duties exemptions. Aside from tax and duties exemptions, Export Processing Zones (EPZs) are developed areas in which transportation, power and communication facilities are readily available.

There are four EPZs in the Philippines located in the areas of Bataan, Mactan, Baguio City and Cavite. The garment and textile manufacturers has 30% share to the total enterprises of the four EPZs (Remedio, 1996). The greatest share comes from the Bataan EPZ with 43.5% share. This is followed by Baguio City (42%), Cavite (30%) and Mac tan (16%). Since EPZs are established to attract local and foreign investments in export-oriented industries like the garment sector, it is expected that EPZs would bring benefits such as creation of jobs, transfer of technology, growth of foreign exchange earnings and better competitiveness.

© 2017 Global Journals Inc. (US)



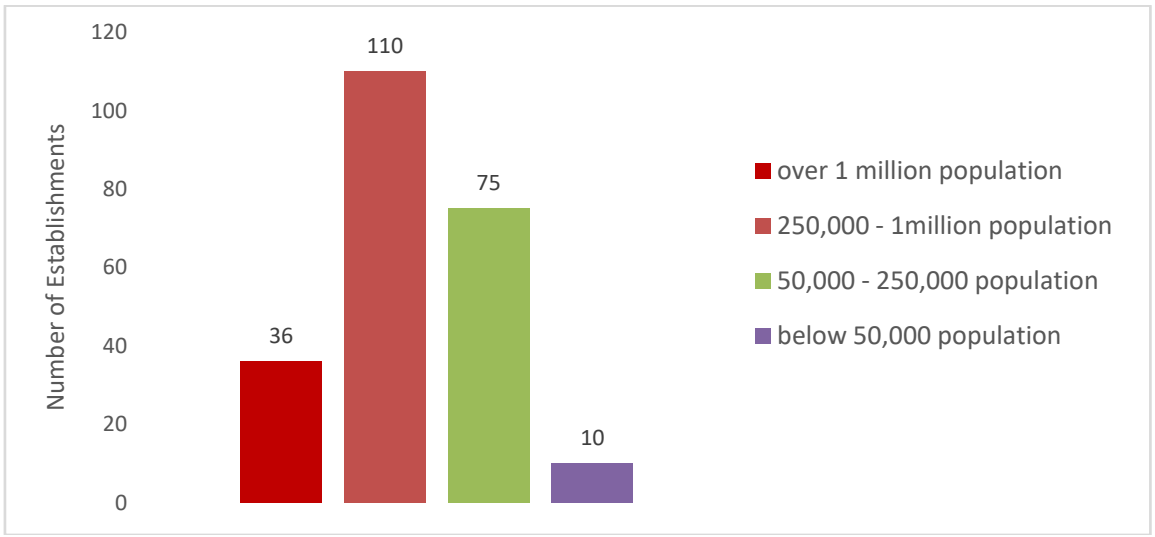
Source: World Bank Enterprise Survey Dataset

Figure 3.7: Foreign and Domestic Ownership (Number of Firms)

Export Processing Zones and Population

In addition to the developed infrastructure and investment incentives, the supply of quality labor in the areas close to the EPZs has been a consideration to the foreign investors particularly in Bataan and Cavite where some of the production process of garment manufacturing like washing, hemming and embroidery are contracted out to the workers in the community close to the zones (Remedio, 1996). This may lead us into question of whether population matters to firm's decision in putting up their business.

Figure 3.8 shows that majority of the establishments (110) are located in the cities with population of over 250,000 to 1 million. Moreover, in the most populous cities with population of over a million people, there can be found 36 establishments operating. This is numerous volume of establishments considering the congestion problem especially in Metro Manila where other businesses, offices, condominiums and migrants are also located. However, operating in a populated area could bring both negative and positive externalities. Garment factories operating in NCR could add to congestion but at the same time could be beneficial to the communities surrounding the factories if they utilize labor surplus of the community.



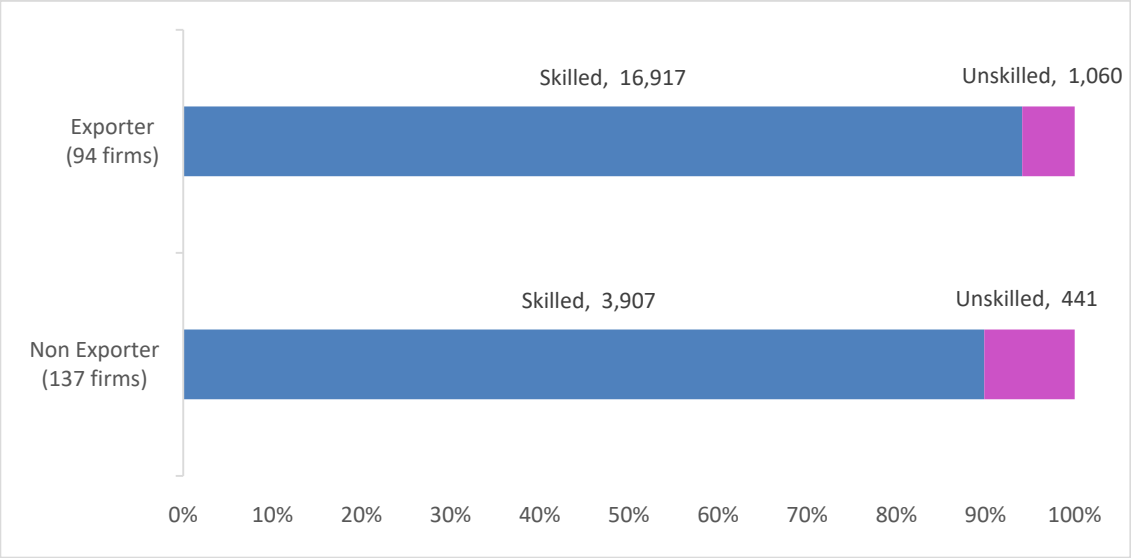
Source: World Bank Enterprise Survey Dataset

Figure 3.8: Establishments in Different Cities Classified by Population

© 2017 Global Journals Inc. (US)

Skilled and Unskilled Worker: Exporter vs. Non-Exporters

When it comes to the skills type of the labor force that the industry attracts, both the exporter and non-exporter firms target more of the skilled in the labor force than unskilled. Figure 3.9 shows the skilled and unskilled production workers shares in the exporter and non-exporter firms. The figure illustrates higher share for skilled production workers especially for exporter firms because they are required to follow international standards.



Source: World Bank Enterprise Survey Dataset

Figure 3.9: Skilled and Unskilled Production Workers in Exporter and Non-Exporter Firms (Total number and % share)

Chapter IV

IV. Empirical Analysis

a) Model

The analysis on the employment opportunities and export earnings in the Philippine garment industry follows a model that looks into the factors affecting employment generation of the industry. The model would have a dependent variable as the number of workers and independent variables namely firms' export shares to total share, labor intensity indicator and population growth. The model controls for firm size (small, medium and large), firm location (NCR, CALABARZON, Central Luzon and Metro Cebu) and survey periods (2009, 2014, 2015 and 2016). The regression analysis will be performed for different types of workers as the dependent variables such as full-time, temporary, production, skilled production, unskilled production, female production and female seasonal workers.

$$lnY = \alpha_0 + \alpha_1 expsh + \alpha_2 lnlaborintensity + \alpha_3 lnpopgrowth + \boldsymbol{X\beta} + \varepsilon \quad (1)$$

where: $X\beta = Firm\ Size, Region\ FE, Year\ FE$

Variables: Dependent, Independent and Control

Table 4.1 gives the description of the variables used in the regression model. The dependent variables are the firms' reported number of workers at the end of the fiscal year which are expressed in natural logarithmic forms. For the independent variables, export share is expressed in percentage while labor intensity and population growth are expressed in natural logarithmic forms. Export share is the firm's share of exports sales in the firm's total annual sales in a fiscal year. It covers sales from direct and indirect exports. Labor intensity variable is the ratio of total cost of labor to the total annual sales multiplied by 100. The labor cost variable covers wages, salaries and bonuses. Population growth variable is the population growth from 2010 to 2015 which is taken from the population census data and merged with World Bank enterprise survey data. The population growth variable is generated to give population information at the regional level where the establishments are located (NCR, CALABARZON, Central Luzon and Metro Cebu). For the control variables namely firm size, region/location and survey period, the base dummies are small-sized firm, CALABARZON and 2009, respectively.

© 2017 Global Journals Inc. (US)

Table 4.1: Variable Name and Description

Variable Name	Description
Dependent Variables	
lnfulltime	Log of number of full-time workers
lntempw	Log of number of temporary workers
lnprodw	Log of number of production workers
lnskiprodw	Log of number of skilled production workers
lnunskiprodw	Log of number of unskilled production workers
lnfemaleprod	Log of number of female production workers
lnfseasonal	Log of number of female seasonal workers
Independent Variables	
expsh	Export share in Total Firm's Sale
lnlaborintensity	Log of total labor cost/total sale
lnpopgr_10_15	Population growth 2010-2015 at each region NCR, CALABARZON, Central Luzon and Metro Cebu
Control Variables	
1.fsize	Small-sized firm *(base dummy)*
2.fsize	Medium-sized firm
3.fsize	Large-sized firm
1.reg	CALABARZON *(base dummy)*
2.reg	Central Luzon
3.reg	NCR
4.reg	Metro Cebu
2009.year	2009 survey year *(base dummy)*
2014.year	2014 survey year
2015.year	2015 survey year
2016.year	2016 survey year

b) Summary Statistics

The World Bank enterprise survey for the Philippines has 231 unique firm identification for garment firms which is the unit of observation for this regression. After performing data cleaning in the survey dataset, Table 4.2 gives the summary statistics of the variables used in estimating the model number of workers as a function of exporting activity by the firm, firm's labor intensity, population as an indicator labor surplus in a community, firm size and firm location.

In the data, full-time employees are defined as all paid employees that are contracted for a term of one or more fiscal years and/or have a guaranteed renewal of their employment contract and that work up to 8 or more hours per day. Production workers are workers (up through the line supervisor level) engaged in fabricating, processing, assembling, inspecting, receiving, storing, handling, packing, warehousing, shipping (but not delivering), maintenance, repair, product development, auxiliary production for plant's own use (e.g., power plant), recordkeeping, and other services closely associated with these production operations. Employees above the working-supervisor level are excluded from this item. Skilled workers are those that have some special knowledge or (usually acquired) ability in their work. A skilled worker may have attended a college, university or technical school. Or, a skilled worker may have learned his skills on the job. Unskilled on the other hand are those who do not have special training, education, or skill to perform their job. Temporary and seasonal are those who are paid short-term (i.e. for less than a fiscal year) employees with no guarantee of renewal of employment contract) and work 40 hours or more per week for the term of their contract.

Table 4.2: Summary Statistics

Variable	Number of Observations / Firms	Mean	Standard Deviation	Min	Max
fulltime	231	121	271	2	2820
tempw	228	41	125	0	1100
prodw	222	100	238	1	2680
skiprodw	222	93	234	0	2680
unskiprodw	222	6	28	0	380
femaleprod	100	81	267	0	2400
fseasonal	55	49	124	0	800
expsh[3]	230	35.33	46.46	0	100
laborintensity	213	27.11	19.15	0.61	87.32

© 2017 Global Journals Inc. (US)

popgr_10_15	232	1.54	0.81	-0.09	4.52
fsize	231	2	1	1	3
year	231	2012	.15	2009	2016

Robustness Check – Region Fixed Effects and Year Fixed Effects Estimators

The empirical analysis checks for robustness of the model to conclude that garment industry, in general, brings employment opportunity. Robustness check also illustrates how certain is regression coefficient estimates when the regression specification is modified by adding or removing one or more regressors. In this paper, region fixed effects and year fixed effects were used as robustness check. This would mean removing the effects of location and the year when the survey was conducted.

c) Regression Result

i. *Regression Result for Different Types of Workers*

The regression table below gives the result of the relationship of the variable of interests such as export share, labor intensity and population growth to the different types of workers in the dependent variable (Table 4.3). For the first variable of interest, the result gives positive and significant estimates of the *export share* variable to number of workers *across all types of workers*. This proves that firms entering into exporting market bring positive effect to employment of all status, be it full-time, temporary, production, skilled, unskilled, female production and female seasonal workers, as shown by the positive and highly significant coefficients in the table below. Firms venturing into exports create bigger market which results to greater sales out of exports. This will eventually turn to job generation expecting that the firm affords to employ more workers to produce more output that are to be exported. This takes into consideration that their market is quite big relative to non-exporter firms.

Labor intensity also gives significant and positive results to most of the regression models *except for temporary workers, unskilled production workers and female seasonal workers*. Based on this result, labor intensive firms seem to keep more full-time workers and do not encourage hiring temporary, seasonal and unskilled workers. Therefore, workers seeking for employment stability are suggested to look for work in firms that are highly labor intensive because they seem to considerably invest in skilled workers that will eventually become full-time workers making sure of their job security. Also production workers are important in labor intensive firms since they undertake majority of the tasks of the entire operation. Again, labor intensity is measured as the ratio of cost of labor to firm's total annual sales. This means that higher value translates to higher cost of labor borne by the firm which is essentially higher investments to labor for their production of garments.

After applying robustness check, population growth do not seem to provide significant coefficients. Firms tend to be selective when it comes to skills type of the labor supply in the area where the establishment is located. It would be most beneficial to the firm if the area is composed of labor force having the skills needed to perform the job efficiently. This refers to trained individuals having the required skills to perform tasks relevant to manufacturing of garments. This saves the firm from providing training to the hired workers or at the very least, firms could provide training to the hired workers to a lesser extent.

On the control variables, firm size dummy variables have highly significant results too and this supports the statistics presented in the previous chapter that firm size is also an indication of employment generation. The regression result gives positive significant coefficients of the medium and large firm size dummies to all models which means that medium and large firm size are more likely to create jobs as compared with small size firm. An exemption is observed from the relationship of medium size firm to unskilled production workers which does not give significant coefficient. But generally, this recommends creating a program that will help the firm move up to becoming large firm because of its potential outcome. It could suggest to continue an implemented government program called "Share Services Facilities" aiming at levelling up small scale firm to medium scale and eventually large enterprise by providing them the needed equipment in processing their locally produce goods.

[3] In some paper, this is defined as export intensity

© 2017 Global Journals Inc. (US)

Table 4.3: Regression Result, Dependent Variable: Different Type of Workers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	lnfulltime	lntempw	lnprodw	lnskiprodw	lnunskiprodw	lnfemaleprod	lnfseasonal
expsh	0.00268**	0.00940***	0.00412***	0.00457***	0.00140	0.00676***	0.0131**
	(0.00111)	(0.00255)	(0.00128)	(0.00136)	(0.00338)	(0.00248)	(0.00486)
lnlaborintensity	0.120**	-0.0786	0.167***	0.208***	0.0347	0.165*	0.287
	(0.0484)	(0.111)	(0.0562)	(0.0598)	(0.162)	(0.0919)	(0.282)
lnpopgr_10_15	-0.0497	-0.0943	-0.0576	-0.0771	0.180	-0.298*	-0.00730
	(0.0514)	(0.130)	(0.0589)	(0.0624)	(0.192)	(0.158)	(0.222)
2.fsize – medium	1.089***	0.611**	1.148***	1.097***	1.193**	1.205***	0.697
	(0.107)	(0.260)	(0.124)	(0.132)	(0.470)	(0.233)	(0.495)
3.fsize –large	2.999***	2.231***	2.952***	2.861***	2.193***	2.986***	1.917***
	(0.122)	(0.300)	(0.142)	(0.150)	(0.509)	(0.282)	(0.562)
Observations	211	119	203	202	56	90	43
R-squared	0.840	0.603	0.807	0.784	0.487	0.759	0.598
Year FE	Y	Y	Y	Y	Y	Y	Y

Standard errors inparentheses
**** p<0.01, ** p<0.05, * p<0.1*

d) Regression Result using Indirect Export

The regression result above follows the model with total export share in one of the variables of interest. Table 4.4 shows regression result same as the baseline model above except that export shares cover only the export shares from the *indirect export* (2). The variable indirect export share is positive and significant to employment to all models except to unskilled and females seasonal production workers.

$$lnY = \alpha_0 + \alpha_1 expshind + \alpha_2 lnlaborintensity + \alpha_3 lnpopgrowth + \boldsymbol{X\beta} + \varepsilon \quad (2)$$

where: $\boldsymbol{X\beta} = \boldsymbol{Firm\ Size, Region\ FE, Year\ FE}$

Indirect export means that a third party is involved in the exporting activity. In the case of garment sector, this could refer to export consignment or a trading transaction involving a contract arrangement between the exporter firm and a distributor. The distributor is the one who handles the selling of goods for the exporter firm that is a common practice in the garment industry. Essentially in a consignment arrangement, the payment is sent to the exporter only after the goods have been sold by the distributor to the end customer. The goods that were not sold after an agreed upon time period can be returned to the exporter at a cost. Therefore, exporting on consignment in this sense is uncertain since the exporter is not guaranteed with any payment. On one hand, if consignment is successful in the sense that the supply of clothes were always sold completely. Selling on consignment basis is also becomes competitive among exporters when it comes to availability and faster delivery of the goods.

In the Philippines domestic market, clothing consignors sell mostly women's garments along with accessories, belts and handbags and its becoming ideal for start-up entrepreneur because start-up costs are small. Interested entrepreneurs just need a shop and the display furnishings like clothes racks, hangers and shelves to come up with a little clothing store. A typical store like this can be found many in Divisoria and some in the provinces. But for a start-up entrepreneur to get consignment from any stores, there's a need to establish a rapport first. Especially for export consignment, an exporter firm needs to partner with a reputable and trustworthy distributor.

There are shops or warehouses of clothes in the Philippines that are direct from the manufacturers of well-known brands where start-up of RTW get their supplies of clothes at small capital. These warehouses sell export overrun clothing which are branded with intact labels and hang tags. The clothes are export quality made from various factories in the countries and are outsourced by international clothing brands. These surplus items being sold at the warehouses are not factory rejects but are excess production items. Some of the items also come from Bangladesh, Cambodia, Vietnam, China, Laos Korea and Thailand. Resellers and distributors can get a consignment at a minimum of 10 pieces for a price as low as Php 250.00 for RTW and Php150.00 – Php180.00 for overruns. For wholesale, the minimum consignment is worth Php10,000.00 of assorted items but the bigger the quantity of purchases, the lower the price that you can get. The policy for consignment is that you only pay for your purchases and nothing more. If for whatever reason, you are

© 2017 Global Journals Inc. (US)

unable to sell the products in a week's time, you can return all unsold items and can be exchanged for other / new items in stock meaning there's no refund but there's unlimited number of exchange items as the stocks change from time to time depending on the availability. The items vary from T-shirts, blouses, polo shirts, jeans, shorts, dresses, undergarments and jackets. The brands are Abercrombie & Fitch, Aeropostale, Hollister, American Eagle, Zara, Mango, Forever 21, Levis, H&M, Nike, Guess, Victoria's Secret, Old Navy, Gap, Ann Taylor, Quiksilver, Roxy, Marks & Spencer, Ralph Lauren, Hurley, No Boundaries and Ripcurl.

Table 4.4: Regression Result, Indirect Export

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	lnfulltime	lntempw	lnprodw	lnskiprodw	lnunskiprodw	lnfemaleprod	lnfseasonal
expshind	0.00351***	0.0101***	0.00495***	0.00547***	-0.000320	0.00714***	0.0140**
	(0.00118)	(0.00264)	(0.00137)	(0.00144)	(0.00408)	(0.00260)	(0.00586)
lnlaborintensity	0.111**	-0.0482	0.161***	0.203***	0.0405	0.160*	0.331
	(0.0485)	(0.113)	(0.0567)	(0.0602)	(0.166)	(0.0933)	(0.308)
lnpopgr_10_15	-0.0487	-0.118	-0.0512	-0.107	0.434	-0.157	-0.151
	(0.0725)	(0.228)	(0.0833)	(0.0880)	(0.279)	(0.209)	(0.356)
2.fsize – medium	1.069***	0.535**	1.117***	1.059***	0.987*	1.190***	0.604
	(0.107)	(0.265)	(0.126)	(0.134)	(0.501)	(0.239)	(0.526)
3.fsize – large	2.970***	2.221***	2.923***	2.820***	2.078***	3.006***	1.860***
	(0.121)	(0.298)	(0.141)	(0.150)	(0.514)	(0.285)	(0.599)
Observations	211	119	203	202	56	90	43
R-squared	0.845	0.612	0.810	0.788	0.567	0.766	0.608
Region FE	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y

Standard errors in parentheses
**** p<0.01, ** p<0.05, * p<0.1*

e) Regression Result Adding Import Variable

Indirect export is therefore favorable to employment creation because there are many agents involved in the exporting activity. As mentioned above that some of the production items being sold in the warehouses come from other countries such as Bangladesh, China, Thailand etc., I incorporated import variables to the baseline model (3) to see its role in the employment generation, see Table 4.5. The variable for import are dummy variables for direct and indirect imports of raw materials. The regression gives positive and significant results for direct imports in full-time, temporary, production and skilled workers. This suggests that trading activities encourage employment as proven by positive and significant coefficients of both the exporting and importing indicators. Moreover, as mentioned in the previous chapter that majority of the firms imports raw materials because it less costly for most of them than sourcing inputs domestically, it therefore confirms that importing raw materials is beneficial to both the industry and labor force.

$$lnY = \alpha_0 + \alpha_1 expsh + \alpha_2 lnlaborintensity + \alpha_3 lnpopgrowth + \boldsymbol{X\beta} + \varepsilon \quad (3)$$

where: $\boldsymbol{X\beta} = \boldsymbol{Firm\ Size, Import, Region\ FE, Year\ FE}$

Table 4.5: Regression Result, Importing Activity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	lnfulltime	lntempw	lnprodw	lnskiprodw	lnunskiprodw	lnfemaleprod	lnfseasonal
expsh	0.00168	0.00635**	0.00321**	0.00337**	0.00222	0.00768**	0.00382
	(0.00133)	(0.00311)	(0.00157)	(0.00166)	(0.00433)	(0.00333)	(0.00660)
lnlaborintensity	0.122**	-0.0465	0.170***	0.216***	0.0241	0.159*	0.548*
	(0.0490)	(0.114)	(0.0576)	(0.0613)	(0.164)	(0.0939)	(0.320)

© 2017 Global Journals Inc. (US)

lnpopgr_10_15	-0.0362	-0.0793	-0.0407	-0.0950	0.399	-0.134	-0.0777
	(0.0728)	(0.229)	(0.0839)	(0.0889)	(0.283)	(0.212)	(0.345)
1.importd – direct	0.258*	0.538*	0.215	0.243	0.220	-0.0303	1.834**
	(0.134)	(0.314)	(0.159)	(0.169)	(0.409)	(0.322)	(0.761)
2.importd–indirect	0.0522	-0.128	-0.0320	-0.0309	0.0193	-0.263	0.197
	(0.124)	(0.297)	(0.150)	(0.158)	(0.432)	(0.283)	(0.721)
2.fsize – medium	1.061***	0.513*	1.119***	1.067***	0.832	1.237***	0.724
	(0.107)	(0.263)	(0.127)	(0.135)	(0.516)	(0.244)	(0.556)
3.fsize – large	2.924***	2.066***	2.889***	2.790***	1.782***	3.000***	1.223*
	(0.126)	(0.310)	(0.148)	(0.157)	(0.550)	(0.284)	(0.683)
Observations	211	119	203	202	56	90	43
R-squared	0.846	0.624	0.810	0.788	0.579	0.772	0.666
Region FE	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

f) Regression Result Adding Foreign Ownership Variable

As mentioned also in the previous chapter that foreign ownership matters, regression result in Table 4.6 below shows positive and significant result to employment especially the firms that have foreign shares of greater than 50% shares. This confirms that unrestricted foreign ownership in the garment industry could be beneficial because of its promising contribution to employment generation.

$$lnY = \alpha_0 + \alpha_1 expsh + \alpha_2 lnlaborintensity + \alpha_3 lnpopgrowth + \boldsymbol{X\beta} + \varepsilon \quad (4)$$

where: $\boldsymbol{X\beta Firm\ Size, Foreign\ Ownership, Region\ FE, Year\ F\ E}$

Table 4.6: Regression Result, Foreign Ownership

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	lnfulltime	lntempw	lnprodw	lnskiprodw	lnunskiprodw	lnfemaleprod	lnseasonal
expsh	0.00173	0.00813**	0.00259*	0.00298**	-0.000969	0.00660**	0.0114*
	(0.00121)	(0.00284)	(0.00140)	(0.00149)	(0.00393)	(0.00277)	(0.00621)
lnlaborintensity	0.120**	-0.0445	0.178***	0.219***	0.123	0.141	0.201
	(0.0483)	(0.112)	(0.0561)	(0.0600)	(0.152)	(0.0921)	(0.325)
lnpopgr_10_15	-0.0264	-0.0734	-0.0210	-0.0773	0.527**	-0.169	-0.0843
	(0.0720)	(0.226)	(0.0821)	(0.0875)	(0.258)	(0.205)	(0.371)
1.fowned>50%	0.349***	0.581*	0.494***	0.462***	1.140***	0.0806	0.488
	(0.133)	(0.329)	(0.152)	(0.163)	(0.414)	(0.327)	(0.573)
2.fowned<=50%	0.355**	-0.435	0.368*	0.363*	-0.127	0.732**	-0.463
	(0.180)	(0.350)	(0.205)	(0.219)	(0.516)	(0.361)	(0.726)
2.fsize	1.095***	0.639**	1.159***	1.104***	1.199**	1.165***	0.700
	(0.106)	(0.258)	(0.123)	(0.132)	(0.475)	(0.233)	(0.534)
3.fsize	2.907***	2.160***	2.841***	2.755***	1.974***	2.850***	1.766***
	(0.123)	(0.313)	(0.144)	(0.153)	(0.494)	(0.292)	(0.633)
Observations	211	119	203	202	56	90	43
R-squared	0.850	0.634	0.819	0.794	0.649	0.781	0.662
Region FE	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

© 2017 Global Journals Inc. (US)

Chapter V

V. Key Informant Interview

This section focuses on the Philippine garment industry's performance in significant historical events for the industry. The information written in this section draws mostly on the interview conducted with the director of the Garment Business Association in the Philippines. The summary of the information that were gathered from the interview are presented with supporting facts and data to validate the information gathered from the interview and to strengthen the significance of this paper.

Embroidery Act, 1961 – Early Development

It was in the 1960-1970 when the Philippines started to develop its potential in the apparel industry from a transformation of cottage-type production or home-sewn production of clothes and tailoring shops in the 1950s to the establishment of garment factories. The established garment factories did not only cater the domestic market but also expanded to venture into the export market. This openness to the foreign market was an opportunity brought about by the formulation of Embroidery Law enacted in 1961 under the Republic Act No. 3137. The law has made a way to the growth of the industry through its stated provisions that are favorable to the local embroidery apparel manufacturers. It states a conditionally tax-free import of raw materials such as textile and leather gloves. These imported raw materials are used in processing for the finished products that are exported as Philippine-made embroideries and apparel.

Relatively Low Labor Costs – Cost advantage

Besides the duty-free import incentives, local apparel manufacturers also enjoyed the relatively lower labor cost in which some US-owned garment companies were encouraged tobuild their factories in the country. Foreign companies were attracted by the relatively low labor cost in the Philippines (Austria, 1994).Big American factories operate their businesses in the country and took advantage on the cheap labor cost. The majority of the garments products that the country produced back then were children's wear and handkerchief which were mostly produced by a Filipino-owned company named Philippine Apparel that was eventually renamed to Philippine Lingerie. According to the director of the Garment Business Association, the company was one of the leading garment companies in the Philippines and it went along with the other top US garment companies in the Philippines such as GAP Inc. Wal-Mart, May Department Stores and Gelmart.

The basic minimum wage in the Philippines in the 1950s was low. Table 5.1 shows a historical data of the basic minimum wage in 1951-1989. It shows that the basic minimum wage range from Php 6.00 – Php 8.00 per day in the non-agriculture sector across all locations (Metro Manila and outside of Metro Manila). 1951-1989 minimum wage trend illustrates a slow increase for both Metro Manila and outside Metro Manila in non-agriculture sector. The minimum wage has been the same across locations in the 1950-1970 until after 1970 when a difference in the minimum wage in the Metro Manila and outside of Metro Manila started. However, there's not much difference in the minimum wage between Metro Manila and outside of Metro Manila. As observed in the table below, minimum wage from 1976 to 1988 has minimal difference. This would mean that location does not matter considerably to the garment manufacturers' operation during those years.

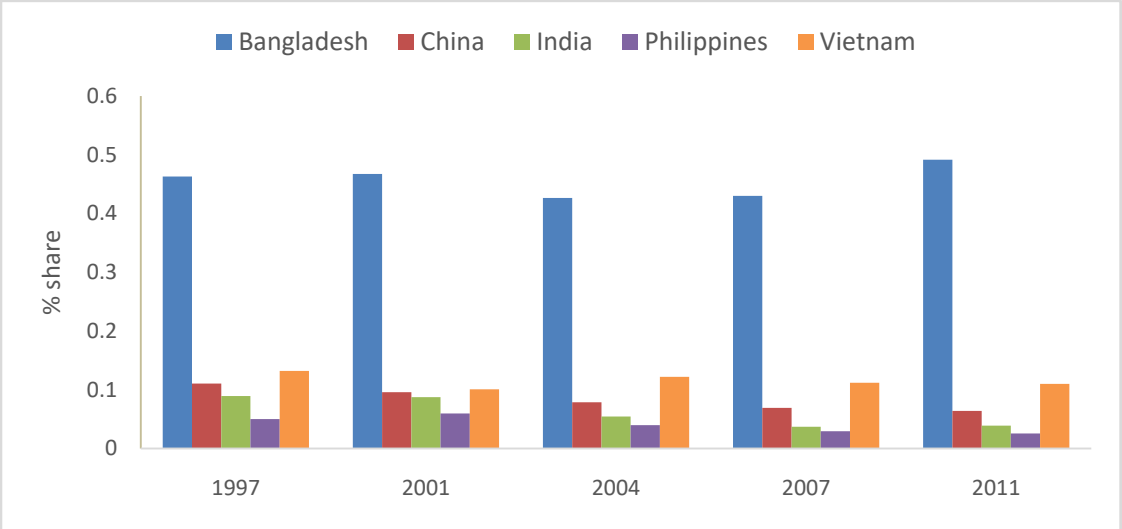
Table 5.1: Minimum Wage

Effective Date	Order / Act / Decree	Minimum Wage (in Php)	
		Metro Manila	Outside Metro Manila
4 Aug 1951	Minimum Wage Law (R.A. 602)	4	4
21 Apr 1965	Minimum Wage Law Amendment (R.A. 4180)	6	6
17 Jun 1970	Minimum Wage Law Amendment (R.A. 6129)	8	8
1 Jun 1976	Presidential Decree 928	10	9
1 Jul 1978	Presidential Decree 1389	11	10
1 Apr 1979	Presidential Decree 1614	13	12
18 Aug 1980	Presidential Decree 1713	14	13
1 Jan 1981	Presidential Decree 1753	18	17
6 Jul 1983	Wage Order No. 2	19	18
1 Nov 1983	Wage Order No. 3	20	19
1 Dec 1983	Wage Order No. 3	21	20
1 May 1984	Wage Order No. 4	32	21
16 Jun 1984	Wage Order No. 5	35	34
1 Nov 1984	Wage Order No.6	37	36
1 May 1987	Executive Order No. 178	46 / 41.50*	45 / 40.50*
1 Oct 1987	Executive Order No. 178	54 / 46*	53 / 45*
14 Dec 1987	Republic No. 6640	64	64
1 Jan 1988	Executive Order No. 178	54*	53*
1 Jul 1989	Republic Act No. 6727	89	89

** Applicable to workers in establishments with less than 30 employees and with paid-up capital of P500,00 or less*
Source: National Wages and Productivity Commission, Department of Labor and Employment
http://www.nwpc.dole.gov.ph/pages/statistics/stat_wage%20rates1951-89.html

© 2017 Global Journals Inc. (US)

The garment industry has therefore taken advantage of the incentives brought about by the Embroidery Law and the cheap labor cost in the 1960-1980. These have resulted to mass production of garments during those times. And even after that period, the Philippine garment production still went along with the world's strongest producers of apparel like China, India and Bangladesh in 1990s to early 2000s, see Figure 5.1. Exports value added[4] trend in selected years between 1997-2011 shows that Philippine production went along with biggest producers of garment like China, India, Bangladesh and Vietnam. However, the Philippines was a little farther away from Bangladesh when it comes to exports value added mainly because Bangladesh is a country driven mostly by export earnings from the garment production. They focus mostly on the production of two main products: woven (or ready-made) garments and knitwear. For a low-income country having a growth driven by the production and exports earnings from one sector only is very unusual (Muzzini and Aparicio, 2013). Other low-income countries have diversified in production.



Source: Export Value Added Database, World Bank

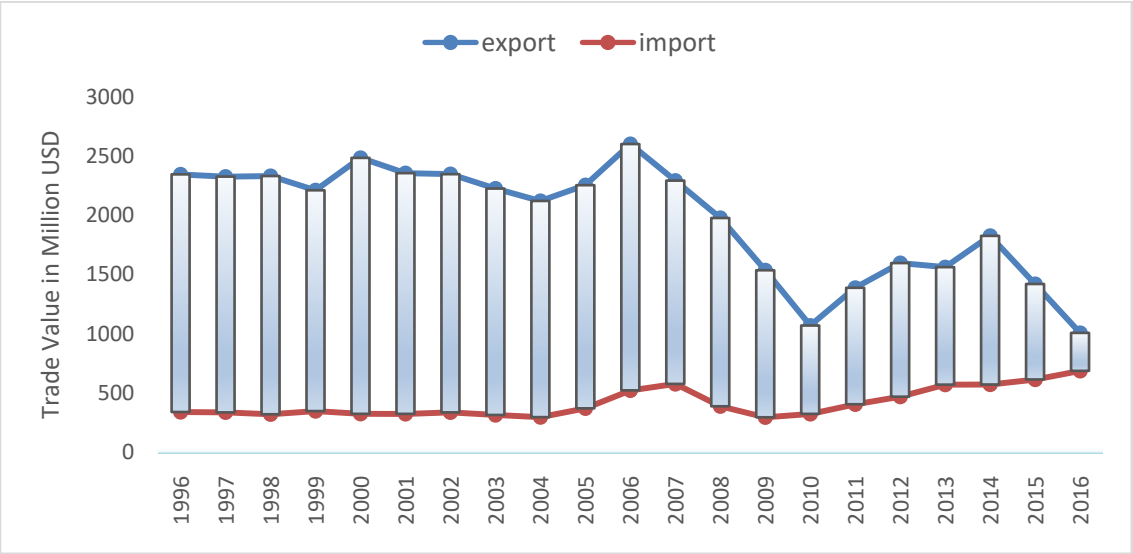
Figure 5.1: Exports Value Added, 1997-2011

a) Trade Trends in the Garment Sector

The trends for imports and exports of the Philippines garments in almost the same. During the transition of MFA to ATC, the trade trend is steady. Trade dropped after the MFA which goes to show that the end of the MFA greatly affected the trade in Philippine garment industry (see Figure 5.2). Although few years after, the industry is bouncing back as illustrated by the rising of trade trend starting 2011. Also the gap between exports and imports in the garment sector is declining over the years as illustrated the converging trend lines of exports and imports. This implies that the country trade on the garment is approaching trade deficit.

[4] Share of each garment sector in total exports based on the gross value of exports.

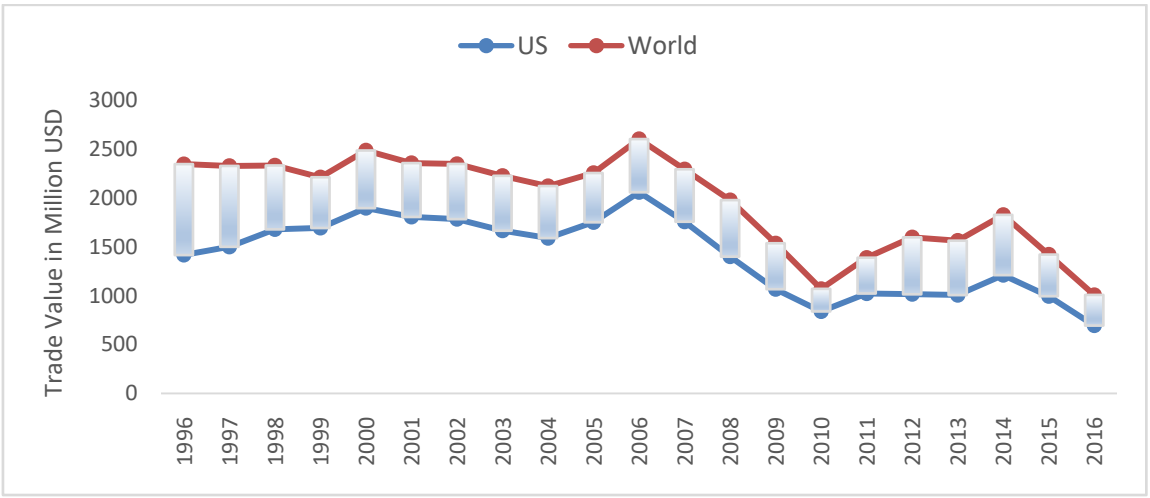
© 2017 Global Journals Inc. (US)



Source: UN COMTRADE

Figure 5.2: Philippine Garment Imports and Exports, 1996-2016

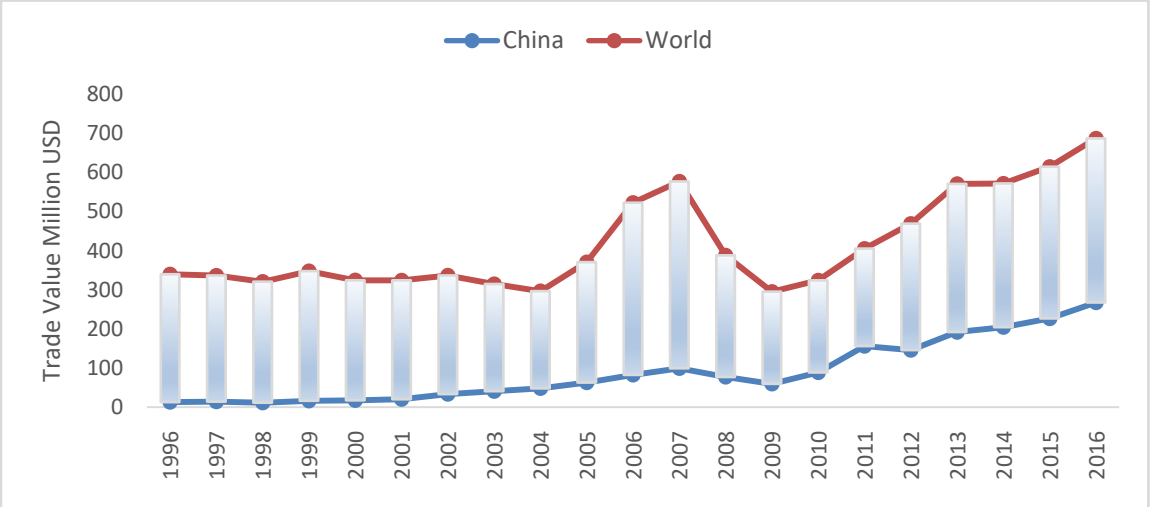
For the Philippine garment export trends to US and total exports to the world, the trends illustrate increasing trends during the MFA implying that the Philippines exporting activity during the MFA was flourishing. Its export trend to US and to the rest of the world has been the same. Figure 5.3 illustrates that a little gap between Philippine exports to US and to the world implying that almost everything that the garment industry has produced and exported goes to US. This further implies the significance of US market to the Philippine garment industry. After the MFA, Philippine exports to US and to the rest of the world have declined significantly. Looking at Philippine garment import trend from its leading importer China (Figure 5.4), the trend is the same with its world imports. During the MFA, the import trends were steady, went down after MFA and uprising again. This implies that the industry is reviving from the end of MFA and that it is still producing garments to be traded. This contributes to the fact that preferential treatment has played a key role in keeping the countries engaging in trading activities.



Source: UN COMTRADE

Figure 5.3: Philippine Garment Export to US, 1996-2016

© 2017 Global Journals Inc. (US)



Source: UN COMTRADE

Figure 5.4: Philippine Garment Imports from China, 1996-2016

b) Philippine Garment Industry during the Multi Fibre Agreement

When the US and EU have imposed import quota to developing countries, Philippine has not really affected undesirably. In fact, it has become advantageous for the Philippines that the basis of quota allocation was the historical exports of countries to US and Europe. US and Europe gave priorities to countries that had previously exporting to them and luckily for the Philippine garment manufacturer, our country was one of the countries that has been previously exporting to US and Europe. Also, this quota system set by the US and EU has somehow favors the Philippines especially when the quota became insufficient for other countries' production of apparel. One example was China. The quota system has led to circumstances wherein China had to buy Philippine's quota allocation in US in order to ship China's products to US via Philippines. It has led to creation of an agreement between Philippines and China to manufacture the apparels in the Philippines that are to be shipped to US using China's raw materials particularly China's fabrics.

In the Executive Order No. 537 in May 24, 1979 the quota allocation is generally described as a fair and objective allocation for firms. It was designed in such a way that it would avoid monopoly power and considerate to new entrants in the markets to acquire equitable and tangible shares of quota allocation. However, there are what they called "reasonable fees" for the issuance of export quotas, export authorizations, export licenses and other related services. According to the director of Garment Business Association, these fees are collected for the purpose of funding the safety nets of the workers in case of industry's closure which comes in terms of separation pay. The collected fines are allocated for employment training and for the planned lobbying of bilateral trade or free trade agreement with US. Unfortunately, these funds were surrendered to the National Treasury after the GTEB was phased out.

c) Post Multifbre Agreement

The end of MFA then became a challenge to the Philippine garment industry as all other countries can now exports without limits to the world's major buyers of the apparel such as US and EU. At this point, the Philippines had to rely on the next stage of liberalization as the only hope to be competitive with other countries. The country has been lobbying for the removal of tariff from US and EU to remain competitive after the lift of quota allocation to all countries. In any case, the end of MFA only means the end of quota allocation and not elimination of tariffs which means that Philippines can still negotiate through bilateral trading agreements, usually through free trade agreements or FTA.

d) Failure of Save Act and Transition to TPP

In 2008, a preferential trade bill for textiles and apparel between the US and the Philippines, called "Save Our Industry Act" was proposed at the US congress. It describes an innovative win-win trade legislation because of the jobs that it could create to both the US and Philippines. The agreement basically allows the Philippine-made apparel products to enter into the US market with duty free market access but on a condition that the apparel products should be made with US fabrics. This would mean creation of jobs in US textile sector because it would pressure the US textile manufacturers to export fabrics in the Philippines. The Philippine government was once hopeful for the passage of the Save Act to the US congress. According to the director of the Garment Business Association, the country had a chance to make it a rider[5] to FTA bills of Colombia, Panama and South Korea but the US citizen lobbyist Hawaii Senator Daniel Inouye passed away.

[5] Rider is an informal term for a no germane amendment to a bill or an amendment to an appropriation bill

© 2017 Global Journals Inc. (US)

e) Pride Bill as a Solution to Failed Save Act

In response to the impossibility of the Save Act was the creation of an alternative initiative called *Pride Bill*. Pride bill or Philippine Recovery Investment Development Export (PRIDE) bill is intended to help the survivors of the super typhoon Yolanda or internationally known as "Haiyan" to recover from their losses. The agreement is a sort of support as it provides grant of duty-free access to US for the goods made in the Visayas areas that were devastated by the super typhoon. This is an advantage for the community to spur economic development and business activity as it will attract investors and developers to venture into the affected areas. Moreover, the privilege of duty free access to US market extends to include the goods made in some of the areas in Mindanao which are not yet developed so as to speed up also their development. Finally, the bill has been designed to be of great benefits because it will build up a foundation for the Philippines to enter into the TPP agreement which is the same with the intention of the creation of Save Act. The challenge for pursuing the Pride bill however is the same with Save Act in that the US does not prioritize giving a preferential treatment to any country not part of the TPP (Asian Journal, 2015). In some way Pride bill has greater advantage in that it has longer duration of implementation. Its proposed timeline takes 5 years giving more time to prepare and push through TPP. However, with the protectionist policy of the Trump administration, it would be of great challenge for the Philippines to get into one level higher to TPP inclusion.

Philippines- EU Generalized System of Preferences (GSP)

Currently, the Philippines does not have FTAs with EU and US. Although PH-EU FTA has been proposed already, the agreement has not decided yet. What the Philippines can rely with the EU in the meantime is the unilateral agreement for GSP scheme grant. GSP scheme is a facility granted to developing countries by certain developed countries. Essentially, in a unilateral agreement, there is beneficiary country and a donor country. This scheme is also called a preferential tariff treatment which means that the benefit is non-reciprocated. If the beneficiary country is a least developed country, a scheme granted to the beneficiary is called "Everything But Arms (EBA)". In this scheme, the beneficiary country is granted with duty-and-quota-free access for all of its exports except arms and ammunitions. EBA therefore is a special privilege grant to least developed country in order to address their special needs. In the case of the Philippines, the country is not privileged with EBA which is what it is hoping to obtain. Nevertheless, Philippines has granted with GSP plus scheme which means full removal of tariffs to products such as coconut and marine products, processed fruit, prepared food, animal and vegetable fats and oils, textiles, garments, headwear, footwear, furniture, umbrellas, and chemicals. Therefore, EU is not problem for the Philippine garment products to enter in the EU market freely. Previously, textiles and garments have 9.6% duty and is now 0% tariff (duty free). One issue here however is that the other countries with the same level of development as with the Philippines have also granted with GSP plus which means that the country has to compete also with the other countries in the EU market.

f) Double Transformation

In this case, Philippines may now move towards the next level of liberalization which is dealing with the Non-Tariff Barriers (NTBs) to get into a step closer to FTA. NTBs refer to various bureaucratic or legal issues that hinders trade. This covers Rules Of Origin (ROO) ora criteria used to define where a product was made. ROO is an essential part of trade rules because a number of policies discriminate between exporting countries such as quotas and preferential tariffs as in the case of Multi fibre Agreement, Philippines and European preferential tariff agreement, etc. Rules of origin is also used to compile trade statistics for "made in" labels attached to the products especially for products processed in several countries. For the Philippines, complying with the ROO seems challenging to the garment industry. To claim the tariff preference, the garment manufacturers need to prove that their clothing products originates in Philippines, hence submitting a proof of origin document known as the certificate of origin (CoO) to fulfil the conditions.

The specific condition for the apparel industry with the EU preferential agreement is called double transformation. This means that textile or clothing products have to be made out of a two-stage transformation process domestically. In the first stage is the production of fabric and the transformation is the weaving of yarn into fabric. In the second stage of transformation is the making of this fabric into cloth. As a beneficiary of the preferential trade from the EU, the Philippines must adhere to the double transformation rule in that the country is not allowed to import the fabric that it will use to make clothes. However, the local manufacturers import the fabric that they used in apparel manufacturing which is a major concern. Even the famous Filipino retail brand clothing which almost dominates our domestic market is not 100 percent made in the Philippines and in fact it is 99 percent made in China.

g) Subcontracting Garment Business

The Philippine garment sector consists primarily of subcontracting operations for international brands (Avila, 2005).Subcontracting is defined as doing partial work for a large company. They are known as subcontractors which are also companies. In the case of garment industry, a subcontracting unit is a factory that mainly does garment stitching work. They don't need to

© 2017 Global Journals Inc. (US)

set-up other facilities and staffs for layer cutting, garment finishing, and packing activities. If illustrated in an apparel supply chain, there are garment export houses receiving original contract from international buyers or retailers of apparel brands. These export houses have their excess production done by the subcontractors. Thus, an export house works witha subcontractor and/or it can also be the subcontractor when it doesn't get enough direct business. In this sense subcontractors do not only sew garments, they can also do jobs like cutting to packing, provided that they have in-house facilities for these.

Subcontracting business in apparel industry are advantageous in a way that it saves them from overhead costs. Garment factories often have set a production amount that is based on the previous average demand. Hence, in times of excess demand especially during the peak seasons, the export houses get some of their products done by the subcontractors. In this way, they don't need to invest more on machines and additional space or house for manufacturing the excess orders because if they would invest on additional these capital, there's no guarantee that it would be utilized for the whole year. The work flow of subcontractor goes like this. First a subcontractor gets their contract with the exporters. However, they must have a factory set up with sewing machines. Second, having the capital and expertise, it would be easy for the subcontractor to work on the given pattern by the exporter. Third, the work that the subcontractor has to do is usually stitching only (partial or complete). Although sometimes, trim is added to subcontractor's work, trims and accessories are normally done by the exporters. Finally, stitched garments are sent back to the exporter for inspection first before the payment is handed.

h) Yarn Forward

Philippines has also a preferential agreement with US in terms of textile industry. The US version of EU double transformation is called yarn forward in that all stages of production must take place in the country. Again, it's the same problem that the garment manufacturers face because the country is not a producer of fabrics as the Philippine textile industry greatly complained about the electricity cost in the country. Running a textile mill consumes 1.5 megawatts in the production of synthetic fibers – cheaper substitutes of natural fibre. Although UN encourages the use of natural fibre as it is more environment friendly. According to the estimated data presented in the proceeding of the symposium on the environmental benefits of natural fibres production held in The Netherlands, the main producer of most of the natural fibre is China. Philippines was noted as main producer of abaca fiber specifically in Aklan where majority of abaca come from (Table 5.3). Also, the country has a Philippine Textile Research Institute (PTRI) an agency under the Department of Science and Technology which provides testing services and textile processing services for the production of natural fiber. PTRI laboratories has testing equipment to determine levels of quality of fibers, yarns, fabrics, garments and allied products including dyes, chemicals, and auxiliaries used in textile production.

Table 5.3: Main Producer of Natural Fiber across the World

Natural Fiber	Million Metric Tons per Year	Main Producer
Cotton	25	China, US, India, Pakistan
Kapok	0.03	Indonesia
Jute	2.5	India, Bangladesh
Kenaf	0.45	China, India, Thailand
Flax	0.50	China, France, Belgium, Belarus, Ukraine
Hemp	0.10	China
Ramie	0.15	China
Abaca	0.10	Philippines, Ecuador
Sisal	0.30	Brazil, China, Tanzania, Kenya
Henequen	0.03	Mexico
Coir	0.45	India, Sri Lank
Wool	2.2	Australia, China, New Zealand
Silk	0.10	China, India

Source: Food and Agriculture Organization

Fiber Industry Development Authority (FIDA) has done various investor friendly initiatives toward further boost of fiber market in the coming years. Significant share of abaca fiber is consumed domestically while the rest is exported majority to US, European countries and Japan. According to the *Philippines Abaca Fiber Market Forecast & Opportunities, 2019* report, the abaca fiber market is projected to grow at around 5.7% till 2019. Abaca (and piña fiber) are mostly produced in the province of Aklan. Huge portion of the land, about 60 hectares, was planted with 1.3 million kilograms of abaca fibers last year in the province of Aklanwhich contributed P46.8 million to farmers' income. According to the local government of Aklan, the province has been traditionally producing abaca fiber in which the main source of income of a typical household. The head of

© 2017 Global Journals Inc. (US)

household (typically the father) together with his sons, plants the abaca and harvest it after a year. The harvested abaca will be stripped and extracted with the abaca fiber which will be sold to the traders. The women of the household typically help in drying while the rest of the production process are done by the male. Therefore, employment contribution of abaca production is slim as it is done as livelihood by families in the rural areas.

i) Skills Development in Textile Manufacturing

However, the other parts of the labor force who aren't come from a family of abaca producer and do not have the skills needed to process textile, are offered with skills development training across the country. PTRI provides technical training to help produce high-quality and skilled workforce from the textile and garment industry working at micro, small, and medium-scale enterprises to ensure efficient production. The Institute extends technical support and expert assistance on manpower and skills development joint program of DOST and Department of Trade and Industry. The Institute conducts in-house seminars and workshops on textile and textile-related training courses for reasonable fees. It can even send experts to other parts of the country through the program Small Enterprise Technology Upgrading DOST. There are actual production machineries used during the in-house courses and/or on-the-job training on textile processing and quality assurance. The aim of the training courses is to contribute to the improvement of production and quality of textiles, decreased unemployment rate of the country, and generation of additional dollar earnings. The training is also designed to target students, entrepreneurs, out-of-school youth, traders, merchandisers, and related groups.

j) TESDA offering Dressmaking course to help garment firms

Aside from the PTRI, a German company in the country that manufactures woven shirts for men and juniors as well as woven blouses for ladies provides vocational training called "Dual Training System" in coordination with the Technical Education Skill Development (TESDA). It is located in the Cavite Economic Processing Zone, an industrial estate that is 45 minutes away from the port of Manila and NAIA airport. The company has been catering the European market engaged in "German Dual Training System (DTS)" for ten years. The training is a pilot project in coordination with Technical Education Skill Development Authority (TESDA) and considered as unique in the garment business in South East Asia. The graduates of the Dual Training System is given with certificate in Dressmaking NC II which warrants a completed 1,240 hours of in-school and in-plant training conducted by both CS Garment, Inc. and the TESDA Provincial Training Center in Rosario, Cavite.

The TESDA garments related courses like tailoring and dressmaking usually varies from 10 months to 3 years. There are also short courses that take 240 hours which if calculated is almost 3 months. However, short courses like this depend on your eagerness to learn and your ability to absorb whatever lectures, hands-on that will be given to you. In TESDA dressmaking course, you can study and train how the fabric can turn into beautiful apparel which most popular fashionista and celebrities wore. Anybody who finished the course may now put its own tailoring shop or start to make small textile business. The short course covers drafting, cutting and sewing fabric and turning them into casual apparel like blouses, dresses, skirts, pants and shorts. For someone who is enrolled in the course can acquire skills such as carrying out measurements and calculation, setting up and operating sewing machine/s, performing basic maintenance, drafting and cutting pattern of casual apparel, preparing and cutting materials of casual apparel, sewing casual apparel and applying finishing touches on casual apparel. Hence, career opportunity for graduates of dressmaking would be dressmaker, seamstress / seamster / tailor or garment sewer at apparel companies, garment manufacturers, fashion design shops or studios and some boutiques. Graduates can even start their own company or work from home by offering services like repairing and altering clothes, teaching basic sewing skills, sewing office and school's uniforms, pillows, curtains, pet clothes or doll clothes, costumes for cosplay or tote bags among others. There is also opportunity for the graduates to become a fashion designer if they will pursue it to the next level because tailoring, sewing and pattern-making skills will provide them the foundation.

k) Benefits of the Growth Corridor

Unlike in the previous decades in which the garment manufacturers enjoy the benefits of low minimum wages, the garment manufacturer these days have been complaining about high labor cost. However, a strategic solution can help them alleviate their issue with cost of labor. The garment manufacturers have the option to locate in the W Growth Corridor in the Central Luzon. As presented in the previous chapter, the sample dataset shows that not much garment firms are located in the Central Luzon so this could encourage them to relocate to Central Luzon because of the W Growth Corridor. The W Growth Corridor is a strategic approach in promoting Central Luzon as an investment destination for tourism, industry and agriculture. These key growth areas when plotted on a map form the shape of a W hence it's called W Growth Corridor. The key growth areas are also spatial representation designed to certain economic activities that can be globally competitive such as an "industrial heartland of the Philippines and

© 2017 Global Journals Inc. (US)

the Asia-Pacific Region", "international transshipment hub", "world conference center" and "showcase of competitive and vibrant agricultural sector".

In the Philippines, minimum wage varies by classification of the areas such as (1) growth corridor, (2) emerging growth and (3) resource-based. See Table 5.4 for minimum wages in each area. Growth corridor areas are the rapidly urbanizing and industrializing. Emerging growth areas are the areas with rural and agricultural resource potential that are located at/or near the rapidly urbanizing and industrializing. Resource Based Area are areas with predominantly rural and agricultural resource potential that are far from regional and Metro Manila markets. These areas cover the cities or municipalities of Cavite, Laguna, Batangas, Rizal and Quezon that are dispersed in each area.

Table 5.4: Minimum Wage in Different Areas

Areas	Minimum Wage	Cities /Municipalities Coverage
Growth Corridor	Php 310 – Php 337	1. Cavite – Bacoor, Carmona. Cavite City, Dasmariñas, Gen. Mariano Alvarez, Gen. Trias, Imus, Kawit, Rosario, Silang, Tagaytay City, Tanza and Trece Martires City 2. Laguna – Biñan, Laguna Techno Park, San Pedro, Cabuyao, Calamba City, Los Baños, San Pablo City, Sta Cruz and Sta Rosa City 3. Batangas – Batangas City, Bauan, Lipa City, Lima Technology Center, San Pascual, Sto. Tomas and Tanuan City 4. Rizal – Antipolo City, Cainta, Rodriguez, Tanay and Taytay 5. Quezon – Lucena City
Emerging Growth	Php 275 – Php 291	6. Cavite – Indang, Naic, Noveleta and Ternate 7. Laguna – Paete and Pakil 8. Batangas – Balayan, Calaca, Calatagan, Lemery, Mabini, Nasugbu, Rosario, and San Jose, San Juan and Taysan 9. Rizal – Angono, Binangonan, Pililia, San Mateo and Teresa 10. Quezon – Candelaria, Sariaya and Tiaong
Resource Based	Php 253 – Php 271	11. Laguna – Alfonso, Amadeo, Gen Aguinaldo, Magallanes, Maragondon and Mendez-Nuñez, Cavite; Alaminos, Bay, Calauan, Cavinti, Famy, Kalayaan, Liliw, Luisiana, Lumban, Mabitac, Magdalena, Majayjay, Nagcarlan, Pagsanjan, Pangil, Pila, Rizal, Sta. Maria, Siniloan and Victoria 12. Batangas – Agoncillo, Alitagtag, Balete, Cuenca, Ibaan, Laurel, Lian, Lobo, Malvar, Mataas na Kahoy, Padre Garcia, San Luis, San Nicolas, Sta Teresita, Taal, Talisay, Tingloy, and Tuy 13. Rizal – Baras, Cardona, Jala-Jala and Morong 14. Quezon – Agdangan, Alabat, Atimonan, Buenavista, Burdeos, Calauag, Catanauan, Dolores, Gen. Luna, Gen. Nakar, Guinayangan, Gumaca, Infanta, Jomalig, Lopez, Lucban, Macalelon, Mauban, Mulanay, Padre Burgos, Pagbilao, Panukulan, Patnanungan, Perez, Pitogo, Plaridel, Polilio, Quezon, Real, Sampaloc, San Andres, San Antonio, San Francisco, San Narciso, Tagkawayan, Tayabas and Unisan

Source: Wage Order No. IVA-114 National Wages and Productivity Commission, Department of Labor and Employment

Operating in the growth corridor can be favorable to garment manufacturers because the area is said to be one of the most dynamic and business-ready destination through its strategic location, accessibility and availability of skilled manpower resources. It is accessible because it has the 3 major international airports within the vicinity: Clark, Subic and Ninoy Aquino International Airport. It has infrastructure and transshipment facilities such as Subic Port, Clark International Airport, Broad-based economic and market spheres of influence and 10,000 hectares of industrial land. If the area is being explored for investment, the priority investment purposes would be information and knowledge-based industries, ancillary and/or support services to the locators of IEs and Ecozones, tourist destinations and facilities development, agri-processing industries, establishment of international schools, training, health and research institutions, businesses on "international lifestyle" and "local color" and infrastructure projects. Table 5.5 also shows the latest figures of the minimum wages across regions. As of 2017, region I has the lowest minimum wage followed by region IV-B.

© 2017 Global Journals Inc. (US)

Table 5.5: Summary of Minimum Wage Rates by Region[a]

Region	Non Agriculture Minimum Wage Rate[b]
NCR	₱491.00
CAR	₱270.00 – ₱300.00
Region I	₱280.00 – Large ₱265.00 – Medium ₱252.00 – Small ₱243.00 – Micro
Region II	₱300.00
Region III	₱380.00
Region IV-A	₱296.00-378.00 – GCA[c] ₱293.00-328.50 – EGA[d] ₱293.00-311.50 – RBA[e]
Region IV-B	₱280.00 – Puerto Princesa ₱275.00 – Calapan City, Puerto Galera, El Nido & Coron ₱265.00 – First Class Mun. of MIMAROPA ₱260.00 – The Rest of the Region
Region V	₱290.00 – Establishments employing 10 and above ₱280.00 – Establishments employing 10 and above 1 to 9
Region VI	₱323.50
Region VII	₱366.00
Region VIII	₱285.00
Region IX	₱296.00
Region X	₱338.00 – ₱304.00
Region XI	₱340.00
Region XII	₱295.00
CARAGA	₱280.00
ARMM	₱265.00

Notes:
a. As of August 2017
b. Non-Agriculture Minimum Wage Rate covers basic wage + COLA, date of effectivity of wage order varies by region
c. GCA=Growth Corridor Area
d. EGA=Emerging Growth Area
e. RBA=Resource Based Area

Chapter VI

VI. Summary, Conclusion and Recommendation

a) *Summary and Conclusion*

The Philippine garment industry was at its advantage in times of the Multi fibre Arrangement (MFA), a period when there was an imposed quota of imports to the developed countries like US and EU, particularly to the imports of garments and textile from the developing countries. Philippines had an opportunity to fairly compete with world's strongest producers of garments like China, Bangladesh and India when it comes to garment production. The quota allocation was a chance for the Philippines to compete against the other developing countries that are also strongest producers and are dominating the US and EU markets of garment and textile. Dominating the US and EU markets can bring significant contribution to the exporting country because they are world's major importers of garment and textile.

MFA, therefore, has somehow distributed the world's production of garment and textile, shifting the concentration of production from China, Bangladesh and India to other developing countries like the Philippines. In MFA's termination in 2005, Bangladesh and India were back on the rise as they captured again the biggest market share in EU and US (Vollrath and Gehlhar, 2008). So the Philippines has consequently taken efforts towards greater liberation to overcome the international competitive pressures. With the lift of quota to all countries, what the Philippines is aiming to gain advantage is the preferential tariff agreement with US. This would mean Philippine inclusion to the Trans-Pacific Partnership (TPP) to gain preferential treatment.

However, Philippine inclusion to TPP seems to be challenging especially now that the Trump administration has imposed protectionist measures. Moreover, the pursuance of preferential tariff might create issue onanti-dumping, countervailing or safeguard rule of GATT. Dumping isa situation of international price discrimination where the price of a product when sold in the importing country is less than the price of that product in the market of the exporting country. One identifies dumping simply by comparing prices in two markets. The principle of Anti-Dumping rule requires that imported goods be accorded treatment no less favorable than domestic goods under domestic

© 2017 Global Journals Inc. (US)

laws and regulations, and establishes rules regarding quantitative restrictions, fees and formalities related to importation, and customs valuation. Subsidies and countervailing measures are regulations that counter the effects of subsidies which comes in the form of charge or "countervailing duty" on imports that are subsidized and are found to be hurting the domestic producers. Safeguard is an action taken by temporarily restriction of imports of a product if domestic industry is injured or threatened with injury caused by a surge of imports.

Subsequently threats like the Philippine garment firm owners are moving out of the country to operate abroad are arising. But realizing the benefits that these firms could bring to the domestic employment is enough to consider giving support to industry's rival. This paper shows an evidence and adds to literature that a labor-intensive garment industry contributes to employment growth of the country. Furthermore, the industry is more significant to employment generation when firms expands their market internationally. This conclusion is backed by the regression analysis performed inthis paper. The findings of the empirical analysis confirm that the relationship of trading activities and employment creation in the garment industry is significantly positive. Using firm-level pooled data of 231 garment and textile firms from enterprise survey datasets of 2009 and 2015, the regression results to positive and significant relationship of firm exporting to job creation for all types of workers in the industry while controlling for several firm characteristics such as firm size, location, population, and survey periods. It is also interesting to find out from the survey data that despite smaller in number, garment exporter firms cover a larger share of employment. This is driven by the presence of large firms in the industry where the bulk of the workers can be found. These large firms are mostly owned by foreign investors that also have operations in the other parts of the world.

b) Recommendation

In the light of the revival of the Philippine garment industry, strategic industrial policy for the garment should be laid out. However, policies specifically relate to provision of incentives to firms by lowering of minimum wages isdifficult to implement and has slim possibility. Providing export subsidy isn't the best solution however. Firstly, because it isn't sustainable. Secondly is because itviolates an international rule. Giving export subsidy in the form of reduction in minimum wage could create distortions in an international free trade. This international rule particularly pertains to WTO Agreement on Subsidies and Countervailing Measures defined as a subsidy in a form of a public financial contribution or a government resource transfer to benefit a recipient through direct payments, tax concessions, contingent liabilities and purchase and provision of goods and services (with the exception of the provision of general infrastructure). The ey feature of the WTO subsidy ruleavoids "specificity", i.e. subsidies benefitting only a limited number of recipients.

Moving up the value chain: focusing on Product Design

The key to success of Bangladesh's and China's garment industry are (1) the industry's export orientation and (2) relatively lower labor cost. These are what drive their competitiveness. The Philippines, however, is not competitive on labor cost. It is therefore essential to discover the "niches" of the Philippine garment industry as a strategy to be competitive. If sewing processis what Bangladesh, China and India might have taken the lead, then designing can be the leverage for the Philippines. Designing for the Philippines can be the "niche" that the country can focus as a strategy to compete internationally. Sewing, moreover, if seen in global value chain is low valued while designing is high-valued and at the same time could be labor-intensive which is favorable to employment. Exploring this aspect therefore is the best solution that the Philippines can have for now.

In the case of Cambodia, the strategy targets on increasing labor productivity through improvement in management systems and training of personnel. In order to do so, a benchmarking analysis was done by Nathan Associates Inc. in 2005 comparing Cambodia's garment industries to five reference countries such as Brazil, China, Egypt, Mexico and Turkey. They were compared in terms of professional development, production controls and engineering, and organization of work. In conclusion, the highest priority is to train companies' middle management such line supervisors and industrial engineering personnel. These are the positions that have the greatest effect on the efficiency of resource use in the plant. Training for other positions, including operators and mechanics, is also desirable. Training is perceived as a way to improve efficiency in production, quality control, planning, and information systems. Productivity training center would therefore help develop human resource capacity. However, a number of practical issues in setting up such a center need to be considered, including modalities for financing, institutional affiliation and participation, and organizational structure. Initially, international experts would train local personnel until they will gain sufficient knowledge and expertise to eventually replace the expatriate experts in delivering productivity-enhancing advisory services to the industry. If Cambodia succeeds in making productivity gains while retaining its reputation for adhering to labor standards, foreign investment will continue to flow into the country.

In the Philippines, there is one leading foreign-owned apparel company that has factories spread out in the country. It operates inSan Fernando, Pampanga, Clarkfield, Pampanga, Mariveles, Bataan and Lapu, Lapu Cebu. Globally, the company has headquarters and operations in China, Hong Kong, Vietnam,

© 2017 Global Journals Inc. (US)

Cambodia and Indonesia. It has sales and designing offices in Asia and America. Aside from making apparel and accessories, the company also provides supply chain services. Because of its expanding capacity and constant innovation to respond to consumer needs, the Philippine garment industry has high hopes for product development. Also, the company enters long term contracts that could be a good signal for the Philippines if it really intends to enter into the designing stage.

Fortunately for Kyrgyz Republic, their garment industry was recognized by it flexibility in product development, lower logistics costs and shorter lead times in manufacturing of clothes as compared to many international competitors. As a consequence, United States through USAID's Business Growth Initiative has worked with Kyrgyz apparel manufacturers to optimize production and marketing in 2014. Kyrgyz producers signed contracts to export more than $1 million in clothing, primarily men's suits. More Kyrgyz companies are now taking advantage of this opportunity in which 22 leading manufacturers that employ over 1,700 workers joined the initiative to share best practices and improve their operations and marketing efforts. After expanding sales to current markets, the project will focus on exports to the European Union and potentially the United States.

The Philippines has another area to explore for product development which is in connection to its richness in indigenous fibers such as abaca and pineapple fiber. In some of the provinces in the Visayas and Mindanao, weaving of these fibers into fabrics are quite famous and their works can actually go global. Pineapple fibers are ivory-white color and naturally glossy. It is often blended with cotton, abaca, and silk to create wonderful light, breezy fabrics. When woven with silk, it's called piña seda or piña-silk. It is also called piña jusi when blended with jusi (abaca or silk) for strength and sheerness which is less expensive than 100% piña. Therefore, there are areas to explore in the Philippine garment industry to move higher in the value chain at the same still keeping the foreign investors. In this way, the country remains competitive internationally. In Egypt, the fine, high quality, light-weight, tightly woven, soft-to-touch fabric and garment made from the long and extra-long-staple cotton gown in the country are the ones they do export as designer or quality branded shirts, blouses, and bed linens. Internationally, the quality-made garments from fine Egyptian cotton are the best that money can buy followed by slightly inferior Pima cotton from the US and Indian cotton. Consumers pay a high price for the products made from extra-long-staple Egyptian cotton which provides the manufacturers with good margins. After the MFA, Egypt's strategies include clustering of small and medium enterprises, improving coordination among the enterprises, share resources and knowledge, integrate textile firms, obtain access to capital and partner with buyers. Developing manufacturing strategies to integrate the often-conflicting strategies of domestic producers, exporters, importers and textile and apparel industries are necessary. Also, creation of a regional trade strategy by establishing a sourcing hub in Egypt and the region will help improve producer's knowledge of complex rules of origin.

i. *Attracting Foreign Direct Investments for textile industry*

Investment in the upstream industry may be considered for garment industry's survival. A presence of multinational textile company that is flexible enough to cater the garment firms' demands and one that can ensure efficiency and sustainability of operation may help the garment industry for the time being. Flexibility is an important factor that the textile company should possess because each garment firm will demand certain design that may be unique to each firm. Having high-tech textile machineries capable of producing varieties of designs will ensure the textile industry's efficiency in the production, and thus, sustainability. This could be most successful with the help of government ensuring its role in reducing cost of doing of business in the Philippines and addressing problems with high electricity cost in the country. These are the issues that might concern the potential textile investor/s who we are targeting to attract for upstream industry. Therefore, addressing the root cause of garment industry's comparative disadvantage could bring promising result to industry.

References Références Referencias

1. Avila, J. 2005. *Non Tariff Barriers Facing Philippine Exporters.* Institute of Political Economy, University of Asia and the Pacific, Philippines
2. Asian Journal. 2015. *PH eyes duty-free entry of products from Mindanao to US.* http://asianjournal.com/news/ph-eyes-duty-free-entry-of-products-from-mindanao-to-us/
3. Balassa, B. 1965. *Trade Liberalization and Revealed Comparative Advantage*. Volume 33, Issue 2. Pp 99 – 123. The Manchester School.
4. Başlevent, C.2004. *The Effect of Export-Oriented Growth on Female Labor Market Outcomes in Turkey* World Development Volume 32, Issue 8. Pp. 1375-1393
5. Chan, S. and Sothea O. 2011. *Impact of Garment and Textile Trade Preferences on Livelihoods in Cambodia.* Oxfam America Research Backgrounders Series, 2011: oxfamamerica.org/publications/impact-garment-textile-trade-preferences-cambodia.
6. Department of Labor and Employment. 2011. *Wage Order No. IVA-14 Setting the Minimum Wage for Region – IVA (CALABARZON).* Calamba, Laguna.

© 2017 Global Journals Inc. (US)

7. Felbermayr, G., Prat, J. and Schmerer, H. 2011. *Trade and unemployment: What do the data say?* European Economic Review Volume 55, Issue 6. Pp. 741-758.
8. Hu, Z. and Liu, X. 2007. *The Impact of Industry Trade on Employment in China:An Empirical Study Based on a Sample of 32-Industry Panel Data*. Finance and Trade Economics 2007-08.
9. Lin, N. 2013. *Foreign Trade Structure and Industrial Structure and China's Labor Employment*. West Forum 2013-04
10. Lu, W.and Li, Y. 2011. *Effects of Chinese Export Growth on Employment: A CGE Model Analysis*. Journal of International Trade. 2011-09.
11. Majumder, P. and Begum, A. 2000. *The Gender Imbalances in the Export Oriented Garment Industry in Bangladesh.* Policy Research Report on Gender and Development Working Paper Series No. 12.
12. Mao, R. 2009. *Export, FDI and Employment in Manufacturing Industries of China*. Economic Research Journal. 2009-11.
13. Muzzini, E. and Aparicio G. 2013*. Bangladesh's Urban Space Today: Implications for the Growth Agenda* Nathan Associates.2004.*Changing International Trade Rules for Textiles and Apparel.* www. nathaninc.com
14. Ozler, S. 2000. *Export Orientation and Female Share of Employment: Evidence from Turkey*. World Development Volume 28, Issue 7. Pp. 1239-1248
15. Philippine Statistical Yearbook. 2015. Philippine Statistics Authority
16. Turco, A. and Maggioni, D. 2013. *Does Trade Foster Employment Growth in Emerging Markets? Evidence from Turkey*. World Development Volume 52. Pp. 1-18.
17. Vollrath, T. and Gehlhar, M. (2008). *Shifts in the Network of Fiber and Textile Trade in Response to Policy Changes*. ERS and Farm Foundation Conference, on January 31 – February 1, 2008. https://www.farmfoundation.org/news/articlefiles/394-Final.Vollrath.pdf
18. Wei, H. 2011. *Empirical Analysis on Relationship between China's Textile Industry's Export and Employment*. Journal of International Trade 2011-01.
19. World Bank Enterprise Survey Philippines 2009 and 2015. World Bank.
20. World Trade Organization. *Textile: Agreement*.
21. Yu, G. 2012.*The Labor Force Effect of Export Trade in Wenzhou Economic and Technological Development Zone-An Empirical Research base on Panel Data of Manufacturing*. East China Economic Management 2012-08.
22. Yu, M. 2008. *The Effects of Manufacture Product Trade on Employment in China: An Empirical Study Based on 34-Industry Panel Data*. Chinese Journal of Population Science 2008-04.

© 2017 Global Journals Inc. (US)

This page is intentionally left blank

© 2017 Global Journals Inc. (US)

Global Journal of HUMAN-SOCIAL SCIENCE: E
Economics
Volume 17 Issue 6 Version 1.0 Year 2017
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-460x & Print ISSN: 0975-587X

Does Control of Corruption Accelerate Economic Growth in Botswana?

By Yapatake Kossele Thales Pacific, Abeid Ahmed Ramadhan &
Ngaba Mbai-Akem Gabriella Magalie

Pan African University

Abstract- The vector author egression model (VAR) was employed to examine the impact of control of corruption on economic growth of Botswana covering the period of 1996- 2014. The results show that government effectiveness, exports of goods and services are significant at 0.03 and 0.07 respectively and have a positive relationship with gross domestic product growth. The Control of corruption is not significant but has positive relationship with economic growth. However, many efforts should continue to be directed towards corruption because as economy grows fast there are temptations as well economy diversifications in agriculture, financial services and textiles for new opportunities for growth.

Keywords: control of corruption, economic growth, VAR, botswana.

GJHSS-E Classification: FOR Code: 349999



Strictly as per the compliance and regulations of:

© 2017. Yapatake Kossele Thales Pacific, Abeid Ahmed Ramadhan & Ngaba Mbai-Akem Gabriella Magalie. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Does Control of Corruption Accelerate Economic Growth in Botswana?

Yapatake Kossele Thales Pacific [α], Abeid Ahmed Ramadhan [σ] & Ngaba Mbai-Akem Gabriella Magalie [ρ]

Abstract- The vector author egression model (VAR) was employed to examine the impact of control of corruption on economic growth of Botswana covering the period of 1996-2014. The results show that government effectiveness, exports of goods and services are significant at 0.03 and 0.07 respectively and have a positive relationship with gross domestic product growth. The Control of corruption is not significant but has positive relationship with economic growth. However, many efforts should continue to be directed towards corruption because as economy grows fast there are temptations as well economy diversifications in agriculture, financial services and textiles for new opportunities for growth.

Keywords: control of corruption, economic growth, VAR, botswana.

I. Introduction

Since gaining its independence in 1966, Botswana has enjoyed four decades of economic growth and rapid development which came with both positive and negative impacts. As for positive impacts, the investment in the mineral sector has made the country rapidly self-supporting. But Botswana's development has brought corruption and economic crime due to an increase in government budget and the expansion of public service. As we know any country, organization, enterprises even developed can't prosper if it is badly managed. Conscious of this threat that can mess the country's reputation, many resolutions have been taken by Botswana's government consequence of an establishment of a dedicated anti-corruption agency, the Directorate on Corruption and Economic Crime (DCEC) to which was given special powers of investigation, arrest, search and seizure. This agency which has its headquarters in Gaborone and an office in Francistown with 100 officer's combats both corruption and economic crime. According to DCEC, by the end of 1999, the anti-corruption had received 5250 from which 1565 cases were investigated, 1018 of which have been completed and 197 persons have been prosecuted. Measures have also been taken by government to educate the population especially young people about the knowledge of right and wrong and the values of ethics. In this approach Botswana's first superhero, Rre Boammaruri (Mr. Honesty) with its character can be seen in public functions and at school has been introduced to the public. On the program anti-corruption, many seminars have been held in purpose of prevention and reduction of corruption opportunities. The establishment of the DCEC has enabled the country to be among the ranks of the least corrupt country in sub-Saharan Africa According to the corruption watchdog, Transparency International. This reflects how control of corruption in Botswana is very good. Control of corruption is perceived to have a positive effect on economic development. Previous studies were mostly conducted on the impact of corruption on economic growth and came out with results that corruption has a negative relationship with economic which is true because the effects of corruption are visible in our daily life (poor infrastructure, slow growth, increase in poverty) even if some of the studies were not conclusive. The focus of this paper is to examine whether the control of corruption in Botswana can impact the economic growth. In addition to that, the aim of this paper is also to investigate if there is a positive and significant relationship between control of corruption and economic growth in Botswana. This article is organized as follows: following the introduction in section I, is section II, reviewing relevant literatures used. Objectives of study in section III. Rational of study, methodology in section IV and V. The empirical model, occupies section VI. Section VII discusses the results, while section VIII concludes the study.

II. Review of Literature

In this section, we shall discuss some previous studies related to impact of control of corruption on economic growth as well on economic development in general. The research conducted by Beekman et. al (2014) by analyzing on how corruption affects investments and its contributions to public goods in Liberia based on experimental and survey data collected in November and December 2010, employing subsample of 20-30 household found that corrupt leaders reduce investment incentives. He also found that corruption undermines incentives to create goods or services. Finally, they argued that the impact of corruption is heterogeneous. Ju Huang (2015) by investigating on the impact of corruption on economic growth in 13 Asian countries covering the period of 1997-2013 by using panel granger causality approach found a positive and significant relationship running from corruption to economic growth, while and

Author α: Pan African University, Institut of Governance, Humanities and Social Sciences, Cameroon. e-mail: yapatake@hotmail.com
Author σ: School of Business- Suza Zanzibar, Tanzania.
Author ρ: School of economics and Management, University of Yaoundé II-SOA, Cameroon.

© 2017 Global Journals Inc. (US)

significant relationship between corruption and economic growth in China. He also found that there is not significant causality between corruption and economic in the rest of countries. He argued that he doesn't support the general opinion on the perception of corruption as bad factor for economic growth for this study sample. Finally, he said that an increase in economic growth in China will lead an increasing corruption level. Aidt et.al (2007) by investigating theoretically and empirically on the relation between regimes, corruption and growth in two governance regimes defined by the quality of political institutions found that corruption have a negation impact on growth in the regime with high quality of political institutions however in the regime with low quality institutions, corruption has no effect on economic growth. Blackburn (2005) by examining the incidence and persistence of corruption in economic development among bureaucrats predicted a negative relationship between corruption and development. Beekman et. al (2013) by investigating on how corruption impacts the economic activities in Liberia found that corrupt leaderships cause reduction income source of generating activities. Saha and Gounder (2012) by investigating the relationship between corruption and economic development found a negative income corruption. He also found that good stage of development reduces corruption level substantially. Finally, he suggested the combination of economic and social policies can reduce or lower the impact of corruption on society, economic and development. Abdul Farooq et .al (2013) by examining the impact of corruption on economic growth in Pakistan covering the period of 1987-2009 by applying break unit root test and structural break co integration found that corruption impedes economy growth. He also found feedback effect between corruption and economic. Dzhumashev (2014)by examining how governance quality, the size of public spending and economic development impact the relationship bureaucratic corruption and economic growth found that the incidence of corruption decline with economic development. Lash (2004) by investigating on corruption consequences and causes found that corruption can affect negatively economy efficiency, capital formation as well the economic growth. Popova and Podolyakina (2013) by examining the impact of corruption on social system and economic growth found that there is statistical dependency between the corruption level and factors of social system. He also found that the countries with different social model present different dependence between corruption and other factors of social systems. Kunieda et. al (2014) by investigating both theoretically and empirically, how the negative effect of government corruption on economic growth found that government corruption has negative and significant impact on economic growth. Ulman (2013) by examining the impact of corruption on national competitiveness found a positive relation between these two variables. In another terms corruption influence, significantly the competitiveness of a country. Kennedy (1997) by investigating the impact of corruption on economy growth in transitions economy found the impact of corruption on growth depends on surrounding environment and corruption often hobbled entrepreneurship. However, corruption has ameliorated less-than-ideal circumstances. Seyf (2001) by examining the relationship between corruption and economic development found that corruption may boost efficiency. He also argues that high level of corruption may advantage powerful individuals with low efficiency and waste of resources at macro-economic level as consequences. Egiegba Agbiboa (2013) by examining the socio- economic aspects of corruption in Nigeria found that there is no solution to the problem of corruption and economic crime in Nigeria. He also argued that corruption can be significantly decreased if more radical policies such as: tax on an unaccountable wealth is adopted by developing countries. King et.al (2004) by investigating on the impacts of corruption on economic development on theBaltic littoral found that the country with poor level of economy is affected more by corruption. He argued also that it is important to fight against corruption in the Baltic States by improving policies against illegal use of individual or organizational power. Publicize cases of corruption and legal sanctions must be taken. Emm Halkos and Tzeremes (2010) by examining impact of corruption on economy efficiency in 79 countries using panel data covering the period of 2000 to 2006 found that corruption have negative impact on countries economic efficiency. Breslin and Samanta (2008) by examining the nature of relationship between level of corruption and investment decisions for developing countries found that corruption affected seriously the inflow of FDI as well the economic growth of developing countries.

III. Objectives

Following the corruption scandals during the 1990s which involves the country of misuse of public money or an abuse of power in several high-ranking government leaders, Botswana has made many efforts the management of corruption by keeping control and reducing its level. The objective of this study is to examine whether the control of corruption in Botswana can impact the economic growth. In addition to that, the aim of this paper is also to investigate if there is a positive and significant relationship between control of corruption and economic growth in Botswana.

IV. Rationale of the Study

The rationale behind of this study is contributed due to the fact previous studies were mostly conducted on corruption and economy development in general with

© 2017 Global Journals Inc. (US)

a qualitative approach and several of the studies on corruption and economic growth. This study will be the first quantitative approach using control of corruption to examine its impact on economic growth.

V. Methodology, Data Source, and Sample frame

In this section, we present the methodology used in our study. The paper used secondary time series data covering the period 1996-2014 in Botswana. The data were collected from World Bank. Three variables are employed in our model such as: Control of corruption, government effectiveness and exports in goods and services. The variables control of corruption and government effectiveness, were collected from worldwide governance indicators available at: www.govindicators.org. The export of goods and services was collected from world development indicators database with the source from World Bank National Accounts data, and OECD National Accounts data files. This paper used vector auto regression model (VAR) to investigate the effect of control of corruption on economic growth of Botswana. Preliminary times series unit root test by using Augmented Dickey-Fuller(Dickey and Fuller, 1981), Phillips and Perron) were conducted to check if our variables are stationary or not. Cointegration approach was conducted to examine whether control of corruption, government effectiveness, exports have long relationship preceded by the running of unrestricted VAR following the selection of lag length. Granger causality was employed for testing causality between control of corruption and the rest of remaining variables in our model. In addition to that,the stability test was conducted to evaluate our model.

VI. Empirical Model

The specification of the model for our study is as follows:

$$GR = F\,(GC, EG, EGS)$$

The model employed includes:

$$GR_t = \beta_o + \beta_1\, CC_t + \beta 2\, GE_t + \beta_3 EGS_t + \varepsilon_t$$

Where:

GR= Gross Domestic Product (%) is measured by real GDP annual growth

CC= Control of corruption is measured by the index of corruption estimate rating from -2.5 to 2.5

GE= Government effectiveness is measured by the index of government effectiveness estimate rating from -2.5 to 2.5

EGS= Exports in goods and services (% of GDP)

ε = Error term

β =coefficient

Economic growth can be defined as an increase in the capacity of an economy to produce goods and services over one year is very important in judgment by economists to see whether the country is growing or not. A lot of factors can impact the economic growth, but our study we used three variables such as: control of corruption, government effectiveness, and export of goods and services. Control of corruption is crucial for economic growth. As we know is one of the major obstacle to development, its effects on development are disastrous. Corruption leads to high investment cost and low profits of government as well foreign investors. In another term, corruption discourages investments which in turn negatively affect the economic growth. The control of corruption which leads to the better management of public budget with consequences such as: good services to the population, reduction of inequalities, encouragement investors and developing partners is very crucial for sustainable economic growth. Because Botswana has a good internationally reputation for control of corruption, we expected a positive and significant relationship between economic growth and control of corruption. Government effectiveness as well anti-corruption is important for economic growth. Two decades ago developing partners, donors do not hesitate to provide help to the governments despite the bad governance (case of Mobutu in Zaire, current Democratic of Congo), now everything have been changed. The priority now to an effective governance and low level of corruption determinant for aid effectiveness, an increase in foreign direct investment inflows which in turn will boost the economic growth of the country. We expected positive and significantly relationship between government effectiveness and economic growth. Export plays a crucial role in the economy. Export is a source of development, a source of improvement of a country reputation as well a business boost. In another term export stimulate economy and ensure the country business sustainability in the context of globalization with a great impact on economic growth. We expected a positive and significant relationship between exports and economic growth.

© 2017 Global Journals Inc. (US)

VII. Results and Discussions

The table 1 and the table 2 present respectively the test results for ADF and PP which indicate that the variables which are non-stationary in level become stationary in first difference. The results of unit roots test are done to avoid spurious regression. The first difference in the case of ADF for the variables economic growth, control of corruption, government effectiveness and export in goods and services become stationary by the inclusion of time intercept.

Table 1: Unit Root Test by Augmented Dickey -Fuller (ADF)

	At Level		First Difference		Remarks
Variables	t. stat	Prob	t. stat	Prob.*	
GR	-4.772340	0.0016	-7.099262	0.0000***	Intercept
CC	-1.975335	0.2936	-8.257354	0.0000**	Intercept
GE	0.646706	0.8362	-4.552374	0.0027*	Intercept
EGS	-2.367877	0.1637	-5.426858	0.0005***	Intercept

****,**,* indicates rejection of the null hypothesis of Unit Root Test at 1%, 5% and 10% levels of significance, source: Prepared by the authors, based on Eview 8*

Table 2: Phillips Perron Unit Root Test

	At Level		First Difference		Remarks
Variables	t. stat	Prob	t. stat	Prob.*	
GR	-4.829166	0.0014	-15.37356	0.0000***	Intercept
CC	-2.998796	0.0541	-8.318518	0.0000**	Intercept
GE	0.756443	0.8073	-4.529402	0.0028*	Intercept
EGS	-2.320355	0.1765	-5.426858	0.0005***	Intercept

****, **, * indicates rejection of the null hypothesis of Unit Root Test at 1%, 5% and 10% levels of significance, source: Prepared by the authors, based on Eview 8*

Cointegration Test

According to Johansen (1991), the co integration is employing to check whether there exists a long run relationship between our variables. The result of co integration (trace and Maximum-Eigen value) is also reported in our analysis.

Table 3: Johansen test for co integration for unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistics	0.05 Critical Value	Prob.**
None*	0.693060	39.49326	47.85613	0.2411
At most 1	0.540234	19.41453	29.79707	0.4634
At most 2	0.251967	6.204907	15.49471	0.6713
At most 3	0.071965	1.269667	3.841466	0.2598

*Trace test indicates no co integration) at the 0.05 level and * denotes rejection of the hypothesis at the 0.05 level, Source: Prepared by the authors, based on Eview 8*

Table 4: Johansen test for cointegration for unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistics	0.05 Critical Value	Prob.**
None*	0.693060	20.07873	27.58434	0.3357
At most 1	0.540234	13.20962	21.13162	0.4332
At most 2	0.251967	4.935241	14.26460	0.7500
At most 3	0.071965	1.269667	3.841466	0.2598

Max-eigenvalue test indicates one (cointegration) at the 0.05 level, denotes rejection of the hypothesis at the 0.05 level, based on Eview 8*

The table 3 and 4 show the result of a co-integration test. The estimated Eigenvalue, trace statistics, the critical value and the probability. The results of Johansen test for co integration for unrestricted Co integration Rank Test (Trace) indicates no co-integration in our model. The trace statistics is (39.49326) less than the critical value (47.85613) at 5% level means that the GDP growth, control of corruption, exports and the government's effectiveness are not co integrated. Therefore, VAR is used to estimate our results. Before running the vector auto-regression, the granger causality test was performed.

© 2017 Global Journals Inc. (US)

Table 5: Granger Causality Test

Null Hypothesis	F-Statistics	P-value.
GE does not Granger Cause GR	1.42467	0.2785
GR does not Granger Cause GE	0.25076	0.7822
EGS does not Granger Cause GR	0.31568	0.7352
GR does not Granger Cause EGS	0.81346	0.4663
CC does not Granger Cause GR	0.66605	0.5317
GR does not Granger Cause CC	0.99088	0.3997

Source: Generated from Eview 8

Table 5 presented the results of Granger causality test. This test is conducted if there is short- run relationship between control of corruption and economic growth. Our results showed that the p-value is greater than 5% means that the control of corruption, the exports, government effectiveness does not granger economic growth. We concluded that there is no short-run causality running from these variables to gross to economic growth.

Table 6: Estimated results for short-run

Variable	Coefficient	Std. Error	t-Stat	Prob.
CC	4.501561	4.368181	1.030534	0.3181
GE	-21.74931	9.451376	-2.301179	0.0352
EGS	0.246325	0.080233	3.070110	0.0073

Source: Generated from Eview 8

The co integration results allowed us to run our regression based on vector auto regression model (VAR). The results summarized in table 6 generating using OLS method showed that government effectiveness and export in goods and services are statically significant respectively at 5 and 10% level and have a positive relationship with economic growth. However, the control of corruption is not statically significant but has a positive relationship with the economic growth. This result confirmed the speech of Lot Moroka, regional Magistrate speech (Friday 18 March 2016, 16:26 pm, Mmegi news) said that: Botswana loses P1 billions to corruption every year due to the cases of corruption and economic crimes. A large amount of money which can be used create business, build schools and hospitals and improve public services. We conclude that the control of corruption in Botswana still not yet so effective to impact significantly the economic growth. The government must continue to keep fighting against corruption as a priority in its agenda. To strength, the direction relation between economic growth, control of corruption, export in goods and services, and the impulse response test was conducted. The figure 1showed the results obtained from impulse responses from dependent variables to dependent variables over 10 years fora long run and 5 years for short -run. In the short -run, the impulse response of economic growth to control of corruption is positive before dying off in the long run. The impulse responses economic growth to government effectiveness is negative in short- run and started slightly to improve and become positive in the long run. The impulse response of economic growth to export in goods and services is positive and decline in short-run and continue to decline in long run before to die positively. The existence of co integration coming does not unavoidably denote that the estimated coefficients are stable.To ascertain the evaluation of our model, the stability test was conducted. The stability of the model control of control of corruption and economic growth indicates that our model is stable since no root lies outside the range of the conditions. The recursive residual test satisfies the stability test at 5% significance level.

© 2017 Global Journals Inc. (US)

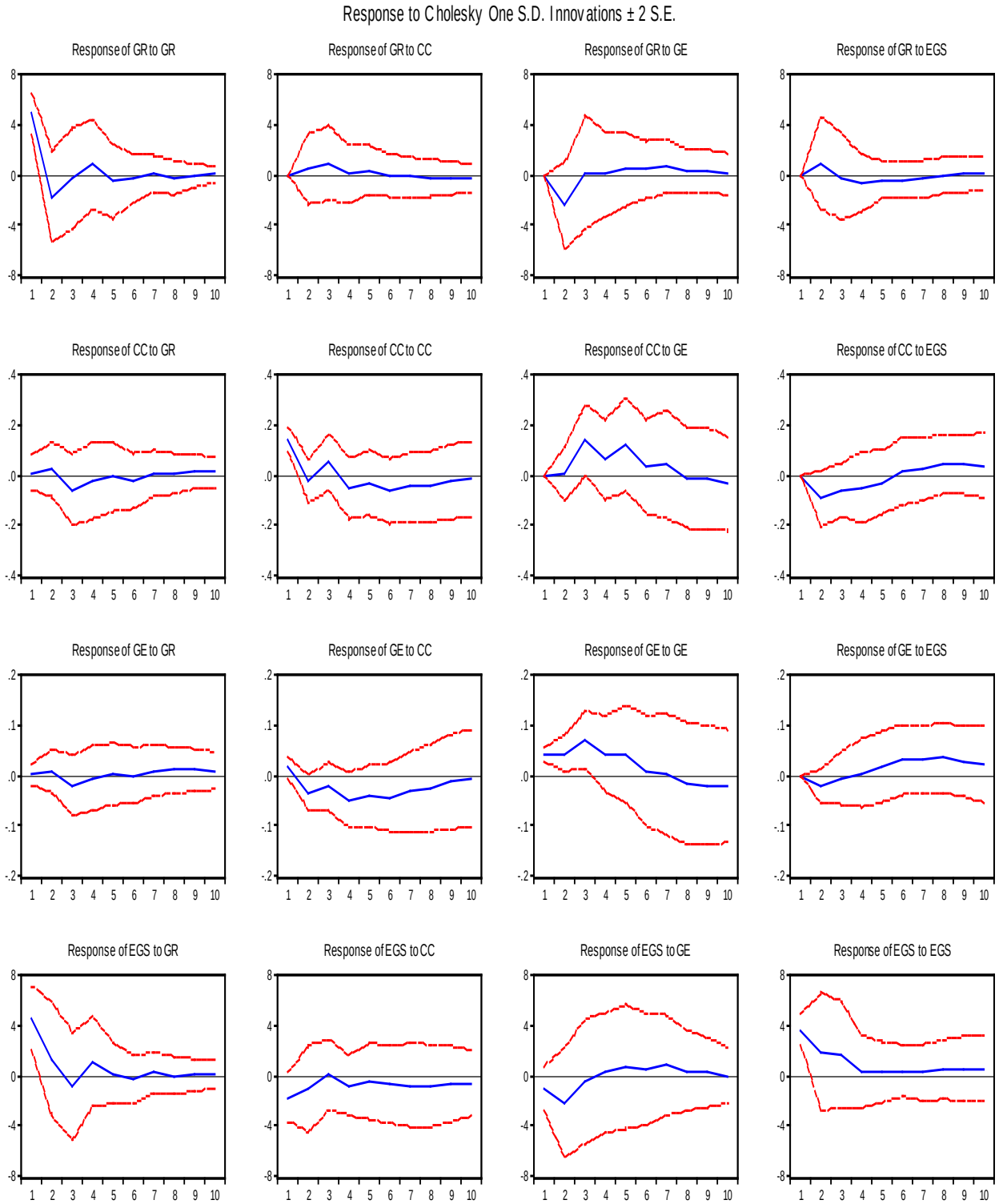


Figure 1: Impulses Responses

© 2017 Global Journals Inc. (US)

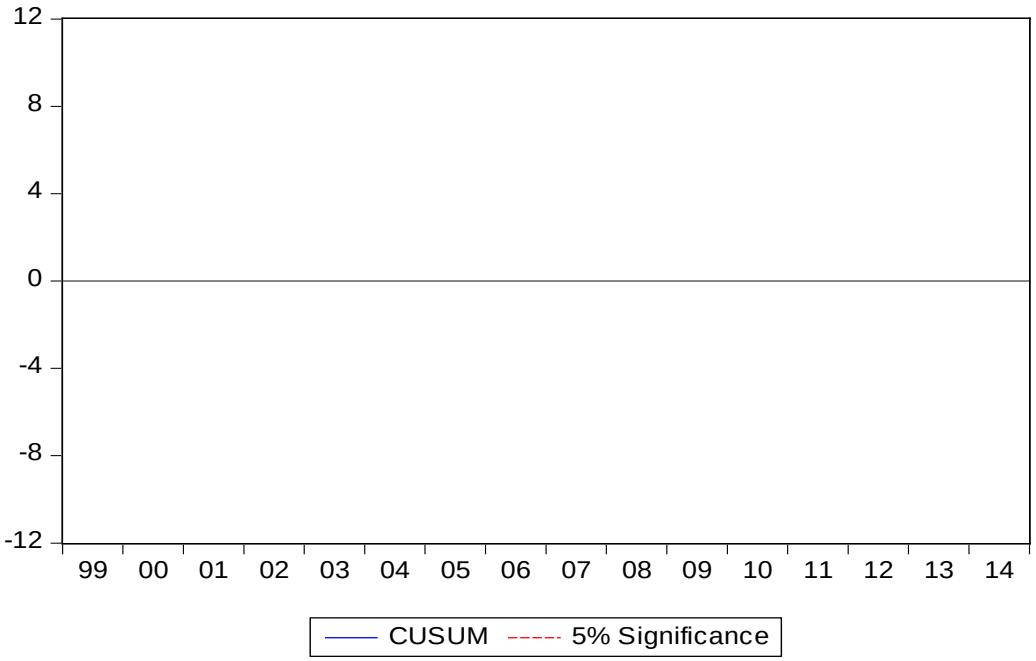


Figure 2: CUSUM

VIII. Conclusion and Managerial Implications and Future Research

To investigate the impact of control of corruption on economic growth of Botswana, the vector auto regression model (VAR) was employed. Government effectiveness, exports of goods and services were found to be positively significant and impact the economic growth of the country. However, control of corruption is not significant but affects positively the economic growth. For a sustainable economic growth, the fight against corruption must remain a priority in government agenda important for country attractiveness. A Lot of efforts must be conducted towards economy diversification as well its growth in purpose to help people to move out the poverty. We suggest further study to be conducted on political stability, control of corruption and economic development as well on how does control of corruption affect the economic growth and Human Development in the least Corrupt African Countries. Most African countries have a lot of mineral resources, but those resources have been factors of corruption which lead to violence, civil wars, Democratic Republic of Congo and Liberia). An investigation in this area can help African countries who are suffering for political instability such as: Sudan, Uganda and Central African Republic to use control of corruption asa toolto enjoy political stability and economic development.

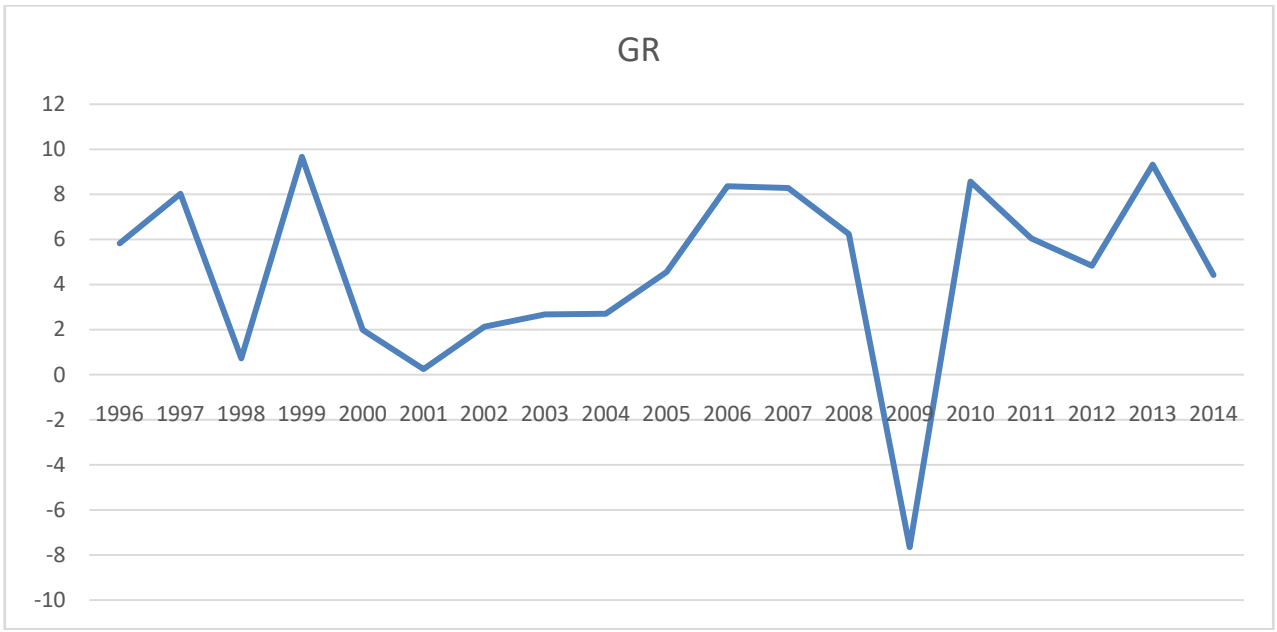
References Références Referencias

1. Farooq, A., Shahbaz, M., Arouri, M., Teulon, F. (2013), Does corruption impede economic growth in Pakistan? Economic Modelling 35, pp 622–633.
2. Seyf, A. (2001) Corruption and development: A study of conflict, Development in Practice, 11:5, 597-605, DOI: 10.1080/09614520120085340
3. Ju Huang, C. (2015) is corruption bad for economic growth? Evidence from Asia-Pacific countries, North American Journal of Economics and Finance 35, pp 247–256
4. Egiegba Agbiboa, D. (2013) Corruption and economic crime in Nigeria, African Security Review, 22:1, 47-66, DOI: 10.1080/10246029.2012.736869
5. Dickey, D.A. and Fuller, W.A. (1981), Likelihood ratio statistics for autoregressive time series with a unit root, Econometrica 49(4) 1057–1072.
6. Emm Halkos, G. and Tzeremes, N.G (2010) Corruption and Economic Efficiency: Panel Data Evidence, Global Economic Review, 39:4, 441-454, DOI:10.1080/1226508X.2010.533854
7. Beekman, G., Bulte, E., Nillesen, E. (2014), Corruption, investments and contributions to public goods: Experimental evidence from rural Liberia, Journal of Public Economics 115,and pp 37–47
8. Beekman, G., Bulte, E., Nillesen, E. (2013), Corruption and economic activity: Micro level evidence from rural Liberia, European Journal of Political Economy 30, and pp 70–79
9. King, G. J., Finnie, B. W., Thad Barnowe, J., Gibson, L.K. (2004), Corruption and economic development on the Baltic littoral: Focus on Latvia, Journal of Baltic Studies, 35:4, 329-345, DOI: 10.1080/01629770400000141
10. Blackburn, K., Bose, N., Haque, M. E. (2005),the incidence and persistence of corruption in economic development, Journal of Economic Dynamics & Control 30, pp 2447–2467.

© 2017 Global Journals Inc. (US)

11. Lash, N. A. (2014), Corruption and Economic Development, the journal of economic asymmetries
12. Dzhumashev, R. (2014), Corruption and growth: The role of governance, public spending, and economic development, Economic Modelling 37, pp 202–215
13. Kennedy, S. (1997) Comrade's Dilemma: Corruption and Growth in Transition Economies, Problems of Post-Communism, 44:2, 28-36, DOI:10.1080/10758216.1997.11655720
14. Saha, S. and Gounder, R. (2012), Corruption and economic development nexus: Variations across income levels in a non-linear framework, Economic Modeling 31, pp 70–79
15. Ulmana (2013), S.R., Corruption and National Competitiveness in Different Stages ofCountry Development, Procedia Economics and Finance 6, pp 150 – 160.
16. Kunieda, T., Okada, K., Shibata, A., Corruption, capital account liberalization, and economic growth: Theory and evidence, International Economics 139, pp 80–108
17. Breslin, T.P. and Samanta S. K. (2008) Investment Flows, Economic Growth, and Corruption in African Countries: An Analysis, Journal of African Business, 9:2, 287-307, DOI: 10.1080/15228910802480032
18. Aidt, T., Dutta, J., Sana, V., (2007), Governance regimes, corruption and growth: Theory and evidence, Journal of Comparative Economics 36, pp 195–220
19. Popova, Y. and Podolyakina, Y. Pervasive impact of corruption on social system and economic growth, Procedia - Social and Behavioral Sciences 110, pp 727 – 737.

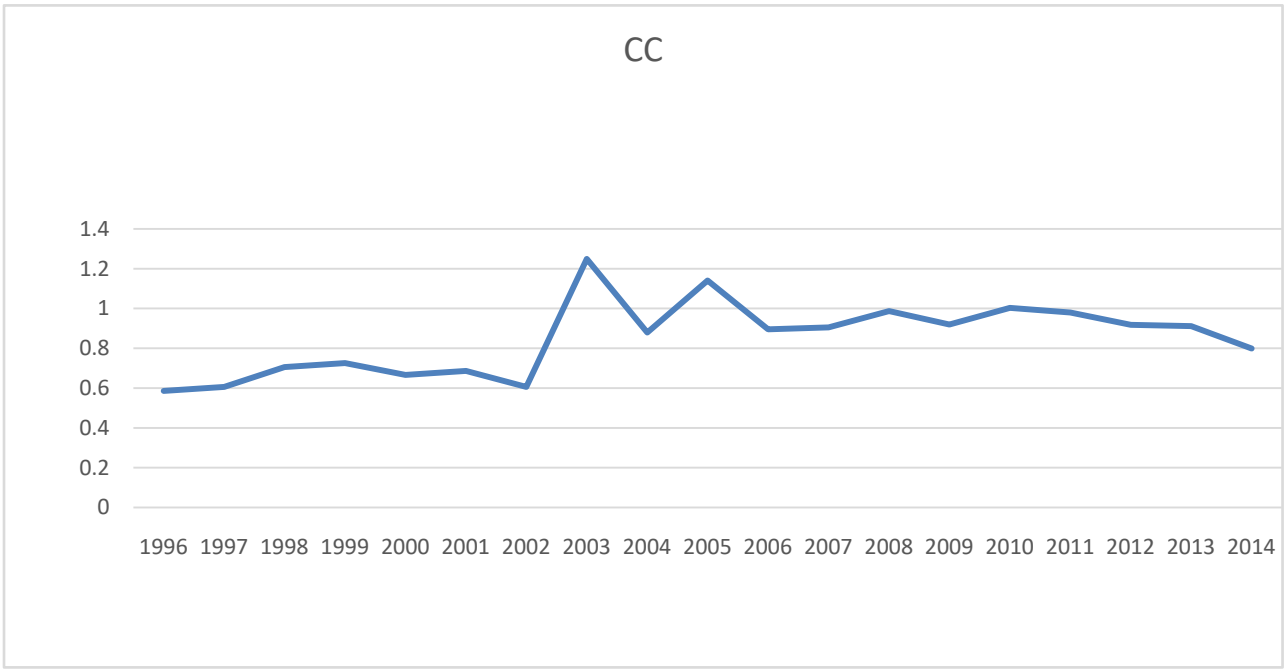
Appendices



Source: Microsoft Excel program (2010) based on World Bank Data

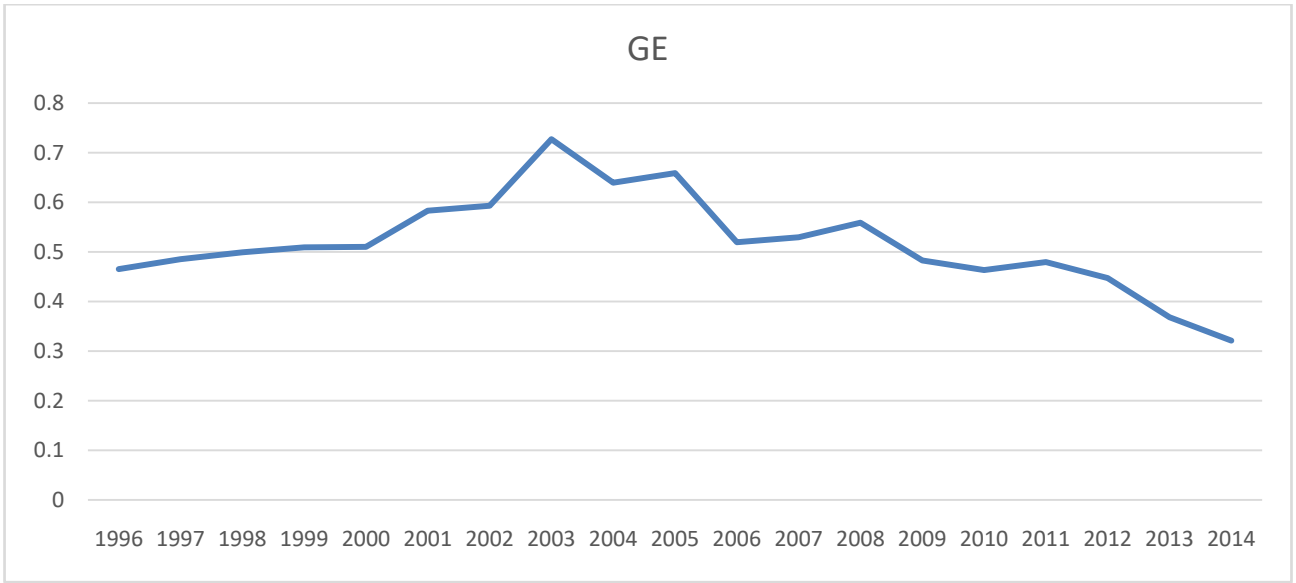
Figure 1: Evolution of economic growth in Botswana (% of GDP)

© 2017 Global Journals Inc. (US)



Source: Microsoft Excel program (2010) based on World Bank Data

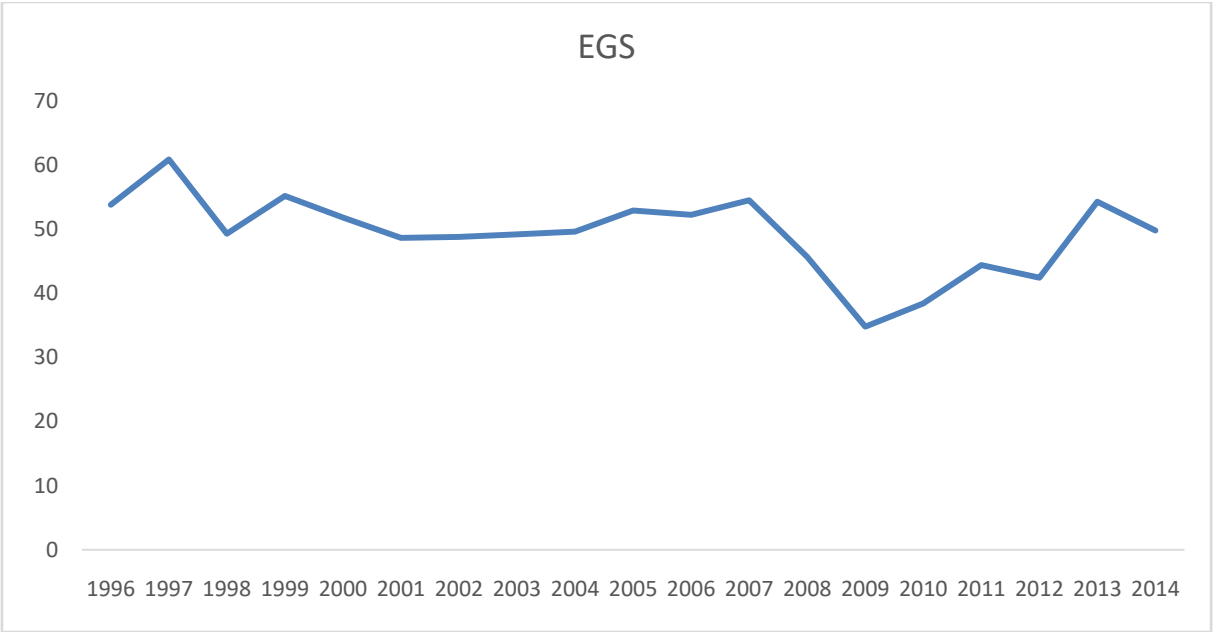
Figure 2: Evolution of control of corruption in Botswana (rating from -2.5 to 2.5)



Source: Microsoft Excel program (2010) based on World Bank Data

Figure 3: Evolution of Government Effectiveness in Botswana (rating from -2.5 to 2.5)

© 2017 Global Journals Inc. (US)



Source: Microsoft Excel program (2010) based on World Bank Data

Figure 3: Evolution of exports in goods and services in Botswana (% of GDP)

The figures 1, 2, 3 and 4 respectively represent the evolution of economic growth, control of corruption, government effectiveness, exports in goods and services based on the data collected in 1994-2014 from World Bank. According to the figure 1, The lowest value of economic growth was observed in 2009 with a value of -7.65 of GDP and the highest value was observed in 1999. The control of corruption increases progressively since 1990 to reach the highest value in 2003 and slightly decreases in 2004 before continuing to keep it steady movement till now (figure 2). The figure 3 present the tendency of government effectiveness, the highest value was observed in 2003. Figure 4 show the trend of export and goods and services which started with increase. the highest value was observed in 1997 and the lowest in 2009 before recover slightly in 2014.

© 2017 Global Journals Inc. (US)

Global Journal of HUMAN-SOCIAL SCIENCE: E
Economics
Volume 17 Issue 6 Version 1.0 Year 2017
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-460x & Print ISSN: 0975-587X

Land-Related Tensions and Women's Empowerment in Rural Senegal

By Dr. Abib Sene
Cheikh Anta Diop University

Abstract- Being numbered among the Less Developed Countries (LDCs), Senegal is a State populated by several ethnic groups among whom the Sereer, the Peulh, and the Diola. Still deeply rooted in their traditional values, the mentioned groups home-grow traditional rules that lessen ordinary people's opportunity, particularly women who, in term of land ownership, come to grip with serious customary and traditional obstacles that hinder their emancipation process. In this paper, the targeted objectives consist in highlighting traditional barriers that bedevill women's horizon to enlightment and empowerment in Senegal. Flings of reforms which, under the pump, have gone through up and down in the corridor of political will, will be underlined to arouse a crib of solutions that may be efficient to bail women out of their below social position.

Keywords: *woman, man, land, customs, emancipation, empowerment.*

GJHSS-E Classification: *FOR Code: 149999*



Strictly as per the compliance and regulations of:

© 2017. Dr. Abib Sene. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Land-Related Tensions and Women's Empowerment in Rural Senegal

Dr. Abib Sene

Abstract- **Being numbered among the Less Developed Countries (LDCs), Senegal is a State populated by several ethnic groups among whom the Sereer, the Peulh, and the Diola. Still deeply rooted in their traditional values, the mentioned groups home-grow traditional rules that lessen ordinary people's opportunity, particularly women who, in term of land ownership, come to grip with serious customary and traditional obstacles that hinder their emancipation process. In this paper, the targeted objectives consist in highlighting traditional barriers that bedevill women's horizon to enlightment and empowerment in Senegal. Flings of reforms which, under the pump, have gone through up and down in the corridor of political will, will be underlined to arouse a crib of solutions that may be efficient to bail women out of their below social position.**

Keywords: woman, man, land, customs, emancipation, empowerment.

I. INTRODUCTION

In spite of the sharpness of constitutional and legislative reforms that guarantee equality of rights in many domains between men and women, customs and religious realities hinder the way bendind to economic empowerment of senegalese women. The latter are put on the receiving side of social unfairness that takes them away from any possibilities to be full land owwners. Indeed, inspite of the meaningful figure of 52% (Department of Forecasting Statistics, Senegal, 2013) they represent in the Senegalese population, women are lapsed into their mere expression of a vulnerable group. As such, in the name of customs and traditional religions, they are denied any right to have access to land and generate profit making activities. Senegalese women, who are iliterate in their vast majority, grind their way through and stomach the injustices they are victim of, soothing their voices into an acceptance of their degrading social status. In the Senegalese society, land is a part and parcel of power; it has to be owned and managed by men.

In so being, it will be interesting to browse through the pages of social obstacles that torn apart the Senegalese women's elan toward empowerment. An in-depth analysis of land issue will lead to put on surface the real and various obstacles that give ground to women's disability to free themeselves from traditional barriers.

Author: Cheikh Anta Diop University (Sénégal).
e-mail: senabb2@yahoo.fr

This article, focuses on three ethnic groups; the Sereer, the Diola and the Peulh. The choice of this approach is premised on the fact that these communities share strong similarities in their cultural realities, inspite of some dissimilarities in their points of law that define the relationship between women and land.

The Sereer,14 % (Department of Forecasting Statistics, Senegal, 2013) of the population live, in their vast majority, in the Center of Senegal and the Atlantic Ocean Islands. They are subdivided into four main groups ; the Sereer Siin, the Sereer Ndout, the Seerer Safène and the Sereer Niominka (in this study, much more attention will be put on Seerer Siin who still are very rooted in their traditions). Except the Sereer Niominka who live in islands and who are fishers by profession, the others are famers. Their traditional society is organized into a matrilineage that does not paradoxically grant rights of landownership to women. Ngoné Diop Tine and Mohamadou Sy confirm : '' it must be noted that even though Seerer tradition grants importance to the maternal line, Seerer women do not have right to own land'' (Ngoné Diop Tine and Mohamadou Sy 2003 : 208)

The Peulh or Halpular, 23% of the population (Department of Forecasting Statistics, Senegal, 2013) are mainly located in the North of Senegal. Even if their main activity remains cattle breeding, they deal as well with agriculture in The Senegal Valley. They evolve in a coercive patriachal society that is divided into two main social groups : noble men (the *Torodo*) ; they are the ones who are atoped at the sheer rank of born to lead community, and the casted ones (The *Mathioudo*), who are men and women at service. Muslisms in their over whelming majority, (Islam does not deny land access and ownership to women), Peulh remain attached to their customary values in terms of land issues. As it is highlighted in the following : '' Here land belongs to men. In term of land distribution and ownership, women belonging to the nobility are in the same boat as casted men'' (Tine and Sy 2003 : 208)

The Diola, 5 % of the population, (Department of Forecasting Statistics, Senegal, 2013), they are located in the southern region of Senegal. Contrary to the Seerer and the Peulh, the Diola society does not go through a scaled stratification. It is organized into a horizontal community in which rights are played equal.

© 2017 Global Journals Inc. (US)

In this article, we examine the above mentioned ethnic groups to highlight the challenges that block women emancipation and empowerment in some Senegalese communities.

a) Conceptual and Methodological Frameworks

This article is an untying result of an in-depth reflection on women's existence in three ethnic groups in Senegal. It is grounded on the theory of masculinism as it it defined by Ferell Christensen and Georgia Duerst-Lahti. According to them, masculinism, which is different from musculism, is a stand from which a promotion of manliness is done. It is based on a patritriachal system which grants men political, economic and social powers to dominate women. In articulation with such a viewpoint on the relationship between men and women, this study targets to denounce the economic and social flat broke situation in which Sereer, Diola, and Peulh women have collapsed inward, loosing willpower to stand strong and fight for a social status change. The patriachal society in which they evolve, have shaped their mind into a belief according to which to empower a woman means to go against traditional values. In the purpose to stand for female interest and denounce the verticality of traditional societies, which indeed believe themeselves to be as clean as a whistle, we call for a rallying elan around the life and limb of a balanced and equity society in Senegal.

A mixed method approach was used. Four wise men and women (it is difficult to find out enough living old persons who are knowledgeable about their ethinic group's history and social stratification), who cross their heart on their communities's history, belonging to the three above mentioned ethnic groups, were selected to, through leadind oral questions, inform in detail how function their societies when it comes to deal with women's status. Their information were then closely confronted with some researchers's works on similar subjects to determine what has not been highlighted so far in the cut and dried fate of women in the north, the south and the west-centered regions of Senegal.

Data inquiries started on July 2016 and ended in September 2016. Besides, important research institutes like the West African Research Center (Dakar), the National Agency of Statistics and Demongraphy (Senegal), Cheikh Anta Diop University's main library, Fondamental Instuitute of Africa (Dakar), etc, were visited and eureka moments of unexpected discoveries pinpointed our underpined resourceful activities in such temples of knowledge.

II. Customary and Traditional Barriers

Located in the West headland of Africa, Senegal is a country that numbers, officially, 13 millions inhabitants (the National Agency of Statistics and Demongraphy, 2014). Its geographical position has granted to its populations a climate of diversity that favors a variousness of agricultural activities. Indeed, the North which is passed through Senegal River is the Senegalese rice granary. The center is the groundnutch pool and the south, which is the most watered area, polarizes the market vegetables and the various commercial products. This agricultural map kindles strong relishes of land control and exploitation.

Indeed, sahelian in its geography, senegal overturns in a severe ruralism with more than 70% (Department of Forecasting Statistics, Senegal, 2013) of its population who evolve in penurious countrysides, living on agricultural activities. Land appears then as an indispensible livelihood that goes hand in glove with cultural conception of dignity and manhood. Deductive arguments sew a grain of manhood that finds expresion into gender repression. In so being, a sociological, political and spiritual domination sprout out to rankle the female gender to the sheer line of yes-women. Its cardinal dimension jostles the already cracking aspect of the social system so as to disorganize the established arragement of moral and ethic ell of rural societies.

Land of culture and traditions, ***Suniugal*** is a country where male domination is still noticeable in various social domains, specially in the field of land ownership. Regarded as the feeble sex, women, in any Sereer, Peulh or Diola ethnic group, have gone through social prejusdices that, in the name of male supremacy, have been deprived of any right of proprietary on land. In the above mentioned communities, the mother of the living gush forth of its innards to live on its open handedness.

Furthermore, customs and traditions potray land as the female sex organ that cannot but be under the control of men without whom it cannot be fertile and productive. The land is viewed as a place where conversations and reflections of what life is all about take place. It is the measure of the gap between the past, the present and the future, death and life being both grounded on the sol of the living. Therefore, it stands as a witness of genesis time and fulfils an anthropological role. It embodies, henceforthe, in the eyes of traditions, the wiseness and the vision through which a direction is defined, a philosophy produced and a social structure designed. Moustapha Sourang, the president of the Commission of Land Reform in Senegal, highlights this situation through these terms : ''There are some sociological obstacles that hinder acces and control of land for Senegalese women.'' (Zakaria Sambakhé 2015 : 5).

Land exploitation vulgarizes men's aptitude to affirm their manhood, their capacities to lay down a legitimate domination on women. Indeed, playground of the masculinity force, land is regarded as an expression of a woman's body who, having laid on her back,

© 2017 Global Journals Inc. (US)

welcome the male performance to procreate. So it is possesed and cannot possess. It goes through, but cannot make undergo. Such a situation has given rise to an African Network for Integrated Development (ANID) to vocalize a defense throug these terms : ''since 1995 we have been voicing arguments to favor land acces and control to women in Dagana''. (Marame Coumba. Seck 2015).

Women are good for working out and dealing with products of the land, but not for becoming land owners. However great they are in number, (they represent 52% of the population), they only posses 4% (National Agency for Statistics and Demography, 2015) of the cultivated land:

> Women are more than 51% of the senegalese population but that control 4% of the landed ressources. Such an enequality in the acces to landed ressources is more visible in rural area where traditions, religions and customs constitute strong barriers for women to have acces to landed ressources (Mame Woury Thioub 2015).

The feudal nature of social organization and the swaging of a surviving economy give ciment to landed orientation that, in fact, on the one hand, deposseses women, and on the other, waves them aside from any possibility to be landowners. Traditions rank them into the world of moving 'objets', for they are to be married, to be devorced, and to become widows. In consequence, to stabilize the issue of land ownership, they must be crossed off from land matters of any kind:

> Marriage deprive very often the young girl from land acces in her own family ; devorce or wedowing period are also source of land depossession in family-in-laws for the young girls whereas, when a boy takes a wife land redistribution is automatical executed in his favor and to the detriment of her sister. (Fatou Diop Fall 2012 : 1)

a) The Case Study on the Sereer Group

In the Sereer ethnic group women are under the permanent veil of silence and submissiveness. The social stratification put foward two social groups : Men who have the obligation to exploit the land and women who have the duty to transform the harvests into consuming products. Women are used as labour force in land exploitation, but are excluded, in the name of traditions, from any possibilities to become land proprietaries. In their diagnostic on the Seerer Siin group society, Tine and Sy state the following : '' women cultivate about 70% (National Agency for statistics and Demography, 2013) to subsistence crops but are also responsible for the whole food chain from production to consomption, including transformation''. (Tine & Sy 2015: 208).

In the Sereer society, a married women is doomed to join his husband's fatherly lineage and house as an epouse. So she leaves her dwelling house as a daughter and a sister and offloads in her husband place as a wife. She is then regarded, in her family-in-law, as *OTew/Yaaye* (a servent and a mother) and *Ombiye Wala o Thiguène* (a daughter or a sister) in her family of origin. This double status of a servent without rights and a daughter ''given'' to another person as a wife, weakens her position as a heir apparent. In her virilocal house, she is allowed to exploit just small pieces of land for market vegetables, or give a leg up in land farming, but she is not and cannot be allowed to become a land owner. Rochegude pinpoints:

> Daughter and sister in her own lineage, she is wife and mother in her husband's. Without ceasing to belong to his lineage as a sister she enters her husband's as a housewife. This double qualification is a motive that prevents her from being in a position of a landed heir. This situation is more due to the exogamic rule that demands the transmission of land to men than to her incapacity related to her sex. (Verdier Rochegude 1986 :13).

Men are then, thanks to customs and traditions, the priviledged ones who control and exploit land in both fatherly and motherly lineages. And Fatou Sow furthers the verso side of Verdier's point through this piece of information : '' contrary to what affirms Verdier, it is rightly the belonging to the female sex that impedes and alienates women from land control and land inheritance''. (Fatou Sow 2004 : 254)

Among the Sereer the landed anthropology establishes a socio-spatial system that requires an adequate diplomatic management that excludes any form of passion and unfaireness. Different forms of land ownership are then put in execution among Sereer Siin. *O doxo niaye*, *O foxos*, *Bax*. Each of these forms acquires and affects plots acording to customs and traditional laws. Brigitte Guigou et *al* explain:

- The right of Fire, *O niaye* which is the most ancient one help to manage land acquisition and tranfer in the uterine lineage.
- The right of Hoof , *O foxos*, is generally granted by political local power to foreigners the *ceedo* and the kingdoms collaborators.
- The right of Ax, *Bax* which is related to forest clearing, is handed down into and by the paternal lineage. (Brigitte Guigou 1999 :191)

These rights that stand as laws are articulated through alegorical symbols of force and violence.

Fire is regarded as a symbol of destruction that necessitates dexterity, sleight of hand, alertness and watchfulness. Fire destroys. It cannot then be left into female hands that are considered by men to be *par exellence* hands of passion and thoughtlessness. Its maneuverability goes, therefore, beyond female adroitness.

© 2017 Global Journals Inc. (US)

Hoof flashes out the image of the horse which, to a certain extent, is the animal of war, competition and a drudge that assists man in all his harsh tasks. It implicates force of conquest in time and space. Such a 'suit of armour', according to customary rules, is not to be abandonned to the hands of weekness and febris.

Ax sprouts the face of brutality and strong envy to overcome, and overpower. And according to the Sereer traditions, its existence must be ignored by the 'sex of ficklessnes'.

Symbols through which is done the controle of landed management, in their nature and social meanings, exclude women from plots possesion and land acquisition. Her status grounded on weekness and lack of control, condemned her to make do with menial and housewife works. They are, in so being, block at the doorsteps of entrepreunership and therefore at the threshold of financial emancipation. Submissive they are, dog eared remains their fate in the Sereer male-dominated society.

Indeed, the sacredness of the land is warmly linked to the people settlement. Each land is said to have a spirit as a first-hand owner. When a family settles in an area by vertue of the law of **Ax** or **Hoe**, they are expected to sign an alliance as a symbol of covenant and commitment with the spirit of the occupied land. The goddess remains then the first-hand owner and the the occupier becomes the second-hand proprietary who has the obligation to honor the goddess' spirit through ceremonial acts that find basis on customs and traditions. Then emerges a protective body suit of unallowable measures of does and don'ts. In the prohibitive points appears the one that forbides women to be first-hand owner of plots of land. Their place is at home, hence the domesticity of their social status.

Men are then priviledged and women inroaded in their Human Rights and weakened into a social vulnerability. They are therefore flabbergasted in their lonely world of gender discrimination and exclusion, becoming recipients of the breadwinner's services who controls land and landed ressources. The opportunities they have to toil on their husband's, father's or brother's lands do not guanrantee them the right of ownership. Their beings are more an expression of ''maternalization (and sexualization)'' (Silvia Tamale 1994 : 23) than the presence of human beings who should claim for joint land ownership. They evolve in a top-down society that gives no margin to the female sex who, in fact, staggers under the backbreaking workloads she is condemned to deal with. By so doing, the Sereer woman works double-shifs inside the house on domestic and menial works, and ouside the house on field tasks. (Tamale 1994 : 25). Such a paternalist and inhibitive society brings Salvia Tamal to tell apart male and female status quo in Africa in these terms: Women are property of men, and since property is the mark of collective relation, then there cannot have been a time when women were not subordinate to men'' (Tamale 1994 : 185)

b) A Case Study on Peulh

In the North region of Senegal, the monopolization and single land ownership have widely moved women away from opportunities of land property. Among the Peulh, the situation of women is not much different from that of the Sereer. Their patriachal society stands as a gloomy curtail between men and women. It agonizes women and organizes men into a commode framework that gives them margin to maintain their viewpoint on traditions, browsing away any idea of women empowerment. Such a skittish egocentrism pulls efficiently up female advancement in social and economic fields. Women then fall down below the surface and stretch empty hands that customs and traditions ruch to fill with victuals of silence and lullaby. Male power is the center of authority that reigns on land ownership in a male-dominating society which reveals itself to be ruinous for women's existence. This mystification of male domination tends to convince that the social structure on which finds ground stratification and property-ownership distribution is the most apt and most suitable to promote development and living standards improvement. Thierry Michalon confirms this idea in the following : ''tradtional societies' structures are enough perennial and find basis on a strong coherence of familial activities (agriculture, commerce, handworking, etc) and social values''. (Thierry Michalon 1984 : 86)

Similarly to the Sereer community, the Peulh group in Senegal is organized through customary laws that define land ownership through tellurian laws like that of **Ax** and **Hoe**. In their society, the law of **Ax** or that of the first reclaimer establishes a power of control on occupied lands which is conserved as a property to be handed down to male lineages. Furthermore, with the law of **Hoe** the land is by farmers and for farmers. And given that Halpular women in Senegal are excluded from land acquisition, even if they are associated in faming activities, they cannot, by any means, be or become landowners.

Vehiculed as a socio-cultural meaning that sounds to be the helen of an endegenous vision on gender relations, the Halpular's traditions shape social status for men and women, condemning the latter in a position of biological machine. At the image of the land, women flourish to produce nourrishing fruits to their owners. Fatou Sow highlights : ''People assimilate the fostering of the mother to that of the land'' (Fatou Sow 2004 : 253). Such a burlesque image puts in a showcase the cultural load that hinders women's agrarian capacities.

© 2017 Global Journals Inc. (US)

Men are actors of history and producers of richness. As for women, they display their efficiency in what they are believed to be good for : sameness with the world of smoothness and delicacy. In the same line of thought, an ecofeminist movement writes up to amend female status in traditional society:

> The masculine relational sphere of public life, production, social and cultural life and rational justice is thus contrasted with the feminine sphere of private, domestic and reproductive life. (ValPlumwood 1992 : 8)

Ducts of social ascension shuff of for women who are obliged to support, on their shoulders, the load of the male gentry that pretend to work for an improvement of a communal destiny. At the image of the sereer community, in the group of Peulh the moral familial authority is embodied by the *Mawdo gallé* who have a yes and-no power on the family welfare. Women fall in the line marked out by men who in fact enslave the female gentry in an endless landless actress' position. The following data talk in the saddle:

Table 1: Land ownership and manner of acquisition (Peuhl)

Marital Status	Inheritance Acwuisition	RC Deliberation	Gifts
Married Women	0	3	0
Divorced Women	0	0	0
Widowed Women	0	1	0
Total	0	4	0

Source : Ngoné Diop Tine & Mouhamadou Sy in Women and Land in Africa
RC : Rural Council

In the North and the West-center areas customs know no law. Women are disbanded into male authority on landed management. They participate in the productive process, but are excuded from the power of property. Their fate is all the more isolated as men reinforce the mercantil landed economy ; giving much attention to commercial farming to the detriment of subsistence crops. Fatou Sow illustrate : ''Men are the managers *par excellence* of the land'' (Sow 2004 : 254). As a consequence, the food crops are widely derelict in favor of the products of annuity. Famine, therefore, gets close and breaks through the ambition of food self sufficiency. Alimentary insecurity unlatches itself in quite the whole national territory, thretening the social fabric and comunities's stability. The following data board is illustrative:

Table 2

Erea	Food Insecurity
Niayes	**27,08**
Bassin arrachidier	47,98
Fleuve	30,32
Casamance	51,89
Sénégal oriental	39,58
Zone Sylvo-pastorale	12,50
Dakar	3,46
Other urban ereas	9,01
Sénégal	20,87

Source : From ESAM-I calculations

Food insequrity in Senegal, specially in the Nothern area (Peulh's area), and the central region, is much linked to women exclusion from land contol and exploitation. The missing of the female input in food and cash crops puts women out of the scale of entrepreneurship, and therefore condemns the female social class, in the Peulh community, to go through poverty in high-numbers.

c) A Case Study on Diola

In the southern part of Senegal, casamance area, the Diola women enjoy a more signifant social margin. Being organized into a horizontal line, the Diola society bestows rights to women who transcend customary barriers and find full expression on land ownership. In that feudal society, traditions make no bones about the spirit of ownership and women empowerment. However, it is important to underline that even if Diola women have access to land, the superficies they are granted to exploite are, as the rule, shrunken at a point they cannot produce enough to nourish themeselves and commercialize. They inhance their exploitation just to cover their day-in-day out food uptake. So if traditions have opened them the door of land property, they have not succeeded in freeing themeselves from their traditional mind-shape. Their elementary working tools and smallness of their cultivated plots make null and void any possibility of entrepreneurship. They exploit land, but they remain at the doorsteps of agrarian ventures. As a consequence, at the image of what happens in the other regions in Senegal, food insecurity emerges and settles as mushrooms that taint life in that zone which, in bygone days, was to be viewed as a potential rice granary. The stifling of women in land exploitation and ownership has deepened the thorny question of food insecurity in Senegal, indeed. To men, belongs the land. To men, amounts power. And inspite of that superpower status, Senegal is still confronted with the headstrong problem of nutrition insecurity. The following data are much telling:

© 2017 Global Journals Inc. (US)

Table 3: Food insecurity according to the sex of heads of families

Head of Family	Incidence
Male	22,82
Female	13,91
National	20,87

Source : From ESAM-I calculations

In the Diola society, men are born equal in Rights, but not imperatively in facts. Despite of its horizontal organization, social determinisms grounded on sex and physical value 'classify' and divvy up men from women. The latter, who do their darnedest to build a strong image of womanhood are, far and wide, enclosed in insignificant paddy fields superficies. This situation of the fair sex that rules great in this region of Senegal, doesn't give a fighting chance to gender development agents, who seemingly, have fallen down the way side of combat for female headship in less Developed countries like Senegal.

III. Flings of Land- Reforms

In 17th of june 1964 a national law was voted in to organize the matter of land issue in Senegal. Decades after its promulgation, the 1964 law melted into the deciduous nature of the negro-african philosophy in which theories speak louder than acts. Forthwith voted in, right away ranked into the cupboard of *oubliettes*, pushing the renowed Professor Kanté to interrogate political decision-makers in the following : ''If the 1964 law does not come to force, is it because it is not enough young and enough modern to raise enthusiasm or it is because it is not enough old and enough wise to be honored and venerated'' (Babacar Kanté 1994 : 7). Such a situation characterized by a strong juridical sleepness, will be hustled into awakeness in 2012 with the second democratic alternation in Senegal. A new regim settled down to put on focus a new vision on land policy. The reorganization of land management was then put on the shoulders of a National Commission for Land Reforms, which was created by the decree n° 2012-1320 (Official Journal, 16 March 2012). That commission was assigned the errand to ''analyse legislative texts, identify the institutional duresses for an optimal management of land issues, to propose adequate measures that take into account modern economic realities to help Senegal to become an emerging power that will be able to satisfy the vital needs of her population'' (Ibrahima Ka 2015 : 7).

The Commission pursuits a waybill that enhances justice and good governance on public affairs. It helps to sort out land conflicts and right the wrong in land retribution. In the same guidance, Michel Pescay informs as follows : ''the customary law legitimized by the collective conscience is being fought out by the state to establish a crossbred law'' (Michel Pescay 1998, 131-132.) that improves and furthers traditional values criteria into a gender-balanced orientation.

However, it is important to underscore that the elan of land reorganization drops out in the tricky smash between the modern policy and the archaic vision on land management. The rural population who find it benefic to reserve land control to men, in their male dominating position, brush aside any projet aiming at balancing male and female opportunity and power to exploit and possess land. The government proposal are ignored and specifically rejected in rural areas. The policephalic direction pointed by the decision-makers is regarded as a vision that put traditions into question. What motivates Carbonnier to speak his mind in these terms : ''you have to legiferate in trembling'' (Carbonnier quoted by Ibrahima Ka 2015 : 10). This legiferation is all the more important as in '' 2014 80 % of women in Senegal do not have access to land exploitation'' (Sambakhé 2015 : 6)

The commendable work of the National Commission and the significant other measures put forward in the field of land preocupation have come out with some non-negligent results. However, that close watch on the isue doesn't keep the reformists's stay out of troubles related to tellurian twinge. Zakaria Sambakhé furthers the point : ''land governance has brought positive changes in Senegal, nevertherless, it is undeniable to state that the access of land for women and young people remain problematical'' (Sambakhé 2015 : 6). To overturn the reek, some Senegalese thinkers around the Mouvement Tellurian Rights and Evennes of Opportunity fiercely mobilize themeselves against the socio-cultural attrative forces that hinder women advancement. They bolster women's applications for land possession in the top qualified authorities. Besides, given that women are not well represented in the distribute administrative local powers, they, as well, condemn egotist attitude of male decision-makers, who are overly preocupied with thmeselves and their needs only. Ndeye Coumba Diouf highlights: ''customary beliefs even perpetuate themeselves in municipal of local authorities brushing off women interess'' (Ndeye Coumba Diouf 2015 : 4).

Land being a rare and non-renewable ressource, its access is becoming more and more problematical, specifically in African countries in which the rate grouth follows an ascending curl. In Senegal, the National Council of Concertation and Cooporation of Rural Population (NCCRP) develops a programme of national rounds to sensitize farmers' co-operative organizations on the necessity to abide by the 2012 land law, integrating women in landed owenership for successful achievements of Milenieum Objectives in the domain of food security. Their standpoint is backed up by the Kilimandjaro Initiative which places women at the center of all landed policies in Senegal. According to its

© 2017 Global Journals Inc. (US)

initiators, through the voice of Ndiouk Lindor Mbaye the National Statistics reveals that in 2015 52% of the national population are women and 90% of domestic and social charges are supported by women. (…). Inspiste of this fact, they are still deprived of any rights to possess land and have a full right of exploitation and owenership'' (Ndiouk Lindor Mbaye 2015 :2)

In one of the incidences of women-led land reforms struggle, one of the most famous exemplified women, Marième Sow, moreover director of the NGO ENDA Pronat (Dakar), lauched in 2015 the famous and sticking slogan : ''All lands to all women''. This hearted gathering cry has not echoed, so far, in the deaf ears of the gatekeepers of traditions. Hence the necessity to deepen the intellectual debate and the juridical reflexion to come out with stronger and more efficient solutions.

IV. Resolving Land-Related Tensions

In many african countries agriculture is said to be the engine of the development process. It elevates land to the file of the mother of solutions to the evil wrongs that turn down urban and rural communities. So land is the backbone of the different steps of social and economic prosperity. However, women in Africa in general and in Senegal in particular sob out their difficulties to be part and parcel in the land exploitation and ownership. To put down such a situation, it appears necessary to think out some key measures that will open a new page in a new book for new women rights in the field of agriculture.

Every law has its meanings inside the intervals of expectations of citizens. The constitutional law that opens the world of possibilities and equality for men and women, in couple with the presidential decrees and definite supression of traditional law, may lead to a rising up of barricaded groups that will reject, in an unembellished manner, any modern law that will aim at organizing land management.

To avoid a bipolarization of the agrarian actors, it proves much important to work in a harmonous marriage between traditions and modernity. To achieve such an objective, it will be necessary to define a participative method that will combine actions of the different camps in order to produce a result stronger than the juridical initiatives of political powers. For the sake of complementary and synergy, the egotist side of the customs (men only), has to be amended so as to welcome women in its periphery. All the same, the authoritative side of the modern law (customs at the foot), has to be improved into an embrassement with the roots of traditional values. In so doing, contradiction will be turned into a body of law, making whole. Futhermore, the social rules that are shaped out to manage land property should be analysed and modernized to lift away constraints that unbalanced opportunities and right-owenerships between men and women. The latter should be protected juridically in their marital engagement by laws that guarantee their fruition of land possession inside and outside marital links.

In A world where complex phenomena impact on economic realities, to deal with landed question required a global approach that will center the point on women's issues in nation's preocupations. In Senegal, the fair attribution of land must bear political, social and economic strenches. Indeed, the notion of parity in professional fields and sphere of powers should be full applied ; what can free the female gentry and allows them to climb the stairs that lead to the circlet of the selected few of decision-makers. The government should bear the top hat of power, to play the lightening conductor's role, in proctecting undefenseless social groups. Its leardership and agenda in public policies should result to the suppression of leonine land shares and controls in rural Senegalese traditional societies.

A principal of equality and equity between male and female sexes must be harmonized with customs realities, strongly constitutionalized and be fully applied in all regions and among all ethnic groups. A new constitutionalization of sexospecifities would, as well, be a life buoy for women emancipation, indeed. To make this emancipation sustainable, women must organize themeselves into Associations of Economical Interests, strong and inclusive enough to buy or to lease lands for exploitation. In so doing, they will head foward agribusiness and develop industrial fabrics. What will give them opportunities to get micro-credits to further the funding of their communal projets. Such collective businesses will lay ground women's independence and therefore establish equality and jusce for the sake of women dignity. Such a standpoint must be fortified by a creation and enforcement of a female parliamentary network that will define and defend women empowerment projet.

Civil societies and NGO should play a hiphen role between the government and the populations. That short line role may enable to facilitate experimentation of new laws and shed light on the entanglement between the local and the global, the political and the economic. Female forums and women's networks must be initiated and animated through the guide line and the leg up of civil societies that should organize and supervise women efforts in their field of emancipation. Besides, university researchers should better hit the nail on the matter to give women intellectual means and capacities to elaborate law advocacy in places like the Social and Economic Council, the High Council of Local Powers, The Commission of Territories Management, etc.

For a better access to land information, network of solidarity and sensitization are to be defined out to reinforce women's capacities to analyse and understand laws and legislation related to land issues and female empowerment. It is in this field that the literacy in local

© 2017 Global Journals Inc. (US)

language and the vocational training of women appear as unaliable rights that are compulsory for habilitation of the female sex, who, furthermore, has to move from a yes-woman to a yes and no-woman decision-maker. Indeed, to stop any form of marginalization women are victim of, they must be educated and sensitized about their rights on land matters. The female gentry and educated few women, who are in the ringside seats of political and economic fields, must stand off the back foot to speak in the name of odds and sods that are ridden roughshod over by the too labour intensive rough-and-tumble activities.

Marabouts and cheftency, who control social, religious and traditional powers, must be invited and welcome in the decision process to modernize customary laws. They are hierach that benefit from people adherence, respect and consideration. Their recommandations are honorablly respected in every one centimer in their length and width. So, to get them give adhrerence to women's access to land, means to take advantage of a determing boost to purpose achievements.

Communication is uphill and downstream of any mainstream projet. To take the lead in female empowerment process, women must be in very close cooperation with media to ease gender promotion. The exemplified work that has been done by FEM FM, a radio channel which belongs to the famous female singer, Coumba Gawlo Seck, is a major step toward goals achievements. Indeed, senegalese women had been deprived of the right of mind-vocing for so long. Tradition stood as gags that muzzled female voices. ''the hen has no right to cackle and pluck in the cock's house'' ; ''public talk are by men and for men'' ; ''female loin cloth is just good for the marriage bed'' are some sayings that put on surface the masculine and repressive character of traditions towards women. Today, with the development of media (radio and Tv channels, internet and social networks), roles are being overturned and the bridle of silence brushed away to give women the opportunity to get educated so as to enclose hands in the combat against poverty.

V. Conclusion

Bygonedays values and achievement cannot, by no means, be the references for solutions. Today, it is clearly noticed that a fossilised society is a society condemned to degererate. Senegal is experiencing a radical change as witnessed by the manifold of ideas scattered around it, and the richness of its human ressources which constitute its greatest asset in the struggle against poverty and for the institution of a lasting development.[i] (The National Action Plan for Senegalese Women 1997 2000).

This assertion, full of insightfulness highlights enough the weightiness of time being in the combat against female discrimination. An ojective self examination of our cultural values and religious stands and belongings is beyond necessity. Social justice and economic progress ring the bells of modernity to appeal to women's emmancipation and empowerment throughout the world.

It is hightime that top political decision-makers, hand in hand, with local power authorities, NGOs, Civil societies, organizations of Human Rights defenses, Intellectuals, in a one and all position, stood up to vocalize and defend women's interests. Enough means are to be dedicated to the education and the training of women to lift, once for all, the sharp reefs that impede the fair sex to head along the road of progress and economic independense.

Holders of traditions and political powers are, in an action-oriented debate, to talk to each other into a collective solution that will keep communities rooted in their customs, but open to the new order of modernity and gender fairness. A common agenda has to be defined to winkle the hen out of the barnyard and shape an adequate and deserved seat for her on reception desk.

In a worldwide economic context dominated by the jungle law, the contribution of women in the developing process in African countries like Senegal should be furthered and valorized. And for that, we voice our mind through a deep and heatedly cry : one woman, one piece of land. They are and must remain citizens through and through and not just partially as they are oriented to be in some ethnic groups in Senegal.

Notes

1. Department of forecasting Statistics, Senegalese Ministry of the Economy, Finance and Planning
2. Department of forecasting Statistics, Senegalese Ministry of the Economy, Finance and Planning
3. Ngoné Diop Tine & Mohamadou Sy. 2003. '' Women and Laand in Africa : A case Study from Senegal'', In *Women and Land in Africa : Culture, Religion and Realizing Women's Rights*. Cape Town, David Philip Publishers, p.208.
4. Department of forecasting Statistics, Senegalese Ministry of the Economy, Finance and Planning
5. Ngoné Diop Tine & Mohamadou Sy. 2003 Women and Laand in Africa : A case Study from Senegal''. *Op.cit*., p.208.
6. Department of forecasting Statistics, Senegalese Ministry of the Economy, Finance and Planning the National Agency of Statistics and Demongraphy, 2014
7. Department of forecasting Statistics, Senegalese Ministry of the Economy, Finance and Planning
8. Zakaria Sambakhé. 2015. *ONG Actionaid Sénégal*, n°°82, p.6.

© 2017 Global Journals Inc. (US)

9. Marame Coumba Seck. 2015. *L'Accès des femmes à la terre en Afrique : Les coutumes sociologue entravent le processus*. Fla, eafrique, p.2. the National Agency of Statistics and Demongraphy, 2014
10. Mame Woury Thioub. 2015. *Pladoyer – Accès au foncier : les femmes rurales disent non à la discrimination*.
11. Ngoné Diop Tine & Mohamadou Sy. '' Women and Laand in Africa : A case Study from Senegal''. *Op.cit*., p.208.
12. V. Plumwood. 1992. ''Feminism and Ecofeminism : Beyond the Dualistic Assumption of Women, Men and Nature''. In the *Ecologist*, vol.22, n° 1, Newton, p.13.
13. Fatou Sow. 2004. ''Les Relations de genre dans l'environnement'' In *Sexe, Genre et société*. Dakar : Karthala, p.254.
14. Brigitte Guigou. 2000. *La Gestion de la terre en pays Sereer Siin*. Dakar: L' Harmattan, p. 191.
15. Sylvia Tamale. 2004. ''Gender Trauma in Africa : Enhancing Women's Links to Ressources'' In *Gender, Economies and Entitlement in Africa*. Dakar : Graphiplus, p.23.
16. *Ibid*., p.25.
17. *Ibid*., p.185.
18. Thierry Michalon. 1984. *Quel etat pour l'Afrique.* Paris : L'Harmattan, p.86.
19. Fatou Sow. 2004. ''Les Relations de genre dans l'environnement''. *Op.cit*., p.253.
20. Val. Plumwood. 1992. ''Feminism and Ecofeminism : Beyond the Dualistic Assumption of Women, Men and Nature''. In the *Ecologist*, vol.22, n° 1, Newton, p.8.
21. Babacar Kanté, quoted by Ibrahima KA. '' Les Enjeux de la réforme fonciière au Sénégal'' *In Agriinfos Mensuel d'inforMations agricoles et rurales*- N° 82, 2015.
22. National Official Journal
23. Michel Pescay.1998. *Transfrmation des ststèmes fonciers*, pp.131-132.
24. Zakaria Sambakhé. 2015. *ONG Actionaid Sénégal*, n°°82, p.6.
25. Ndeye Coumba Diouf. 2015. ''Genre et Foncier : une équation non encore résolue au Sénégal'' *InAgriinfo*, n°82, p.4.
26. Ndiouck Lindor Mbaye. 2015. ''FONCIER : Une rencontre se penche sur le problème de l'accès des femmes rurales à la terre''. *InAgriinfo*, n°82, p.2.
27. Ministry in charge of Children and Family matters quoted in the *National Action Plan for Senegalese Women 1997 2000*, p.15.

References Références Referencias

1. Amott, Therresa & Mattaeri, Julie. 1996. *Race, Gender, and Work*. Boston : South End Press.
2. Antrobus, Peggy. 2004. *The Global Women's Mouvement : Origins, Issues and Strategies*. Dhaka: University Press.
3. Department of forecasting Statistics, Senegalese Ministry of the Economy, Finance and Planning.
4. Droy, Isabelle. 1990. *Women and Rural Development*. Paris Karthala.
5. Fall, Diop Fatou. 2012. *L'Accès des femmes à la terre au Sénégal, un chemin escarpé*. Dakar : AGRIDAPE.
6. Guigou, Brigitte. *La Gestion de la terre en pays Sereer Siin* (Sénégal)
7. Hurting, Marie-Claude et all. 1991. *Sex et genre : de la hiérachie entre les sexes*. Paris : Karthala.
8. Ka, Ibrahima. 2015.''En jeux de la réforme foncière au Sénéga'' In *Afriinfo Mesuell d'information agricoles et rurales*, n°82.
9. Plumwood, V., ''Feminism and ecofeminism : beyond the dualistic assumption of women, men and nature'', In *Ecologist,* vol.22, n° 1 Jan/Feb., Sturminster, Newton.
10. Michalon, Thierry. 1984. *Quel etat pour l'Afrique.* Paris : L'Harmattan.
11. Ministry in charge of Children and Family matters cited in the National Action Plan for Senegalese Women 1997 2000.
12. Pescay, Michel. 1998. ''Transformation des systèmes fonciers.
13. Sambakhé, Zakaria. Mai 2015. ONG Actionaid Sénégal. N°82.
14. Seck, Coumba Marame. Mai 2015. *L'Accès des femmes à la terre en Afrique :. Les coutumes sociologue entravent le processus*. Fla, eafrique.
15. Sow, Fatou. 2004. ''Les Relations de genre dans l'environnement'' *InSexe, Genre et société*. Dakar : Karthala.
16. Sydie, R. A. 1994. Natural Women, Cultured Men. Vancouver : ABC Press.
17. Thioub, Mame Woury. Décembre 2015. ''Pladoyer – accès au foncier : les femmes rurales disent non à la discrimination''.
18. Tine Diop, Ngoné & Sy, Mohamadou. 2003. ''Women and Laand in Africa : A case Study from Senegal'', In *Women and Land in Africa : Culture, Religion and Realizing Women's Rights*. Cape Town, David Philip Publishers.
19. Yao-Annan, Elizabeth et all. 2004. *Gender, Economies and Entitlement in Africa*. Dakar : CDESRIA.

© 2017 Global Journals Inc. (US)

This page is intentionally left blank

© 2017 Global Journals Inc. (US)

Global Journal of HUMAN-SOCIAL SCIENCE: E
Economics
Volume 17 Issue 6 Version 1.0 Year 2017
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-460x & Print ISSN: 0975-587X

Estimation Bayésienne D'un Modèle DSGE Pour une Petite Economie Ouverte: Cas De la RD Congo

By Gilles Bertrand UMBA

Resume- Ce travail a eu pour objectif d'estimer un modèle DSGE en économie ouverte pour la RD Congo en se référant aux techniques bayé siennes pour les données trimestrielles allant de 2002q1 à 2016q4 en vue d'analyser les relations entre les principales variables macroéconomiques et simuler l'impact de quelques principaux chocs sur leur évolution. Les résultats d'estimation du modèle ont été globalement satisfaisants, en particulier en ce qui concerne les tests de convergence de Brooks et Gelman (1998). Les résultats qui ressortent de l'analyse de la décomposition historique ont révélé l'influence des chocs sur le taux de change, sur la production, des chocs de productivité interne et externe comme principaux déterminants de l'évolution du taux directeur et du taux d'inflation domestique. L'analyse de la décomposition historique de la variation du taux de change a indiqué l'influence notoire des chocs du taux de change et de politique monétaire dans l'explication de la dépréciation du taux de change durant les trois derniers trimestres de l'année 2016.

Mots-cles: economie ouverte, modèles dynamiques stochastiques d'equilibre général, techniques bayésiennes, nouvelle macroéconomie keynésienne.

GJHSS-E Classification: JEL Code: C32, C51, E52, F41



Strictly as per the compliance and regulations of:

© 2017. Par Gilles Bertrand UMBA. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Estimation Bayésienne D'un Modèle DSGE Pour une Petite Economie Ouverte: Cas De la RD Congo

Par Gilles Bertrand

Résumé- **Ce travail a eu pour objectif d'estimer un modèle DSGE en économie ouverte pour la RD Congo en se référant aux techniques bayé siennes pour les données trimestrielles allant de 2002q1 à 2016q4 en vue d'analyser les relations entre les principales variables macroéconomiques et simuler l'impact de quelques principaux chocs sur leur évolution. Les résultats d'estimation du modèle ont été globalement satisfaisants, en particulier en ce qui concerne les tests de convergence de Brooks et Gelman (1998). Les résultats qui ressortent de l'analyse de la décomposition historique ont révélé l'influence des chocs sur le taux de change, sur la production, des chocs de productivité interne et externe comme principaux déterminants de l'évolution du taux directeur et du taux d'inflation domestique. L'analyse de la décomposition historique de la variation du taux de change a indiqué l'influence notoire des chocs du taux de change et de politique monétaire dans l'explication de la dépréciation du taux de change durant les trois derniers trimestres de l'année 2016.**

Mots-clés: economie ouverte, modèles dynamiques stochastiques d'equilibre général, techniques bayé-siennes, nouvelle macroéconomie keynésienne.

I. Introduction

Les chocs affectant l'économie ont depuis toujours été d'importants déterminants dans l'explication de l'évolution future des variables macroéconomiques internes. Ceux affectant l'offre aussi bien que la demande peuvent entrainer des changements imprévisibles de l'offre globale et de la demande globale et nécessitent donc une action en termes de politique macroéconomique. L'autorité monétaire effectue continuellement une évaluation de la source et de l'ampleur des chocs économiques aussi bien extérieurs qu'intérieurs, et elle agit pour atténuer leur impact. De manière générale, l'action de cette dernière consiste principalement dans le maniement de ses instruments de politique monétaire, principalement le taux directeur. Ce qui affecte consécutivement les variables cibles de la politique monétaire.

Toutefois dans la pratique, aucune autorité monétaire n'a un ensemble d'informations parfaites au moment où il détermine le taux directeur. Dans un contexte d'informations imparfaites, les attentes des banques centrales quant à l'offre et aux chocs du côté de la demande peuvent ne pas correspondre à leurs valeurs réelles, contrairement à l'information parfaite, dans laquelle les banques centrales peuvent mieux anticiper, et donc compenser, tous les chocs. Cependant, une incertitude sur les mécanismes de transmission et sur l'impact réel de la réponse de la Banque Centrale.

Des profonds changements dans la théorie macroéconomique ont commencé à influencer la conception et la mise en œuvre de la politique monétaire aussi bien au sein des pays avancés que ceux en développement. Ces changements dans la théorie macroéconomique et la modélisation économétrique ont offert la possibilité aux banquiers centraux de concevoir de meilleures pratiques en vue d'obtenir des résultats de politique de stabilisation contra cycliques plus efficaces.

Avec la critique de Lucas (1976), les modèles économétriques traditionnels ont été fortement remis en cause du fait que leurs coefficients ne changent pas en cas de changement des politiques et que, par conséquent, ils étaient structurellement invariants et que les politiques basées sur pareils modèles étaient susceptibles d'être biaisées. Avec les travaux de Kydland et Prescott (1982), les modèles de cycles réels (Real Business Cycles) basés sur les fondements microéconomiques ont été reconnus comme susceptible de décrire correctement les fluctuations économiques pour l'économie américaine. Toutefois ces modèles n'ont pas joué un rôle essentiel en vue d'expliquer les actions de politique monétaire. Cette lacune entre la nouvelle perception de la théorie macroéconomique et la pratique de la politique monétaire a conduit les économistes nouveaux keynésiens à souligner l'importance des rigidités nominales et réelles et le rôle de la politique monétaire en vue de stabiliser les fluctuations économiques à court terme.

Les modèles résultant de cette nouvelle synthèse néoclassique ont été qualifiés de nouveaux keynésiens et soulignent que les actions de la politique monétaire ont des effets non-triviaux sur le cycle économique et les variables réelles. Les caractéristiques

Author: UMBA, e-mails: bertrand.umba@bcc.cd, gilles.umba2014@gmail.com

© 2017 Global Journals Inc. (US)

essentielles de ces modèles ont été étudiés par Gali et Gertler (1999) et autres. Ces modèles fournissent les fondements théoriques des modèles d'équilibre général dynamique stochastique (DSGE) préconisés dans ce travail en d'analyser l'évolution des variables macroéconomiques pour la RD Congo.

Au cours des années, beaucoup d'éléments ont été incorporés par des chercheurs pour que ces modèles simulent convenablement les variables du monde réel. Néanmoins, l'applicabilité de ces modèles à l'analyse des politiques a été limitée par la difficulté d'estimer leurs paramètres à partir des données réelles. Par conséquent, les chercheurs ont entièrement compté sur l'étalonnage des paramètres où les paramètres sont basés sur certaines propriétés théoriques de l'économie ou empruntés à d'autres études économétriques ou à des modèles déjà calibrés.

La calibration a cependant conduit à un débat prolongé parmi les macro-économistes. En effet, plusieurs argumentent que la calibration est une méthode qui discipline le choix des paramètres pour un modèle en utilisant ses propriétés de court et de long termes. Toutefois, beaucoup soutiennent qu'il s'agit d'une méthode informelle qui ne permet pas d'évaluer la qualité de l'ajustement ni d'établir un critère de comparaison entre les modèles. Avec les développements récents influencés par les travaux de Smet et Wouters (2003 et 2007) et Christiano et al (2005), les techniques bayésiennes ont été de plus en plus utilisées en vue de pallier aux faiblesses de la calibration Ce qui a rendu de plus en plus courant l'estimation des modèles de petite et moyenne taille être pour différents pays.

Parmi les études faites pour les pays d'Afrique subsaharienne, Peiris et Saxegaard (2007) ont fait une première tentative d'estimation des modèles DSGE en les adaptant à quelques caractéristiques des pays d'Afrique Subsaharienne pour l'analyse de la politique monétaire du Mozambique. Pour ce faire, ces derniers recourent à l'approche bayésienne en utilisant des données trimestrielles allant de 1996 à 2005 pour 18 variables macroéconomiques fondamentales. En outre, les auteurs incluent les frictions sur le marché du crédit dans le modèle en supposant l'existence d'une prime sur les taux de dépôt et une version de la fonction de réaction de la politique monétaire développée dans les travaux de Adam et al (2009). Les auteurs concluent que les pays d'Afrique subsaharienne à l'instar du Mozambique sont enclins à de nombreux chocs exogènes et les résultats suggèrent qu'un ancrage du taux de change et moins efficace qu'un ciblage d'inflation en raison de la volatilité des taux d'intérêts.

Alege (2009) a eu à examiner les sources de la croissance économique au Nigeria en recourant à un modèle de cycle réel dans l'esprit des modèles DSGE. A cet effet, trois types de chocs ont été considéré à savoir le choc relatif à l'offre de monnaie, le choc technologique et celui relatif à l'offre d'exportation. En utilisant les techniques bayésiennes, les résultats suggèrent que l'économie du Nigéria est influencée ainsi bien par les chocs nominaux que ceux réels qui affecte son économie. Ces résultats ont également révélé que l'économie du Nigéria est fortement dépendante de leurs produits d'exportation, le pétrole en particulier.

Garcia (2010) a développé un modèle équilibré Dynamique général DSGE-NK en vue d'analyser la pertinence de la relation de la courbe de Phillips pour l'économie nigériane. Le modèle a incorporé des caractéristiques prospectives (telles que les anticipations d'inflation) dans la fonction d'objectif de politique monétaire de la Banque Centrale du Nigeria. Estimant avec les données trimestrielles nigérianes de 1995 à 2007, les résultats justifient les actions politiques actuelles du CBN pour contrôler l'inflation. En effet, l'action sur le taux directeur est suffisamment fort pour réduire les pressions inflationnistes et ramener l'activité économique à un niveau d'équilibre. En outre, ce dernier renseigne que la Banque Centrale devra consentir à une perte de croissance de 3% pour réduire le taux d'inflation de 10%.

À la suite de Garcia (2010), le modèle DSGE d'Adebiyi et Mordi (2016) a appliqué des techniques d'estimation bayésiennes pour d'évaluer l'effet pass-through du taux de change sur les prix domestiques. Pour ce faire, ces derniers utilisent des données trimestrielles allant de 1990 à 2011. L'étude a révélé que le taux d'inflation réagit positivement et significativement au taux de change dans le court terme. Tout particulièrement, ces derniers trouve un faible niveau de pass-through qui va de 0.09 pour le premier trimestre à 0.18 pour le deuxième trimestre puis retombe à 0.07 et 0.01 respectivement durant le troisième et le quatrième trimestre. L'auteur attribue ces performances notamment à une plus grande crédibilité de la politique monétaire au Nigéria ainsi qu'à un changement important dans la structure commerciale.

Pour l'Afrique du Sud, Steinbach, Mathuloe et Smit (2009) ont utilisé un modèle DSGE-NK en vue d'analyser les interactions de l'économie avec le reste du monde en utilisant une approche bayésienne pour les données trimestrielles allant de 1990 à 2007. Le modèle utilisé par les auteurs considère deux économies à savoir celle domestique représentée par l'Afrique du Sud et celle étrangère englobant le reste du monde. Tout d'abord, l'économie domestique a été modélisée comme une petite économie ouverte en prenant en compte un pass-through incomplet du taux de change. Le modèle a été adapté pour inclure une rigidité réelle sous la forme de la formation d'habitudes externes dans la consommation et des rigidités nominales supplémentaires grâce à une indexation partielle des prix intérieurs à l'inflation passée, au prix échelonné, au salaire ajusté à la Calvo (1983) et à une

© 2017 Global Journals Inc. (US)

indexation partielle de les salaires à l'inflation passée des prix à la consommation. En outre, le reste du monde a été supposé avec les mêmes caractéristiques qu'une économie fermée en considérant que ce dernier ne serait pas affecté par les développements dans l'économie sud-africaine.

Houssa et al (2009) ont utilisé un modèle DSGE en économie ouverte, similaire à la version DSGE développée par Adolf son et al (2007) et Christiano, et al (2005), pour analyser la Politique monétaire, particulièrement du Ghana. Pour ce faire, ces derniers recourent à l'approche bayé sienne en utilisant les données trimestrielles allant de 1981 à 1997. Les auteurs trouvent que les chocs technologiques permanents sont la plus importante source de fluctuations de l'activité économique. En outre, ces derniers montrent également l'importance des chocs de politique budgétaire dans l'explication des variations des variables du modèle. La règle de politique monétaire estimée indique un accent plus orientés vers les fluctuations de l'output en ignorant l'inflation, les importations et les exportations.

A notre connaissance, la seule étude empirique utilisant une approche bayésienne des modèles DSGE pour la RD Congo est celle de Tsasa (2012) qui utilise un cadre d'analyse nouvelle keynésienne en économie fermée en vue d'effectuer un diagnostic de la politique monétaire. Pour ce faire, ce dernier procède à l'estimation dudit modèle en considérant des données trimestrielles allant de 2002 à 2011. Le modèle utilisé comporte les trois relations macroéconomiques standard à savoir : la relation IS dynamique, la courbe de Phillips nouvelle Keynésienne et la règle de politique monétaire. Les résultats obtenus à l'issue de ces investigations révèlent notamment un écart de production peu sensible aux variations du taux d'intérêt et une inflation courante plus sensible à l'inflation future anticipée.

Ce travail quant à lui est un essai d'estimation par approche bayésienne d'un modèle DSGE sur base du celui initialement formulé par Gali et Monacelli (2002) en vue d'analyser les interactions entre les principales variables macroéconomiques dans le cadre d'une petite économie ouverte. Ainsi, les résultats de cette étude peuvent être exploitées en vue de faire avancer les discussions pour parvenir à un cadre d'analyse de la politique monétaire en RD Congo qui donnerait des orientations utiles aux décideurs de politique monétaire.

La suite du présent travail est structurée comme suit : La section 2 décrira le cadre d'analyse en économie ouverte utilisée pour modèle DSGE en détail. La section 3 décrira brièvement la technique bayé sienne utilisée dans le cadre de ce travail en vue d'estimer le modèle DSGE en économie ouverte (DSGE-SOE) proposée. La section 4 exposera les résultats empiriques du modèle DSGE-SOE en utilisant les techniques bayé siennes. Et pour finir, la section 5 présentera les conclusions générales du présent travail.

II. Présentation Du Modèle Utilisé

Le modèle utilisé dans le cadre de ce travail s'inspire essentiellement de celui élaboré par Gali et Monacelli (2002) en vue d'analyser la politique monétaire en considérant une petite économie ouverte. Plusieurs travaux se sont inspirés de ce cadre de référence en vue d'analyser les fluctuations des variables macroéconomiques. Quoiqu'il soit vrai que les modèles de cette famille ont largement évolué depuis les travaux de ces derniers comme illustré ci-haut, le cadre d'analyse utilisé offre toujours l'avantage d'appréhender la dynamique des variables macroéconomiques de l'économie étudiée et contribue à établir des fondements solides pour des analyses futures plus approfondies.

a) Comportement des ménages

L'objectif du consommateur est de maximiser la valeur anticipée de la somme actualisée des fonctions utilité relatives à chaque période:

$$E_0 \sum_{t=0}^{\infty} \beta^t \left[\frac{{C_t}^{1-\sigma}}{1-\sigma} - \frac{{N_t}^{1+\varphi}}{1+\varphi} \right] \quad (1)$$

Où N_t indique les heures de travail et C_t est un indice de consommation composite défini comme suit:

$$C_t = \left[(1-\alpha)^{\frac{1}{\eta}} {C_{H,t}}^{\frac{\eta-1}{\eta}} + \alpha^{\frac{1}{\eta}} {C_{F,t}}^{\frac{\eta-1}{\eta}} \right]^{\frac{\eta}{\eta-1}} \quad (2)$$

Avec $C_{H,t}$ et $C_{F,t}$ étant les indices de consommation des biens domestiques et ceux des biens étrangers. Ces indices sont des aggrégations des quantités de biens consommés de ces deux types de biens et sont définis comme suit:

$$C_{H,t} = \left(\int_0^1 C_{H,t}(i)^{\frac{\varepsilon-1}{\varepsilon}} \right)^{\frac{\varepsilon}{\varepsilon-1}} \quad ; \quad C_{F,t} = \left(\int_0^1 C_{F,t}(i)^{\frac{\varepsilon-1}{\varepsilon}} \right)^{\frac{\varepsilon}{\varepsilon-1}}$$

Notons que η mesure l'elasticité de substitution entre les biens domestiques et ceux étrangers. L'elasticité de substitution entre les biens dans chaque catégories et donnée par ε. Nous supposons que $\eta > 0$ et $\varepsilon > 1$.

La maximisation de la contrainte de (1) est sujet à la séquence de contraintes inter-temporelles de la forme suivante:

$$\int_0^1 \left[P_{H,t}(i) C_{H,t}(i) + P_{F,t}(i) C_{F,t}(i) \right] di + E_t \{ Q_{t,t+1} D_{t+1} \} \leq D_t + W_t N_t + T_t \quad (3)$$

© 2017 Global Journals Inc. (US)

Pour $t = 0,1,2,\ldots$ où $P_{H,t}(i)$ et $P_{F,t}(i)$

dénote les prix des biens i respectivement domestiques et étrangers, D_{t+1} est le prix nominal pour la période $t+1$ du portefeuille detenu à la fin de la période t, lequel inclut les parts des firmes, W_t est le salaire nominal, et T_t fait référence aux transferts et taxes forfaitaires. Toutes les variables précitées sont exprimées en unité de monnaie nationale. $Q_{t,t+1}$ est le facteur d'actualisation stochastique des rendements en terme nominale. Nous supposons que les ménages ont accès à un ensemble complet de créances éventuelles. L'allocation optimale de toute dépense donnée dans chaque catégorie donne les fonctions de demande suivantes:

$$C_{H,i}(i) = \left(\frac{P_{H,t}(i)}{P_{H,t}}\right)^{-\varepsilon} C_{H,t}\ ; \quad C_{F,i}(i) = \left(\frac{P_{F,t}(i)}{P_{F,t}}\right)^{-\varepsilon} C_{F,t} \tag{4}$$

Pour tout $i \in [0,1]$ où $P_{H,t} \equiv \left(\int_0^1 P_{H,t}(i)^{1-\varepsilon} di\right)^{\frac{1}{1-\varepsilon}}$ et $P_{F,t} \equiv \left(\int_0^1 P_{F,t}(i)^{1-\varepsilon} di\right)^{\frac{1}{1-\varepsilon}}$ sont les indices de prix pour les biens domestiques et importés.

L'allocation optimale des dépenses entre biens domestiques et étrangers implique de ce fait que:

$$C_{H,t} = (1-\alpha)\left(\frac{P_{H,t}}{P_t}\right)^{-\eta} C_t\ ; \qquad C_{F,t} = (1-\alpha)\left(\frac{P_{F,t}}{P_t}\right)^{-\eta} C_t \tag{5}$$

Où $P_t \equiv \left[(1-\alpha){P_{H,t}}^{1-\eta} + \alpha {P_{F,t}}^{1-\eta}\right]^{\frac{1}{1-\eta}}$ représente l'indice de prix à la consommation. Notons que, lorsque les indices de prix pour les biens domestiques et étrangers sont égaux, le paramètre α représente l'indice d'ouverture. En prenant en compte la condition d'optimalité ci-dessus, la contrainte budgétaire inter-temporelle devient:

$$P_t C_t + E_t\{Q_{t,t+1} D_{t+1}\} \leq D_t + W_t N_t + T_t \tag{6}$$

Les conditions d'optimalité peuvent ainsi s'écrire comme suit:

$$C_t^{\sigma} N_t^{\varphi} = \frac{W_t}{P_t} \tag{7}$$

$$\beta R_t \left(\frac{C_{t+1}}{C_t}\right)^{-\sigma} \left(\frac{P_t}{P_{t+1}}\right) = 1 \tag{8}$$

$$\text{Avec } R_t^{-1} = E_t\{Q_{t,t+1}\}$$

En forme log-linéaire, les relations (7) et (8) peuvent-être réécrites comme suit:

$$w_t - p_t = \sigma c_t + \varphi n_t$$

$$c_t = E_t\{c_{t+1}\} - \frac{1}{\sigma}(r_t - E_t\{\pi_{t+1}\} - \rho)$$

Où les lettres en minuscule désignent les variables log-linéarisées. $\rho \equiv -\log\beta$ et $\pi_t = p_t - p_{t-1}$ désignent respectivement le taux d'actualisation temporel et le taux d'inflation.

Dans le reste du monde, il est supposé un ménage représentatif faisant face à un problème identique à celui évoqué ci-haut. De ce fait, une solution similaire à celui présenté ci-haut s'obtiendrait à cet effet. La taille de la petite économie ouverte est également supposée négligeable par rapport au reste du monde lequel nous incite à considérer celle-ci avec les caractéristiques similaires à une économie fermée.

A partir de ce stade, plusieurs hypothèses et définitions seront introduites en vue de découler un nombre d'identités qui sont explicités dans les lignes qui suivront. En considérant que $P_t = P_{H,t}^{1-\alpha} P_{F,t}^{\alpha}$ lorsque $= 1$, nous obtenons l'expression log-linearisée suivante autour d'un état d'équilibre où $P_{H,t} = P_{F,t}$ comme suit:

$$p_t \equiv (1-\alpha)p_{H,t} + \alpha p_{F,t} = p_{H,t} + \alpha s_t \tag{10}$$

Où $s_t \equiv p_{F,t} - p_{H,t}$ est l'expression en logarithme du terme de l'échange. Il s'en suit que la relation entre l'inflation domestique et l'inflation globale est donné comme suit:

$$\pi_t = \pi_{H,t} + \alpha \Delta s_t \tag{11}$$

Cette relation établit que l'écart de deux mesures de l'inflation est proportionnel à la variation en pourcentage du terme de l'échange, avec un coefficient de proportionnalité donné par l'indice d'ouverture α.

En outre, nous supposons la loi du prix unique s'applique c'est-à-dire que $P_{F,t}(i) = \mathcal{E}_t P_{F,t}^*(i)$ pour tout $i \in [0,1]$. $\mathcal{E}_t$ désigne le taux de change nominal et $P_{F,t}^*(i)$ indique le prix du bien étranger i en monnaie étrangère. En intégrant tous les biens et en exprimant sous forme log-linéaire nous obtenons $p_{F,t} = e_t + p_{F,t}^*$. En incluant cette dernière relation dans l'expression désignant le terme de l'échange, nous obtenons:

$$s_t \equiv e_t + p_t^* - p_{H,t} \tag{12}$$

A présent, nous représentons la relation définissant le taux de change réel en logarithme comme suit:

$$q_t = e_t + p_t^* - p_t = s_t + p_{H,t} - p_t = (1-\alpha)s_t \tag{13}$$

La condition de premier ordre évoquée dans la relation (8) est également supposée être vérifiée pour le reste du monde et cette dernière peut être exprimée comme suit:

© 2017 Global Journals Inc. (US)

$$\beta\left(\frac{C_{t+1}^*}{C_t^*}\right)^{-\sigma}\left(\frac{P_t^*}{P_{t+1}^*}\right)\left(\frac{e_t}{e_{t+1}}\right)=Q_{t,t+1} \quad (14)$$

Les relation (8) et (14) nous permettent de dégager la relation ci-dessous:

$$C_t=\vartheta C_t^* Q_t^{\frac{1}{\sigma}} \quad (15)$$

Avec ϑ désignant une constante qui dépend des conditions initiales (données telles que $\frac{\alpha\vartheta}{\alpha^*}=1$). En considérant l'expression logarithmique de la relation (15), nous obtenons:

$$c_t=c_t^*+\left(\frac{1-\alpha}{\sigma}\right)s_t \quad (16)$$

En considérant que les marchés sont complets au niveau mondial, une relation peut être établie entre la consommation domestique, la consommation étrangère et les termes de l'échange. Ainsi, la condition de parité de taux d'intérêt non-couvert peut s'écrire comme suit:

$$E_t\{Q_{t,t+1}[R_t-R_t^*(\mathcal{E}_{t+1}/\mathcal{E}_t)]\}=0$$

Cette relation peut être linéarisée par rapport à un état d'équilibre pour obtenir l'expression suivante:

$$r_t-r_t^*=E_t\{\Delta e_{t+1}\} \quad (17)$$

En combinant l'expression linéarisée du terme de l'échange à la relation (17), nous obtenons l'équation différentielle stochastique ci-après:

$$s_t=(r_t^*-E_t\{\pi_{t+1}^*\})-(r_t-E_t\{\pi_{H,t+1}\})+E_t\{s_{t+1}\} \quad (18)$$

L'équation ci-dessus peut être résolue de manière récursive vers le futur pour obtenir ce qui suit:

$$s_t=E_t\{\textstyle\sum_{k=0}^{\infty}[(r_{t+k}^*-E_t\{\pi_{t+k+1}^*\})-(r_{t+k}-E_t\{\pi_{H,t+k+1}\})]\} \quad (19)$$

b) Comportement des firmes

i. *Technologie de Production*

Il est supposé que chaque firme produise un bien spécifique en utilisant une technologie de production représentée par

$$Y_t(i)=A_tN_t(i)$$

Où $a_t\equiv\log A_t$ suit le processus autoregressif d'ordre 1 $a_t=\rho_a a_{t-1}+\varepsilon_t$. Ainsi le coût marginal en terme nominal est supposé commun entre les firmes et donné par:

$$mc_t^n=-v+w_t-a_t$$

Où $v=-\log(1-\tau)$, avec τ représentant les subvention d'emploi qui peuvent être accordées par le gouvernement.

Définissons la production agrégée, d'une manière similaire à la production agrégée, ainsi que l'emploi agrégé comme suit:

$$Y_t\equiv\left[\int_0^1 Y_t(i)^{\frac{\varepsilon-1}{\varepsilon}}di\right]^{\frac{\varepsilon}{\varepsilon-1}};\quad N_t\equiv\int_0^1 N_t(i)\,di=\frac{Y_tU_t}{A_t},\ \text{où}\quad U_t\equiv\int_0^1\frac{Y_t(i)}{Y_t}di$$

La production agrégée peut être linéarisée comme suit:

$$y_t=a_t+n_t$$

Le processus de production du reste du monde peut être représentée par une relation similaire en considérant que la technologie suit le processus autorégressif $a_t^*=\rho_a^*a_{t-1}^*+\varepsilon_t^*$ où $\{\varepsilon_t^*\}$ peut être susceptible d'être correlé à ε_t.

c) Fixation des Prix

Il est supposé que les firmes fixent leur prix à la Calvo (1983). De ce fait, une proportion $(1-\theta)$ est uniquement en mesure d'ajuster leur prix à chaque période, avec une probabilité de réoptimiser le prix indépendante du temps passé depuis le dernier changement de prix. La stratégie de prix optimal de fixation de prix par la firme représentative au temps t peut être approximée par l'expression suivante:

$$\bar{p}_{H,t}=\mu+(1-\beta\theta)\textstyle\sum_{k=0}^{\infty}(\beta\theta)^k E_t\{mc_{t+k}^n\} \quad (21)$$

Où $\bar{p}_{H,t}$ denote le nouveau prix fixé en logarithme et $\mu\equiv\log\left(\frac{\varepsilon}{\varepsilon-1}\right)$ qui correspond au logarithme de la marge de prix à l'état d'équilibre. Une règle de fixation de prix similaire peut être obtenue pour les firmes opérant dans le reste du monde.

d) Equilibre

i. *Demande et détermination du produit*

Comme dérivée plus haut, l'équation d'Euler log-linéarisée en considérant leconditions d'efficience de marché $y_t^*=c_t^*$ implique la relation suivante pour le reste du monde:

$$y_t^*=E_t\{y_{t+1}^*\}-\frac{1}{\sigma}(r_t^*-E_t\{\pi_{t+1}^*\}-\rho) \quad (22)$$

En outre, notons $C_{H,t}^*$pour indiquer la consommation mondiale pour le bien domestique i. La condition d'efficience de marché pour une petite économie ouverte requiert que:

$$Y_t(i)=C_{H,t}(i)+C_{H\,t}^*(i)$$

$$=\left(\frac{P_{H,t}(i)}{P_{H,t}}\right)^{-\varepsilon}\vartheta Y_t^*\left[\left(\frac{P_{H,t}}{P_t}\right)^{-\eta}(1-\alpha)Q_t^{\frac{1}{\sigma}}+\left(\frac{P_{H,t}}{\mathcal{E}_tP_t^*}\right)^{-\eta}\alpha\right] \quad (23)$$

© 2017 Global Journals Inc. (US)

En agrégeant la production de biens domestiques i, nous obtenons l'expression ci-après:

$$Y_t = \vartheta Y_t^* \mathcal{S}_t^{\eta} \left[(1-\alpha)\mathcal{Q}^{\frac{1}{\sigma}-\eta} + \alpha\right] \quad (24)$$

Et l'approximation linéaire de la relation (24) est représentée comme suit:

$$y_t = y_t^* + \frac{\omega_\alpha}{\sigma} s_t \quad (25)$$

Où $\omega_\alpha \equiv 1 + \alpha(2-\alpha)(\sigma\eta - 1) > 0$. En particulier, lorsque $\sigma\eta = 1$, nous trouvons que:

$$y_t = y_t^* + \eta s_t \quad (26)$$

En intégrant l'équation (16) dans la relation (25) en utilisant s_t, nous pouvons exprimer la consommation domestique comme étant une moyenne pondérée de la production locale et de celle mondiale lequel donne:

$$c_t = \Phi_\alpha y_t + (1-\Phi_\alpha) y_t^* \quad (27)$$

Où $\Phi_\alpha \equiv \frac{1-\alpha}{\omega_\alpha} > 0$. Lorsque $\alpha = 0$, à l'instar d'une économie fermée, $\omega_0 = 1$, $\Phi_0 = 1$ et par conséquent $c_t = y_t$ pour tout t. Et si nous considérons $\sigma\eta = 1$, les relations (16) et (26) peuvent être combinées en vue d'obtenir:

$$c_t = (1-\alpha) y_t + \alpha y_t^* \quad (28)$$

En réunissant les équations (27), (11) et (25) à travers l'équations d'Euler log-linéarisée, nous obtenons la production domestique exprimée comme fonction des taux d'intérêts réels et de la production mondiale:

$$y_t = E_t\{y_{t+1}\} - \frac{\omega_\alpha}{\sigma}\left(r_t - E_t\{\pi_{H,t+1}\} - \rho\right) + (\omega_\alpha - 1) E_t\{y_{t+1}^*\} \quad (29)$$

Il va de cette relation que le niveau de production d'une petite économie ouverte est une fonction négative du taux d'intérêt réel courant et anticipé. En outre, il est une fonction positive de la croissance mondiale anticipée si $\sigma\eta > 1$ et négative au cas contraire.

En vue de représenter la balance commerciale, notons $NX_t \equiv \left(\frac{1}{Y}\right)\left(Y_t - \frac{P_t}{P_{H,t}} C_t\right)$ pour désigner les exporations nettes exprimé comme étant une fraction de la production à l'état d'équilibre Y. Dans le cas où $\sigma = \eta = 1$, il s'en suit que des relations (15) et (24) $P_{H,t} Y_t = P_t C_t$ pour tout t. Ceci conduit à l'approximation linéaire $nx_t \simeq y_t - c_t - \alpha s_t$ laquelle combinée aux relations (25) et (27) implique que:

$$\begin{aligned} nx_t &= (1-\Phi_\alpha)(y_t - y_t^*) - \alpha s_t \\ &= \frac{\alpha\Lambda}{\omega_\alpha}(y_t - y_t^*) \end{aligned} \quad (30)$$

$$\text{Où } \Lambda \equiv (2-\alpha)(\sigma\eta - 1) + (1-\sigma)$$

En supposant une fois de plus que $\sigma = \eta = 1$, nous avons $nx_t = 0$ pout tout t. D'une manière générale, le signe de la relation entre le différentiel de production et les exportations nettes est ambigu, dépendant du signe de Λ. Lorsque ce dernier est positif, le différentiel de production génère un surplus commercial et inversement si ce dernier est négatif. Λ désigne également l'effet sur les exportations nettes d'un changement du terme de l'échange étant donné $nx_t = \frac{\alpha\Lambda}{\sigma} s_t$. Ainsi ce dernier indiquerait les conditions de Marshall-Lerner.

ii. *Offre: Coût marginal et dynamique de l'inflation*

Il est supposé que la dynamique de l'inflation dans le reste du monde correspond à celui de l'économie ouverte avec un prix fixé à la Calvo. En combinant l'équation (21) à la version linéarisée de la relation décrivant l'évolution du prix agrégée, nous dérivons la relation suivante:

$$\pi_t^* = \beta E_t\{\pi_{t+1}^*\} + \lambda \widehat{mc}_t^* \quad (31)$$

Où $\widehat{mc}_t^* \equiv mc_t^* + \mu$ indique le coût marginal réel exprimé en logarithme, en déviation par rapport à son état d'équilibre $-\mu$ alors que la pente est donnée par $\lambda \equiv \frac{(1-\theta)(1-\beta\theta)}{\theta}$.

Le coût marginal est ainsi donné par:

$$\begin{aligned} mc_t^* &= -v^* + (w_t^* - p_t^*) - a_t^* \\ &= -v^* + \sigma c_t^* + \varphi n_t^* - a_t^* \\ &= -v^* + (\sigma + \varphi) y_t^* - (1+\varphi) a_t^* \end{aligned} \quad (32)$$

Dans la petite économie ouverte, la dynamique de l'inflation domestiques en terme de coût marginal réel est décrite de manière similaire comme suit:

$$\pi_{H,t} = \beta E_t\{\pi_{H,t+1}\} + \lambda \widehat{mc}_t \quad (33)$$

La détermination du coût marginal réel comme fonction de la production domestique au sein de la petite économie ouverte diffère quelque peu de celle en économie fermée en raison de la présence d'un écart entre la production et la consommation, et entre les prix intérieurs et les prix à la consommation. Ce qui donne:

$$\begin{aligned} mc_t &= -v + w_t - a_t - p_{H,t} \\ &= -v + (w_t - p_t) + (p_t - p_{H,t}) - a_t \\ &= -v + \sigma y_t^* + \varphi y_t + s_t - (1+\varphi) a_t \end{aligned} \quad (34)$$

© 2017 Global Journals Inc. (US)

En substituant la relation (25) pour s_t, nous pouvons réécrire la relation ci-dessus comme suit:

$$mc_t = -v + \left(\frac{\sigma}{\omega_\alpha} + \varphi\right) y_t + \sigma\left(1 - \frac{1}{\omega_\alpha}\right) y_t^* - (1+\varphi)a_t \quad (35)$$

e) Dynamique de l'équilibre

En vue d'analyser la dynamique de l'équilibre aussi bien au niveau de l'économie fermée que du reste du monde, nous commencerons par définir les deux écarts de production respectivement comme suit:

$$\tilde{y}_t \equiv y_t - \bar{y}_t \; ; \tilde{y}_t^* \equiv y_t^* - \bar{y}_t^*$$

i. *Dynamique de l'économie mondiale*

En régime de prix flexibles, les coûts réels marginaux dans l'économie mondiale seront supposés constants à travers le temps et donné par $mc^* \equiv -\mu$. Le niveau naturel de la production mondiale sera ainsi donné par:

$$\bar{y}^* = \Omega_0 + \Gamma_0 a_t^* \quad (36)$$

Où $\Omega_0 \equiv \frac{v^*-\mu}{\sigma+\varphi}$ et $\Gamma_0 \equiv \frac{1+\varphi}{\sigma+\varphi}$. En plus, une relation entre le coût marginal réel et l'écart de production peut être définie comme suit:

$$\widehat{mc}_t^* = (\sigma + \varphi)\tilde{y}_t^*$$

Cette relation, combinée à la relation (31), permet d'obtenir la nouvelle courbe de Philips (New Keynesian Phillips Curve):

$$\pi_t^* = \beta E_t\{\pi_{t+1}^*\} + \kappa_0 \tilde{y}_t^* \quad (37)$$

Où $\kappa_0 \equiv \lambda(\sigma + \varphi)$. Ainsi, la relation (22) peut également réécrite en terme d'écart de production:

$$\tilde{y}_t^* = E_t\{\tilde{y}_{t+1}^*\} - \frac{1}{\sigma}(r_t^* - E_t\{\pi_{t+1}^*\} - \overline{rr}_t^*) \quad (38)$$

Où $\overline{rr}_t^* \equiv -\sigma(1-\rho_a^*)\Gamma_0 a_t^* + \rho$ représente le taux d'intérêt anticipé naturel ou wicksellien), celui qui prévaudrait dans un équilibre de prix flexible. Notons que les relations (37) et (38) combinés à une règle de politique monétaire déterminant pleinement le taux d'intérêt mondial décrit pleinement la dynamique de l'inflation et de la croissance mondiale.

ii. *Dynamique de la petite économie ouverte*

Le niveau nature de production de la petite économie ouverte est trouvée en supposant que $mc_t = -\mu$ pour tout t, ce qui donne:

$$\bar{y}_t = \Omega_\alpha + \Gamma_\alpha a_t + \Theta_\alpha y_t^* \quad (39)$$

Où $\Omega_\alpha \equiv \frac{\omega_\alpha(v-\mu)}{\sigma+\omega_\alpha\varphi}$, $\Gamma_\alpha \equiv \frac{\omega_\alpha(1+\varphi)}{\sigma+\omega_\alpha\varphi} > 0$, et $\Theta_\alpha \equiv \frac{\sigma(1-\omega_\alpha)}{\sigma+\omega_\alpha\varphi}$

Il s'en suit de la relation (35) que le coût marginal réel et l'écart de production seront relation conformément à la relation suivant:

$$\widehat{mc}_t = \left(\frac{\sigma}{\omega_\alpha} + \varphi\right)\tilde{y}_t$$

En combinant la relation ci-dessus à la relation (33), nous dérivons la nouvelle courbe de Phillips pour la petite économie ouverte exprimée en considérant l'écart de production:

$$\pi_{H,t} = \beta E_t\{\pi_{H,t+1}\} + \kappa_\alpha \tilde{y}_t \quad (40)$$

Où $\kappa_\alpha \equiv \lambda\left(\frac{\sigma}{\omega_\alpha} + \varphi\right)$. Signalons que lorsque $\alpha = 0$ la pente de la relation est donnée par $\kappa_0 \equiv \lambda(\sigma + \varphi)$ et la relation (40) correspond à une nouvelle courbe de Phillips en économie fermée. Ainsi, le degré d'ouverture affecte la dynamique de l'inflation à travers son influence sur la pente de la courbe de Phillips.

En utilisant la relation (29), il est aisé de dériver la nouvelle courbe IS pour l'économie ouverte exprimée par rapport à l'écart de production comme suit :

$$\tilde{y}_t = E_t\{\tilde{y}_{t+1}\} - \frac{\omega_\alpha}{\sigma}\left(r_t - E_t\{\pi_{H,t+1}\} - \overline{rr}_t\right) \quad (41)$$

Où $\overline{rr}_t \equiv \rho - \frac{\sigma(1+\varphi)(1-\rho_a)}{\sigma+\varphi\omega_\alpha} a_t - \varphi\Theta_\alpha E_t\{\Delta y_{t+1}^*\}$ représente le taux d'intérêt naturel en économie ouverte.

f) Politique Monétaire

La politique monétaire dans le cadre de ce travail, contrairement aux travaux de Gali et Monacelli (2002), est définie non seulement comme étant réactive aux écarts de production et à l'inflation mais aussi à la dépréciation du taux de change. De ce fait, la règle de politique monétaire dans le cadre de ce travail est représentée comme suit:

$$\frac{R_t}{R} = \left(\frac{\Pi_t}{\Pi_{t-1}}\right)^{\rho_\pi} \left(\frac{\bar{Y}_t}{\bar{Y}}\right)^{\rho_Y} \left(\frac{E_t}{E_{t-1}}\right)^{\rho_e} \Upsilon_t \quad (42)$$

En ajoutant une composante autorégressive, la relation (42) peut être linéarisée sous la forme suivante:

$$r_t = \rho_\pi \pi_t + \rho_Y \tilde{y}_t + \rho_e(e_t - e_{t-1}) + \upsilon_t \quad (43)$$

Il est supposé que le cadre de politique monétaire au niveau mondial suit le processus suivant:

$$r_t^* = \varphi_\pi^* E_t\{r_{t+1}^*\} + \varphi_a^* a_t^* + \upsilon_t^* \quad (44)$$

g) Chocs Stochastiques

Dans le cadre de cette étude, quatre principaux chocs seront analysés à savoir les chocs technologiques internes et externes ainsi que les chocs de politique monétaire internes et externes. Les différents chocs sont décrits par les processus suivants:

$$a_t^* = \rho_a^* a_{t-1}^* + \varepsilon_t^{a^*} \quad (45)$$

$$\upsilon_t^* = \rho_\upsilon^* \upsilon_{t-1}^* + \varepsilon_t^{\upsilon^*} \quad (46)$$

$$a_t = \rho_a a_{t-1} + \rho_{aa^*}\varepsilon_t^{a^*} + \varepsilon_t^a \quad (47)$$

$$\upsilon_t = \rho_\upsilon \upsilon_{t-1} + \varepsilon_t^\upsilon \quad (48)$$

Aux chocs mentionnés, trois erreurs de mesures ε_t^s, ε_t^y et ε_t^π respectivement sur la relation (12) prise en différence, la relation (25) et la relation (11) en vue de faire face au problème de singularité

© 2017 Global Journals Inc. (US)

stochastique du fait que le modèle présente sept variables observées et que leur nombre devrait correspondre au nombre des chocs présents dans le modèle.

III. Analyse Empirique

a) Approche Bayésienne

Dans le cadre de ce travail, l'approche bayésienne a été utilisée pour plusieurs raisons évidentes. Comme discuté par plusieurs chercheurs, le principal avantage de la méthodologie bayésienne est qu'elle permet une caractérisation complète de l'incertitude dans l'estimation des paramètres structurels en simulant les distributions postérieures. Cette méthodologie fournit également un moyen élégant d'incorporer les informations à priori sur les paramètres provenant aussi bien des études microéconomiques que des exercices macroéconomiques précédents et, par conséquent, permet de créer une connexion entre la littérature basée sur la calibration et l'analyse des politiques rigoureuses.

Un autre point à noter est que les modèles DSGE accusent usuellement d'une singularité du fait qu'ils génèrent des prédictions sur un large nombre de variables endogènes observables par rapport aux chocs exogènes utilisés en vue d'alimenter le modèle. Ceci implique qu'il existe une combinaison linéaire entre les variables qui se vérifie en l'absence de bruits. La méthode bayésienne s'applique même dans le cas où la matrice variance-covariance des variables endogènes est singulière alors que ceci constitue un problème au cas où la méthode de maximum de vraisemblance est utilisée.

L'approche bayésienne suppose que, dans un modèle, il existe un ensemble de paramètres inconnus $\theta \in \Theta$ qui lui est associé. L'objectif de l'implémentation d'une estimation bayésienne est de caractériser la distribution postérieure des paramètres du modèle. A partir du théorème de Bayes, la distribution à posteriori peut être obtenue comme suit:

$$p(\theta|Y^T) = \frac{L(Y^T|\theta)p(\theta)}{\int L(Y^T|\theta)p(\theta)d\theta} \propto L(Y^T|\theta)p(\theta) \qquad (49)$$

Où $p(\theta)$indique la densité à priori du vecteur paramètre θ, $L(Y^T|\theta)$ est la vraisemblance de l'échantillon Y^T avec T observations et $\int L(Y^T|\theta)\, p(\theta)d\theta$ correspond à la densité inconditionnelle de l'échantillon. La connaissance de la distribution posterieure permet d'implémenter l'inférence bayesienne. En général, l'objectif de l'inférence bayésienne peut être exprimée par $E[g(\theta)|Y^T]$ où $g(\theta)$ est une fonction d'intérêt, définit par:

$$E[g(\theta)|Y^T] = \int g(\theta)p(\theta|Y^T)d\theta = \frac{\int g(\theta)p^*(\theta|Y^T)d\theta}{\int p^*(\theta|Y^T)d\theta} = \frac{\int g(\theta)L(Y^T|\theta)p(\theta)d\theta}{\int L(Y^T|\theta)p(\theta)d\theta} \qquad (50)$$

Où $p^*(\theta|Y^T) \propto p(\theta|Y^T) \propto L(Y^T|\theta)p(\theta)$ est n'importe quelle densité posterieure de Kernel pour θ.

En vue d'obtenir les résultats de la densité postérieur, l'algorithme de Metropolis MCMC MH (Monte Carlo Markov Chain-Metropolis Hasting algorithm) est utilisé. A cet effet, le filtre de Kalman permet d'obtenir la vraisemblance en vue d'obtenir les résultats inhérents à la distribution à posteriori. En effet, le modèle décrit ci-haut peut être réécrit sous une forme espace-état comme suit:

$$\wp_t = F(\theta) + G(\theta)\varepsilon_t, \quad \varepsilon_t \sim nid(0, I) \qquad (51)$$

$$Y_t = H(\theta)\wp_t \qquad (52)$$

Où $F(\theta)$, $G(\theta)$ et $H(\theta)$ sont des fonctions non linéaires du vecteur θ des paramètres structurels. $\wp_t$ Représente le vecteur des variables d'état incluant notamment les variables endogènes et les variables anticipées. ε_t représente le vecteur de 7 chocs d'innovations. La représentation espace-état est décrit par l'équation de transition (51) et l'équation de mesure (52).

b) Résultats Empiriques

En vue de procéder à l'analyse empirique, le modèle présenté utilisé a été linéarisé autour des variables d'équilibre. Les données ont été de fréquence trimestrielle allant de 2002q1 à 2016q4. Sept variables ont principalement été utilisés dans le modèle à savoir: le taux d'inflation et le taux de croissance des Etats-Unis comme proxies du taux d'inflation et de croissance mondial, l'écart de production, le taux directeur en variation, l'écart de production, le taux de croissance du PIB, le taux de change en variation et l'indice de prix à la consommation. En vue d'obtenir le taux de croissance du PIB en rythme trimestriel, ce dernier a été trimestrialisée en utilisant l'approche de Litterman (1983).

Il est important de noter que les moyennes des variables utilisées ont été soustraites initialement de leur moyenne en vue d'obtenir des séries centrées sur zero. L'écart de production a été obtenu en utilisant un PIB potentiel calculé en utilisant le filtre HP. L'algorithme d'optimisation utilisé en vue d'obtenir les estimation initiales du mode de la distribution postérieure du vecteur des paramètres est celui de Monte Carlo.

En outre, il a été difficile de choisir le vecteur des paramètres à priori pour l'estimation bayesienne du fait que jusqu'à présent, aucune estimation bayesienne d'un modèle DSGE en économie ouverte avec autant de paramètres n'a encore été fait pour la RD Congo. D'une manière générale, le choix des valeurs à priori est basée sur les considérations suivantes : i) le choix des paramètres structurels refletés par le jugement des chercheurs sur la structure de l'économie congolaise ; ii) l'absence des études analysant les fondements microéconomiques en vue d'apprehender les paramètres estimés pour la RD Congo a été levée par le

© 2017 Global Journals Inc. (US)

recourt aux resultats d'autres études des pays émergents ; iii) le choix des à priori est également refleté par l'imposition des contraintes de non-négativité. En effet, la distribution beta a été utilisé pour confiner les paramètres dans un intervalle unitaire. Les distributions Gamma et Normale ont été utilisé pour représenter les paramètres dans $\mathbb{R}^+$. La distribtuion Gamma inverse a été choisie pour tenir compte de la précision des chocs. Tous les paramtères du modèle ont été estimés à l'exception des chocs sur la production hors mines, sur le taux de change réel et sur l'inflation. Le facteur d'actualisation a été calibré à 0.99. Le coefficient d'ouverture a été calibré à 0.6 qui correspond à la moyenne des coefficients d'ouverture calculés de 2002 à 2016. La probabilité de Calvo a été fixée à 0.75 dans le cadre cette étude. Les ecart-types des chocs sur la production hors mine, le taux de change réel et l'inflation ont été calibrés à 0.1.

Les distributions à priori des paramètres et des ecart-types sont représentés de manière détaillée dans le tableau ci-dessous:

Tableau 1: Densités à priori des paramètres du modèle

Paramètres	Symboles	prior_mean	Mode	s.d.	prior	pstdev
Facteur d'actualisation	β	0.990	1.0000	0.0399	gamm	0.1000
Elasticité de subst. Intertemporelle	σ	1.000	1.3098	0.0754	gamm	0.1000
Degré d'ouverture	α	0.600	0.5282	0.0851	beta	0.1000
Elast susbt entre bien dom et etran.	η	1.000	0.9874	0.1032	gamm	0.1000
Param de desutilité du travail	φ	3.000	3.0376	0.0903	gamm	0.1000
Probabilité de Calvo	θ	0.750	0.7346	0.0924	gamm	0.1000
Pente Courbe Philips	λ	0.086	0.4601	0.0671	norm	0.1000
omega_a	ω_α	1.000	0.9201	0.0678	gamm	0.1000
kappa_a	κ_α	0.343	0.5294	0.1376	gamm	0.1000
BigGamma_a	Γ_α	1.000	0.7792	0.0583	gamm	0.1000
Influence de a_t^* sur a_t	ρ_{aa^*}	0.300	0.3703	0.0797	beta	0.1000
ρ_a technologie, AR(1)	ρ_a	0.900	1.0000	0.0027	norm	0.2000
ρ_a^* technologie, AR(1)	ρ_a^*	0.750	0.9433	0.0303	beta	0.2000
ρ_v politique monétaire, AR(1)	ρ_v	0.300	0.0912	0.0660	beta	0.2000
ρ_v^* politique monétaire, AR(1)	ρ_v^*	0.300	0.3258	0.1481	beta	0.2000
Taylor, inflation	ρ_π	1.500	1.5701	0.0598	gamm	0.1000
Taylor, Output gap	ρ_Y	0.100	0.2455	0.0758	norm	0.1000
Taylor, Taux de change	ρ_e	0.500	0.5481	0.0650	gamm	0.1000
Coefficient de $E_t\{r_{t+1}^*\}$	φ_π^*	1.010	1.0985	0.0948	gamm	0.1000
Coefficient de a_t^*	φ_a^*	-0.250	-0.0585	0.0497	norm	0.1000
Ecart-type technologie a_t	ε_t^a	0.100	0.0158	0.0016	invg	0.5000
Ecart-type technologie a_t^*	$\varepsilon_t^{a^*}$	0.100	0.0196	0.0030	invg	0.5000
Ecart-type v_t	ε_t^v	0.075	0.0458	0.0047	invg	0.5000
Ecart-type v_t^*	$\varepsilon_t^{v^*}$	0.050	0.0106	0.0017	invg	0.5000

Le test de diagnostic univarié des chaines de Monte Carlo Markov (MCMC) de Brooks and Gelman (1998) sont un outil important d'évaluation des résultats. L'analyse a été effectuée avec 500000 simulations de Metropolis Hastings. Les deux ratios d'acceptation par chaînes ont été respectivement de 27,5 et 27,48%, ce qui est plutôt satisfaisant. Si les résultats sont concluants, deux choses devraient se produire. En premier, les resultats devraient être similaires au sein de n'importe quel éventail de simulation MH. En second, les resultats entre les différentes chaînes devraient être proches tel qu'indiqué par Pfeifer (2014). Dans l'annexe 1, les deux lignes sur les cartes représentent des mesures spécifiques du paramètre concerné à la fois au sein et entre les chaînes. Pour que les resultats soient sensibles, ceux-ci devraient être relativement constants et devraient converger. Les graphiques en annexe (annexe 1) montrent que cette exigence est réalisée dans notre étude.

Les diagnostics de convergence multivariée sont basés sur la portée de la fonction de vraisemblance postérieure au lieu des paramètres individuels. La dernière figure de l'annexe 1 illustre la proximité des deux lignes, ce qui indique la convergence des paramètres. Les variables historiques et lissés des variables observées sont representés sur la figure 1. Si l'ajustement du modèle est satisfaisant, les deux lignes devraient se chevaucher. Ceci est vrai pour notre modèle pour toutes les variables observées. Tous les tests de diagnostic MCMC suggèrent que la chaîne de Markov a convergé vers ses distributions stationnaires après le nombre d'itérations défini.

© 2017 Global Journals Inc. (US)

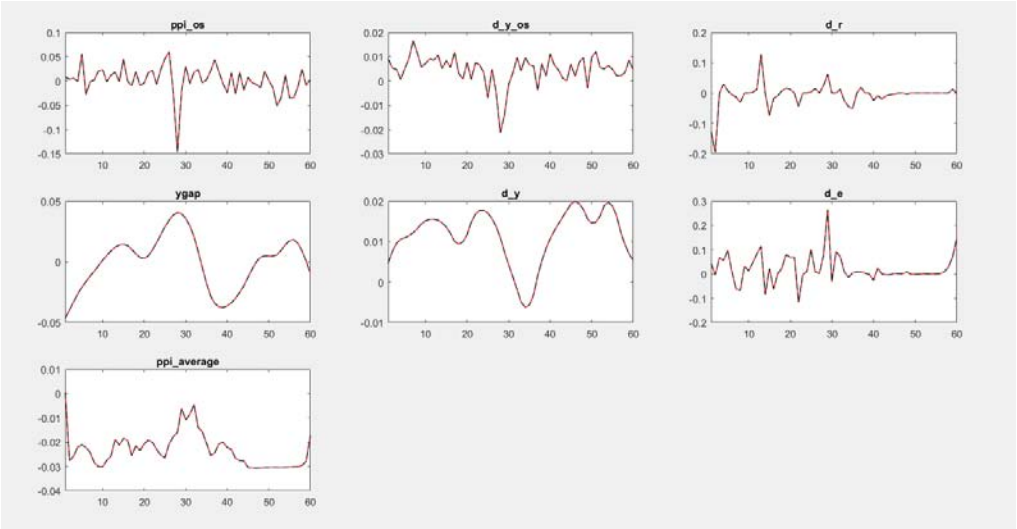


Figure 1: Evolution historique des variables observées dans le modèle

Les résultats de l'estimation à posteriori sont indiqués dans le tableau 2. Le facteur d'actualisation obtenu a été de 0.95, ce qui est assez proche des résultats obtenus dans la plupart d'études sur les modèles DSGE. Le coefficient d'ouverture obtenu est de 0.56 contre 0.6 postulé à priori. Le pente de la courbe de Philips indique que les prix domestiques sont susceptibles d'augmenter de 0.455% si la production hors mine se situe à 1% de son niveau potentiel. Les coefficients attachés à l'inflation, à l'écart de production et au taux de change dans la règle de politique monétaire sont respectivement estimés à 1.59, 0.25 et 0.55. Ceci indique que la politique monétaire réagit plus sévrement aux pressions inflationnistes et une dépréciation du taux de change qu'à une déviation de la production de son niveau potentiel. En outre, les chocs technologiques aussi bien internes qu'externes (0.9974 et 0.9403) semblent être plus persistents que les chocs de politique monétaire (0.1208 et 0.4252). Le degré d'influence des chocs technologiques externes sur ceux internes se situe à 0.3987. Ce faible niveau indique que le progrès technique ont niveau interne est faiblement correlé à celui de l'exterieur.

Tableau 2 : Estimations à posteriori des paramètres du modèle

Paramètres	Symboles	prior_mean	post._mean	90% HPD_interval		prior	Pstdev
Facteur d'actualisation	β	0.990	0.9519	0.8953	1.0000	gamm	0.1000
Elasticité de subst. Intertemporelle	σ	1.000	1.2962	1.1252	1.4623	gamm	0.1000
Degré d'ouverture	α	0.600	0.5600	0.4151	0.7088	beta	0.1000
Elast susbt entre bien dom et etran.	η	1.000	1.0004	0.8375	1.1648	gamm	0.1000
Param de desutilité du travail	φ	3.000	3.0351	2.8668	3.2011	gamm	0.1000
Probabilité de Calvo	θ	0.750	0.7522	0.5843	0.9106	gamm	0.1000
Pente Courbe Philips	λ	0.086	0.4547	0.3432	0.5638	norm	0.1000
omega_a	ω_α	1.000	0.9247	0.7913	1.0630	gamm	0.1000
kappa_a	κ_α	0.343	0.5699	0.3689	0.7698	gamm	0.1000
BigGamma_a	Γ_α	1.000	0.7900	0.6703	0.9139	gamm	0.1000
Influence de a_t^* sur a_t	ρ_{aa^*}	0.300	0.3987	0.2324	0.5601	beta	0.1000
ρ_a technologie, AR(1)	ρ_a	0.900	0.9974	0.9940	1.0000	norm	0.2000
ρ_a^* technologie, AR(1)	ρ_a^*	0.750	0.9403	0.8976	0.9879	beta	0.2000
ρ_v politique monétaire, AR(1)	ρ_v	0.300	0.1208	0.0030	0.2218	beta	0.2000
ρ_v^* politique monétaire, AR(1)	ρ_v^*	0.300	0.4252	0.1899	0.6650	beta	0.2000
Taylor, inflation	ρ_π	1.500	1.5889	1.4224	1.7559	gamm	0.1000
Taylor, Output gap	ρ_Y	0.100	0.2473	0.1026	0.3918	norm	0.1000
Taylor, Taux de change	ρ_e	0.500	0.5508	0.4262	0.6743	gamm	0.1000
Coefficient de $E_t\{r_{t+1}^*\}$	φ_π^*	1.010	1.2352	1.0598	1.3933	gamm	0.1000
Coefficient de a_t^*	φ_a^*	-0.250	-0.0428	-0.1163	0.0310	norm	0.1000

© 2017 Global Journals Inc. (US)

Ecart-type technologie a_t	ε_t^a	0.100	0.0161	0.0130	0.0191	invg	0.5000
Ecart-type technologie a_t^*	$\varepsilon_t^{a^*}$	0.100	0.0196	0.0151	0.0241	invg	0.5000
Ecart-type v_t	ε_t^v	0.075	0.0467	0.0382	0.0547	invg	0.5000
Ecart-type v_t^*	$\varepsilon_t^{v^*}$	0.050	0.0114	0.0087	0.0140	invg	0.5000
Log data density [Laplace approximation]		865.787601					

IV. Analyse des Fonctions De Réponse Impulsionnelles

Les reponses impulsionnelles bayesienne sont calculés en vue d'évlauer la réponse de l'économie aux différents types de chocs pris en compte dans notre modèle. L'ampleur du choc dans chaqque cas correspond à l'écart-type dudit choc dans le modèle estimé. Les resultats sont présenté sur les figures qui suivent. Les surfaces en gris représentent les intervalles de densité postérieure les plus élevées.

a) Chocs de Productivité

Deux types de chocs de productivité seront pris en compte à savoir : le choc de productivité d'origine interne et le choc de productivité provenant du reste du monde.

i. *Réponse des variables à un choc positif de productivitié au niveau externe*

Il ressort de l'analyse des réponses impulsionnelles ci-dessous qu'un choc de productivité reduit le coût marginal réel lequel conduit à la baisse des prix des produits domestiques. Ceci augmente le niveau de compétivité lequel pousse les agents domestiques à substituer les biens domestiques aux biens étrangers initiallement consommés. L'inflation baisse à la suite de la baisse des coûts de production. La banque centrale réagit à un assouplissement de la politique monétaire. Ceci conduit à la depréciation du taux de change. Une augmenttion graduelle du taux d'intérêt 5 trimestres après le choc ramène à l'équilibre les variables macroéconomiques.

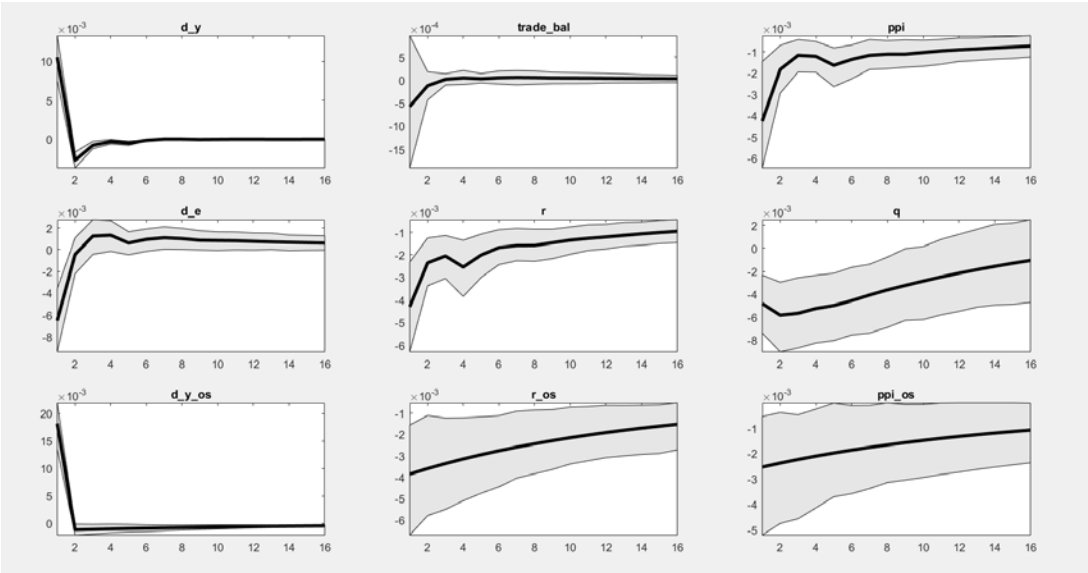


Figure 2: Réponse à un choc technologique externe

ii. *Réponse des variables à un choc positif technologique interne*

Comparativement aux effets d'un choc technologique externe, un choc dû à un changement positif de la productivité interne conduit à l'augmentation du niveau de production et améliorer l'évolution de la balance commerciale. A cette évolution de la production, le niveau des prix augmente et la monnaie nationale se deprécient durant les premières périodes suivant le choc, ce qui conduit la banque centrale à durcir sa politique monétaire durant les premiers trimestres. Au bout de 6 trimestres, les variables macroéconomiques retrouvent leur sentiers d'équilibre d'avant le choc.

© 2017 Global Journals Inc. (US)

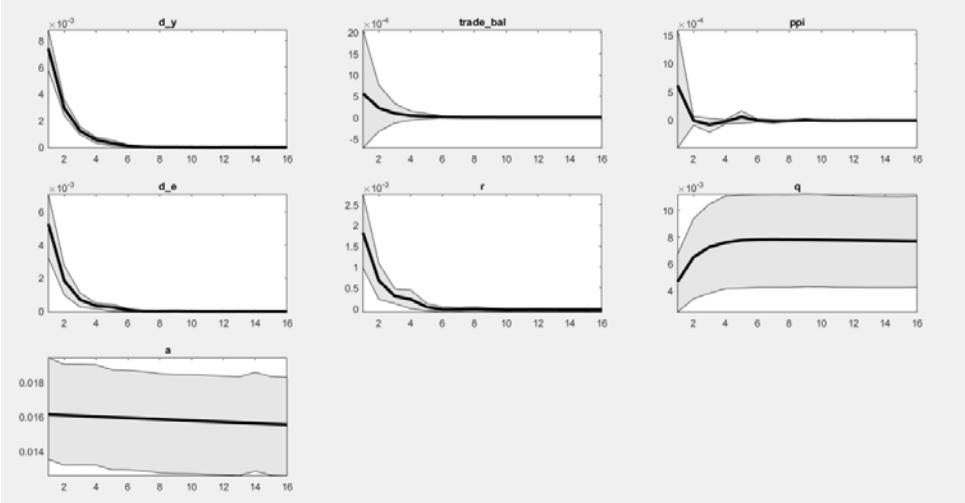


Figure 3: Réponse à un choc technologique interne

b) Chocs de politique monétaire

Comme mentionné plus haut, deux types de chocs monétaires seront considerés à savoir : le choc de politique monétaire interne et le choc de politique monétaire externe.

i. *Réponse des variables à un choc positif sur la politique monétaire interne*

L'analyse des fonctions de réponse impulsionnelles indique qu'un choc monétaire positif entraine une rélèvement du taux directeur. Ce qui conduit à une baisse de l'inflation et de la croissance économique de la production hors mines. La hausse du taux directeur entraine une depréciation du taux de change nominal et réel ainsi qu'une déterioation de l'évolution des termes de change.

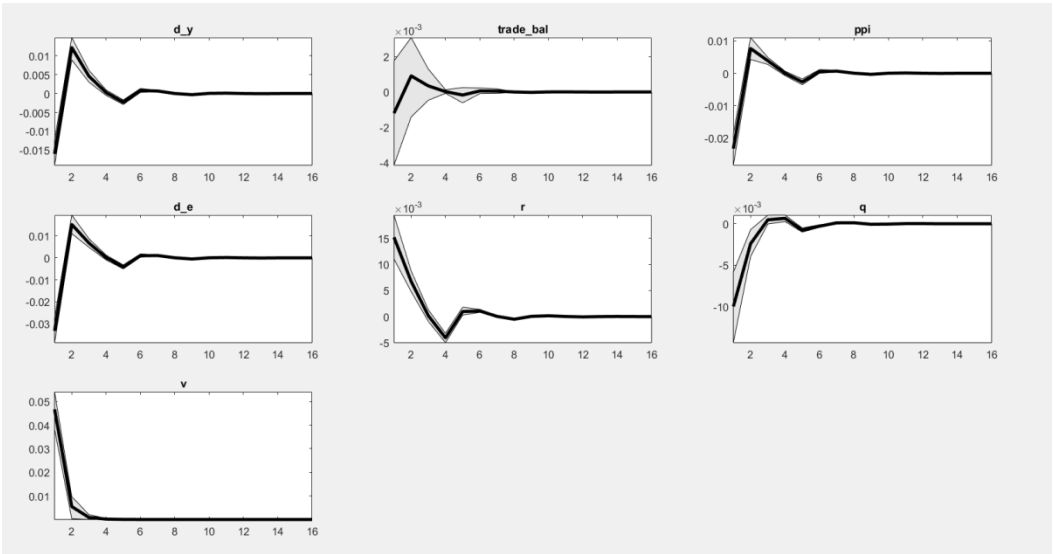


Figure 4: Réponse à un choc de politique monétaire interne

ii. *Réponse des variables à un choc positif sur la politique monétaire externe*

L'effet d'un resserrement de la politique monétaire mondiale se traduit par une baisse de l'activité mondiale qui n'est pas sans conséquence sur le taux de croissance de la production hors mine et sur l'inflation en raison de la baisse de la demande mondiale. En outre, le resserrement de la politique monétaire mondiale conduit également à une dépréciation du taux de change nominal et réel. Ce qui conduit à une contraction de la politique monétaire intérieure en vue d'atténuer la dépréciation initiale des taux de change. Le choc positif sur la politique monétaire externe entraine des effets positifs sur la balance commerciale pour les 3 premiers trimestres avant d'être négatifs pour les trimestres suivants jusqu'au 6ème trimestre.

© 2017 Global Journals Inc. (US)

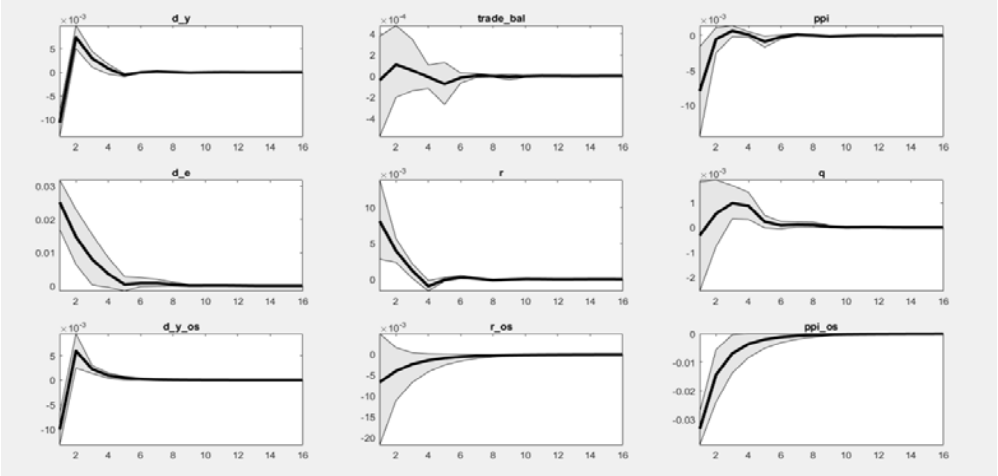


Figure 5: Réponse à un choc de politique monétaire externe

c) *Réponse des variables à un choc positif en provenance du taux de change*

Un choc positif en provenance du taux de change réel entraine une croissance économique plus élevée, à travers un effet de compétitivité, et une inflation plus élevée au premier trimestre. A l'inflation plus élevée s'adjoint une détérioration des termes de l'échange du fait que l'inflation étrangère reste inchangée. L'excédent commercial entraine une appréciation du taux de change, ce qui conduit à une politique expansionniste menée par l'autorité monétaire en vue d'atténuer l'appréciation initiale du taux de change. L'effet d'un choc positif en provenance de l'erreur du taux de change réel s'amoindrit jusqu'à disparaitre complètement au bout de 7 trimestres après le choc.

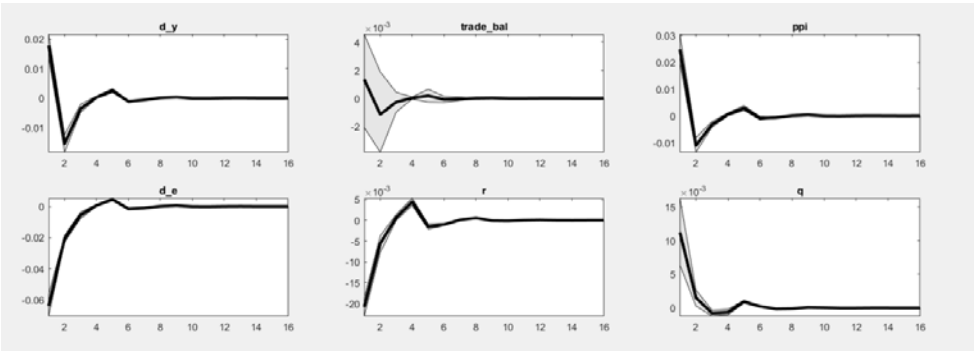


Figure 6: Réponse à un choc en provenance du taux de change réel

d) *Réponse des variables à un choc positif en provenance du PIB hors mines*

Un choc positif liée au PIB hors mine conduit conjointement à une appréciation du taux de change et une baisse de l'inflation. L'inflation étrangère n'étant pas affectée par ledit choc, cette situation conduit à une détérioration des termes de l'échange et à une chute de la croissance au second trimestre après le choc. L'autorité monétaire entreprend une politique monétaire expansionniste en vue d'atténuer l'effet néfaste de la détérioration des termes de l'échange sur la croissance économique de la production hors mines.

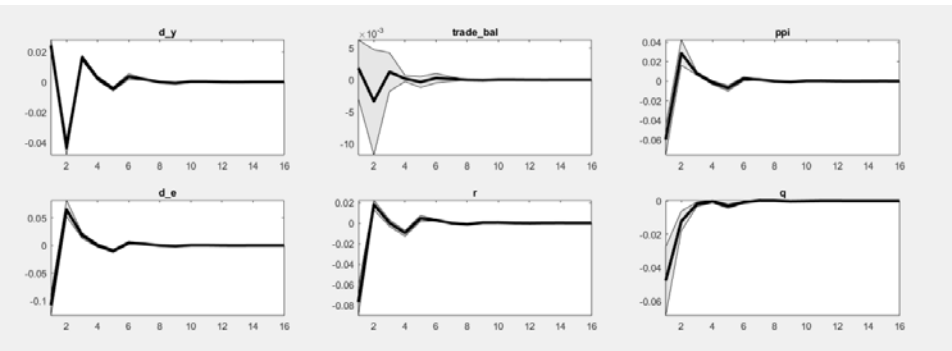


Figure 7: Réponse à un choc en provenance du PIB hors mines

© 2017 Global Journals Inc. (US)

e) Réponse des variables à un choc positif en provenance de l'inflation

Un choc positif en provenance de l'inflation entraine une détérioration de la balance commerciale et une détérioration des termes de l'échange et, par conséquence, une baisse de la croissance de la production hors mines. Les prix étrangers n'étant pas influencé par le choc sous-analyse, la hausse des prix conduit une appréciation du taux de change aux premiers trimestres suivant le choc. Ainsi, la politique monétaire s'assouplit durant les 2 premiers trimestres et se resserre pour les trimestres suivants à la suite de la détérioration des termes de l'échange comme illustré dans la figure ci-dessous.

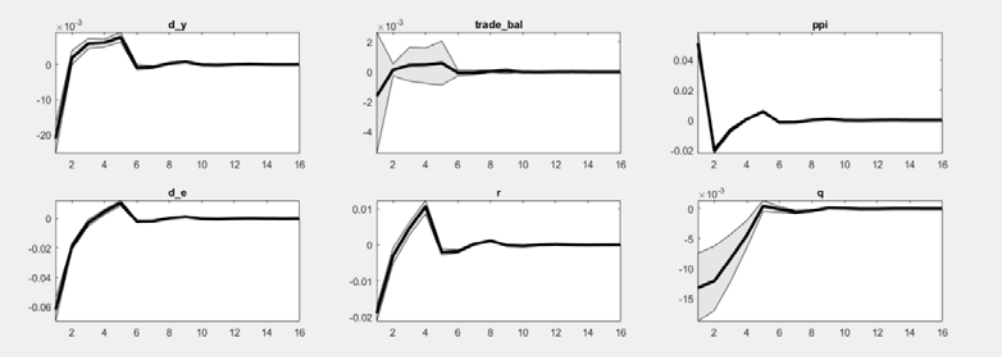


Figure 8: Réponse à un choc en provenance de l'inflation

V. Analyse Des Décompositions Historiques

L'un des principaux objectifs des modèles en économie ouverte est d'expliquer le rôle joué par les chocs aussi bien internes qu'externes sur l'évolution de l'activité économique. Pour ce faire l'analyse des décompositions historiques des principales variables a été effectuée sur les données allant de 2002q1 à 2016q4 en vue d'évaluer la capacité du modèle à expliquer leurs déterminants durant la période sous analyse.

a) Décomposition historique du taux d'intérêt (directeur)

L'analyse de la décomposition historique du taux d'intérêt révèle que le choc lié à la production hors mines, le choc de politique monétaire interne et celui de productivité externe ont été les principaux facteurs ayant guidé son évolution durant la période sous analyse. En outre, le choc lié au taux de change a connu une ampleur plus importante au point d'être le principal facteur expliquant l'évolution du taux directeur durant les trois derniers trimestres de l'année 2016, ce qui concorde avec la réalité des faits remarqués au cours de ladite année, marquée notamment par un resserrement de la politique monétaire.

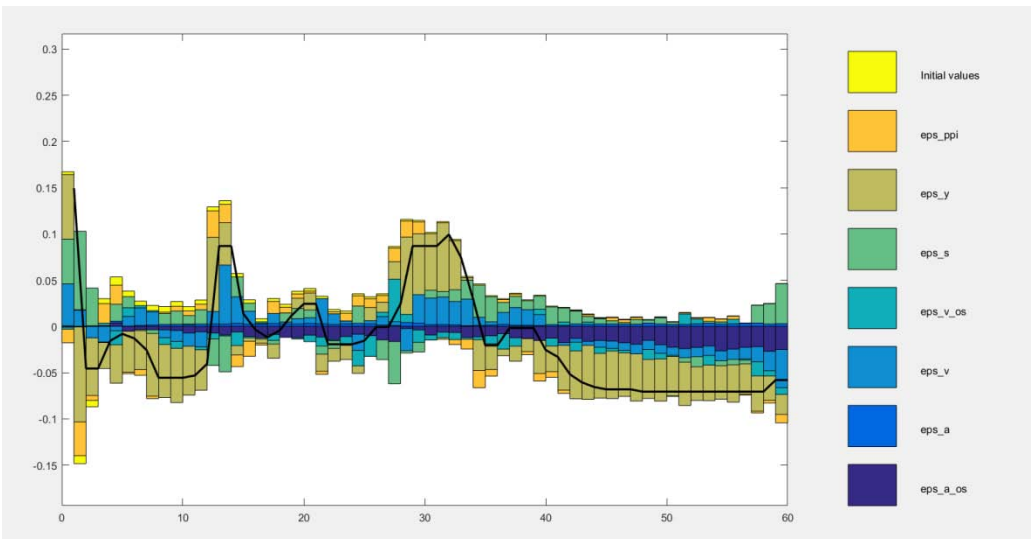


Figure 9: Décomposition historique du taux d'intérêt (directeur)

© 2017 Global Journals Inc. (US)

b) Décomposition de l'output gap hors mines

L'analyse de la décomposition historique de l'output gap de la production hors mines révèle que l'erreur liée à l'inflation ainsi que le choc de politique monétaire ont été les principaux facteurs ayant conduit l'évolution de la variable sous analyse d'une manière globale. Durant les trois derniers trimestres, l'erreur liée au taux de change a contribué négativement et d'une ampleur plus forte à l'évolution de l'écart de production hors mines. En outre, la politique monétaire externe ne détermine pas significativement l'évolution de l'output gap hors mines durant toute la période.

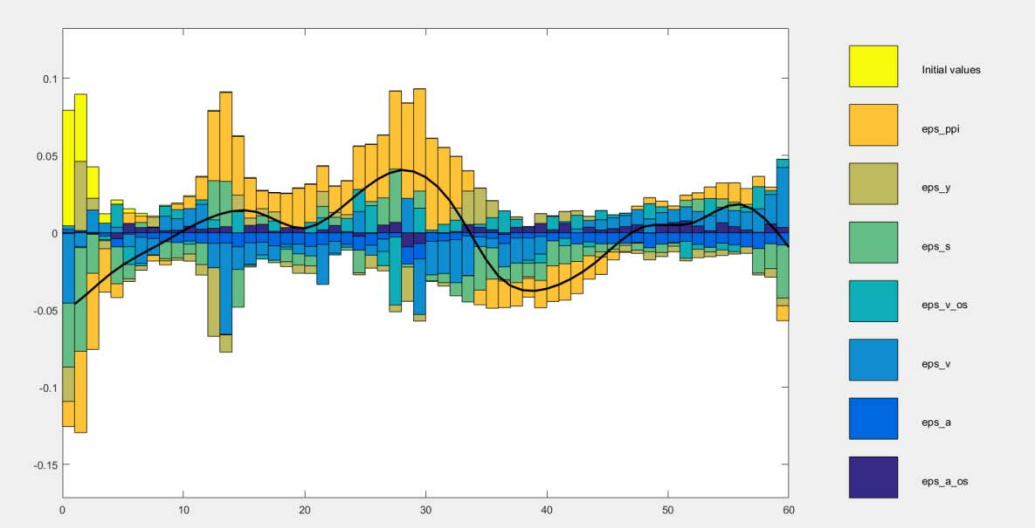


Figure 10: Décomposition historique de l'output gap hors mines

c) Décomposition du taux de dépréciation nominal

L'analyse de la décomposition historique du taux de change nominal révèle que le choc lié au taux de change constitue le principal facteur expliquant l'évolution de la variable durant la période considérée. L'influence positive notoire dudit choc durant les années 2002, 2010, 2011 et 2016 sur la dépréciation du taux de change traduit la réalité vécue au cours des années considérées. En effet, les années 2010 et 2011 ont été principalement marquées par les effets néfastes de la crise économique mondiale sur l'économie congolaise notamment marquée par la détérioration des termes de l'échange.

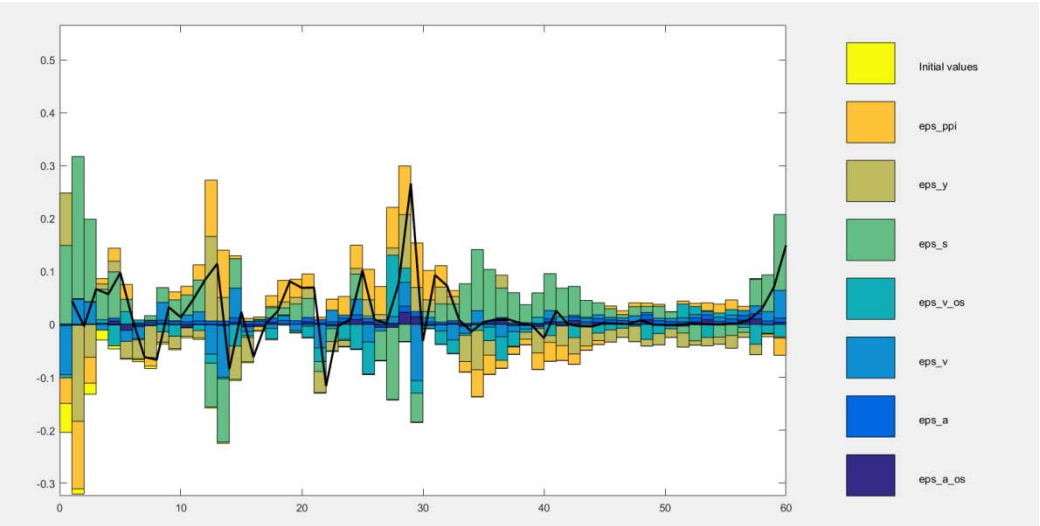


Figure 11: Décomposition historique du taux de dépréciation nominal

d) Décomposition du solde de la balance commerciale (en variation)

L'analyse de la décomposition historique de l'évolution de la balance commerciale ne révèle pas de prédominance d'un quelconque choc dans l'explication du comportement de ladite variable. Toutefois, il ressort que durant l'année 2009, les chocs de politique monétaire, du taux de change, le choc de productivité mondiale et interne ont d'une manière générale contribué à expliquer la dégradation de la balance

© 2017 Global Journals Inc. (US)

commerciale. En 2010, le choc sur le niveau des prix a fortement contribué à expliquer la dégradation de la balance commerciale de raison de la crise des produits alimentaires ayant prévalu à cette époque. En 2016, les chocs liés au taux de change et au niveau des prix ont prévalu sur les effets positifs des politiques monétaires internes et externes dans l'explication de la détérioration plus accrue du solde de la balance commerciale.

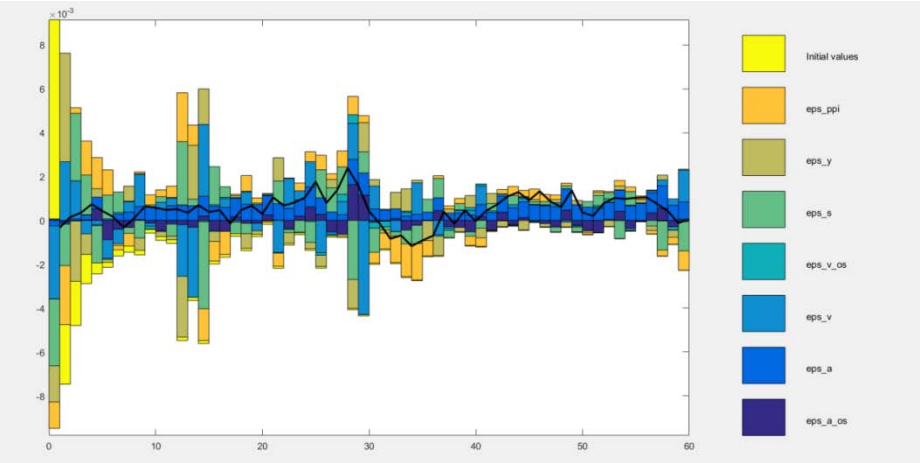


Figure 12: Décomposition historique de l'évolution du solde de la balance commerciale

e) Décomposition du taux d'inflation (domestique)

L'analyse de la décomposition historique du taux d'inflation domestique révèle plusieurs facteurs ayant guidé l'évolution de ladite variable durant la période sous analyse. En effet, il se remarque une nette influence des chocs sur les prix dans l'explication de l'évolution positive du taux d'inflation durant les années 2008 et 2009. A l'opposé les chocs liés à la production hors mines ainsi que le resserrement de la politique monétaire au niveau extérieur se sont révélé être déterminant dans la diminution des tensions inflationnistes depuis 2011.

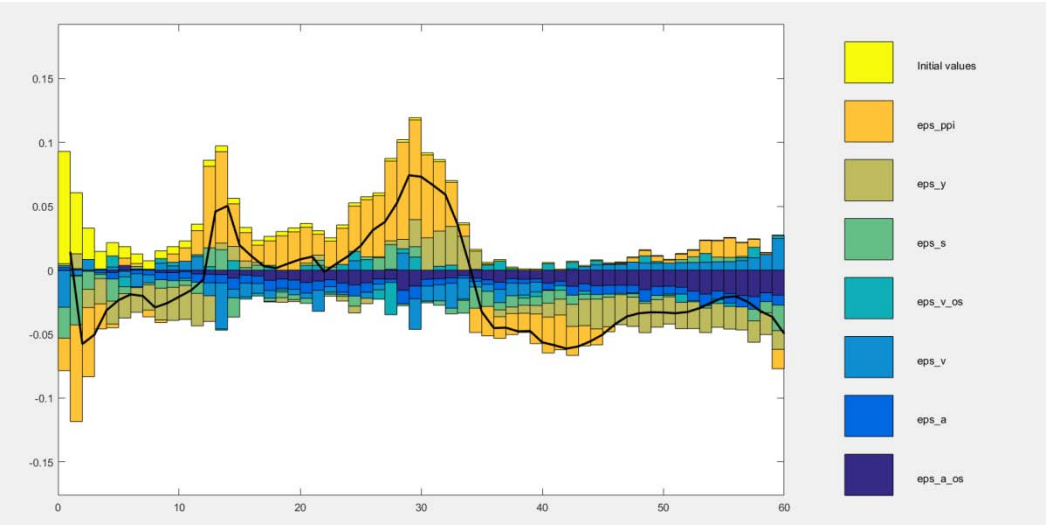


Figure 13: Décomposition historique de l'inflation domestique

VI. Conclusion et Recommandation

Ce travail a eu pour objectif d'estimer un modèle DSGE en économie ouverte pour la RD Congo en se référant aux techniques bayésiennes en vue d'analyser les relations entre les principales variables macroéconomiques et simuler l'impact de quelques principaux chocs sur leur évolution. L'utilisation d'un modèle DSGE a été motivé par le fait que ces types de modèle occupent actuellement une partie centrale de la modélisation macro-économétrique aussi bien dans la plupart des institutions politiques que dans le monde universitaire. Parmi les nombreuses techniques utilisées pour estimer ces modèles, l'approche bayésienne est apparue comme la plus fructueuse et a été largement adoptée au cours des dernières années. En dépit de l'importance de cette approche d'analyse dans la macroéconomie moderne, aucune tentative n'a encore été faite en considérant le cas d'une économie ouverte (au meilleur de ma connaissance) pour les explorer les

© 2017 Global Journals Inc. (US)

déterminants des fluctuations du niveau d'activité économique en RD Congo.

Les résultats d'estimation du modèle sont généralement satisfaisants. Les mesures de diagnostic semblent indiquer que l'estimation est robuste dans la plupart de ses domaines, en particulier en ce qui concerne le test de convergence de Brooks et Gelman (1998) en vue d'évaluer le niveau de convergence univarié et multivarié des paramètres. En effet, les données semblent raisonnablement informatives sur la plupart des paramètres et le modèle semble assez bien refléter les données observées. Les estimations obtenues pour les paramètres d'intérêt sont en général reflété la réalité économique inhérente à l'économie congolaise. En effet, le coefficient d'ouverture obtenu des estimations (56%) correspond à près à la moyenne du coefficient d'ouverture durant la période d'étude (2002-2016). Le paramètre à posteriori de l'influence du choc de productivité externe sur le choc interne s'est élevé à 39%. Ce qui indique la faible réaction du progrès technique interne aux progrès technologiques au reste du monde.

L'analyse de la décomposition historique a révélé l'influence des chocs sur le taux de change, sur la production, des chocs de productivité interne et externe comme principaux déterminants de l'évolution du taux directeur et du taux d'inflation domestique. L'analyse de la décomposition historique du taux de dépréciation du taux de change a indiqué l'influence notoire des chocs du taux de change et de politique monétaire dans l'explication da la dépréciation du taux de change durant les trois derniers trimestres de l'année 2016. Toutefois, nous n'avons pas été en mesure d'estimer quelques chocs désirés notamment les chocs liés à la production hors mines, aux taux de change et à l'inflation en raison du défaut de convergence de l'algorithme MH. De ce fait ces trois chocs ont été calibrés. En outre, les résidus lissés relatifs au choc technologique interne ne semble pas être complètement centré sur zéro.

Le constat pousse à considérer que notre analyse a besoin d'être amélioré et étendu en vue de prendre en compte plusieurs spécificités telles que la prise en compte des préférences, l'insertion du secteur public, les frictions financières, etc. Ceci permettra également la prise en compte d'un plus grand nombre de variables observées en vue d'obtenir des résultats plus consistants. Nonobstant ce fait, il est essentiel de noter que l'estimation du présent modèle DSGE en économie ouverte en utilisant les techniques bayé siennes a globalement fourni des résultats satisfaisants dans la tentative de description de l'activité économique en RD Congo.

Dans le futur, nous souhaitant prendre en compte plus d'aspects non couverts dans le cadre de cette étude en vue d'améliorer les résultats obtenus sur base d'un modèle DSGE pour l'économie congolaise. Les amendements porteront notamment sur l'amélioration des micro-fondements en vue de les rendre plus adéquats à l'analyse des pays en développement. En outre, nous voudrions également considérer l'approche DSGE-VAR utilisée par Del Negro et Schorfheide (2004) et Del negro et Al. (2005) qui s'avère être l'un des moyens les plus prometteurs d'évaluer les modèles macroéconomiques sur base des données empiriques.

Bibliographie

1. An, S and Shorfheide (2007), Bayesian analysis of DSGE models, *Econometric Reviews*, vol. 26, no. 2-4, pp. 113-172.
2. Adolfson, M., Laseen, S., Linde, J. & Villani, M. (2008), Evaluating an estimated New Keynesian Small open economy model, *Journal of Economic Dynamics & Control*, vol. 32, no. 8, pp. 2690-2721.
3. Alege, P.O. (2009), A Business cycle Model for Nigeria,https://www.researchgate.net/profile/Philip_Alege/publication/228891484_A_Business_Cycle_Model_for_Nigeria/links/5523c1b80cf27b5dc3796bf3/A-Business-Cycle-Model-for-Nigeria.pdf.
4. Allegret, J.P. and Benkhodja, M. T. (2011), External Shocks and Monetary Policy in a Small Open Oil Exporting Economy, *EconomiX Working Papers*, 2001-39, 43p.
5. Adebiyi, M.A. and C.N.O. Mordi (2016). A dynamic stochastic general equilibrium (DSGE) model of exchange rate pass-through to domestic price in Nigeria, Central Bank of Nigeria Occasional Paper, No 59, june 2016.
6. 1-45Blanchard, O. and Khan, C. (1980), The Solution of Linear Difference Models under Rational Expectations, *Econometrica*, 48(5), July 1980, 1305-1311.
7. Calvo, G. (1983), Staggered prices in a utility-maximizing framework, *Journal of Monetary Economics*, vol. 12, no. 3, pp. 383-398.
8. Canova, F. (2007), *Methods for Applied Macroeconomic Research*, Princeton University Press, Princeton.
9. Christiano, L. Trabandt, M. & Walentin, K. (2011), DSGE models for monetary policy analysis, Chapter 7, in Friedman, B.M. and Woodford, M. (eds), *Handbook of Monetary Economics*, vol. 3A, pp. 285-364, Elsevier.
10. Clarida R., Gali J. and Gertler M. (1999), The Science Of Monetary Policy: A New Keynesian Perspective, *Journal of Economic Literature*, 37(4), December 1999, 1661-1707.
11. Collard, F. and Dellas, H. (2010), Price resetting and inertia, *Journal of Macroeconomics*, vol. 32, no. 1, pp. 28-34.
12. Del Negro, M. and Schorfheide, F. (2011), Bayesian Macroeconometrics, in Geweke, J., Koop, G. and H. van Dijk (eds), *Handbook of Bayesian Econometrics*, Oxford University Press.

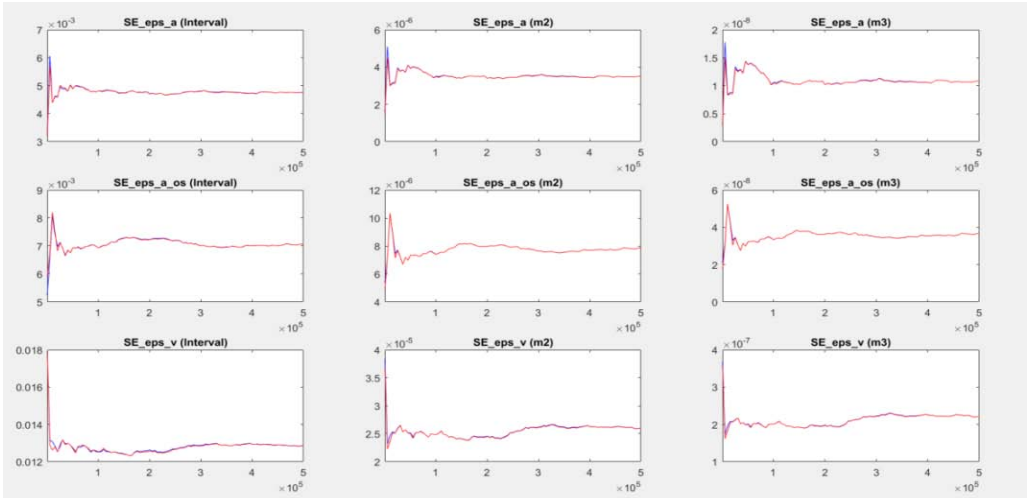
© 2017 Global Journals Inc. (US)

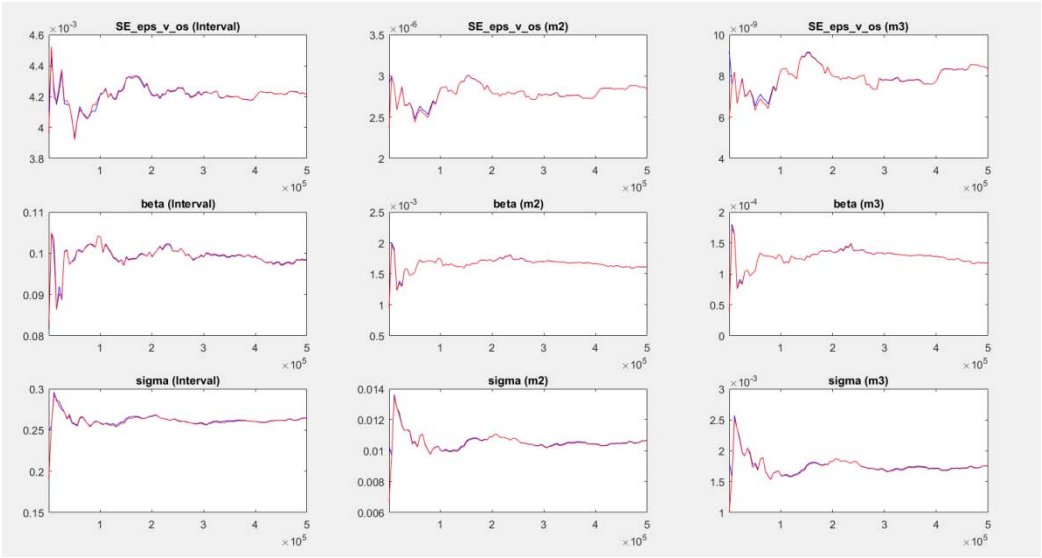
13. Faust, J. and Rogers, J.H. (2003), Monetary policy's role in exchange rate behavior, *Journal of Monetary Economics*, vol. 50, no. 7, pp. 1403-1424.
14. Fernandez-Villaverde, J. (2010), The econometrics of DSGE models, *NBER Working Paper*, No. 14677, issued in January 2009.
15. Gali J. and Monacelli T. (2005), Monetary Policy and Exchange Rate Volatility in a Small Open Economy, *The Review of Economic Studies*, v72 (252, Jul), 707-734.
16. Garcia, C.J. (2010). Is the Phillips Curve Useful for Monetary Policy in Nigeria?, Central Bank of Nigeria Occasional Paper 38, December, pp 1-36.
17. Hansen, L.P. and Sargent, T.J. (1980), Formulating and Estimating Dynamic Linear Rational Expectations Models, *Journal of Economic Dynamics and Control*, 2 (1), 7-46.
18. Hodrick, R. and Prescott, E. (1997), Postwar U.S. Business Cycles: An Empirical Investigation, *Journal of Money, Credit and Banking*, Blackwell Publishing, vol. 29 (1), pages 1-16, February.
19. Houssa, R., C. Otrok and R. Puslenghe (2009) A Model for Monetary Policy Analysis for Sub-Saharan Africa. Open Econ Rev. Springer Science Business Media, LLC 2009.
20. Kydland F. and Prescott E. (1990), Business Cycle: Real Facts and a Monetary Myth, *Federal Reserve Bank of Minneapolis Quarterly Review*, 14 (2), pp. 3–18.
21. Kydland F. and Prescott E. (1977), Rules Rather than Discretion: The Inconsistency of Plans, *Journal of political Economy*, 85(3), pp. 473-491, June.
22. Kydland F. and Prescott E. (1982), Time to Build and Aggregate Fluctuations, *Econometrica*, 50(6), pp. 1345-1370, November.
23. Litterman, R.B. (1983), A Random Walk, Markov Model for Distribution of Time Series, *Journal of Business and Economic Statistics*, 1(2), pp. 169-173, April.
24. Lucas, R.E. (1976), Econometric Policy Evaluation: A Critique, *Carnegie-Rochester Conference Series on Public Policy*, 1(1), pp. 19-46, January.
25. Lucas, R.E. (1980), Methods and Problems in Business Cycle Theory, *American Enterprise Institute for Public Policy Research*, 12 (4), pp. 697-715.
26. Lucas, R.E. and Sargent, T.J. (1979), After Keynesian macroeconomics, http://www.minneapolisfed.org/research/QR/QR321.pdf.
27. Lucas, R.E. (1972), Expectations and the Neutrality of Money, *Journal of Economic Theory*, 4 (2), pp. 103-124, April.
28. Mankiw, N. G. (1989), Real Business Cycles: A New Keynesian Perspective, *Journal of Economic Perspectives 3 (Summer)*, pp. 79-90.
29. Naoussi, C.F. et Tripier, F. (2012), La Modélisation en Equilibre Général Dynamique et Stochastique des Cycles Economiques en Afrique Sub-Saharienne : Une Revue de la Littérature, *Revue d'économie politique*, 122 (5), pp. 657-683.
30. Peiris,S.J. and Saxegaard,M. (2007), An Estimated DSGE Model for Monetary Policy Analysis in Low-Income Countries. *IMF Working Paper*, WP/07/282, December 2007.
31. Pytlarczyk,E. (2005), An Estimated DSGE Model for the German Economy within the Euro Area, https://www.econstor.eu/bitstream/10419/19618/1/200533dkp.pdf.
32. Sargent, T. J. and Wallace, N. (1975), Rational Expectations, the Optimal Monetary Instrument and the Optimal Money Supply Rule, *Journal of Political Economy*, 83 (2), pp. 241- 254, April.
33. Senbeta, R.S. (2011), A Small Open Economy New Keynesian DSGE model for a foreign exchange constrained economy, http://anet.uantwerpen.be/docman/irua/57c83c/a41114a4.pdf.
34. Smets, F.R. and Wouters,R. (2003), An Estimated Dynamic Stochastic General Equilibrium Model for the Euro Area, *Journal of the European Economic Association*, 1 (5), pp. 1123-1175, September.
35. Smets, F.R. and Wouters,R. (2007), Shocks and frictions in US Business Cycles: A Bayesian DSGE Approach,http://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp722.pdf.
36. Steinbach, R., P. Mathuloe and B. Smit, (2009). "An Open Economy New Keynesian DSGE Model of the South African Economy", South African Reserve Bank Working Paper, WP/09/01.
37. Tsasa, J.P. (2014), Diagnostic de la politique monétaire en Rép. Dém. Congo : Approche par l'équilibre général dynamique stochastique. *Dynare Working Papers Series*, 38, 72p.

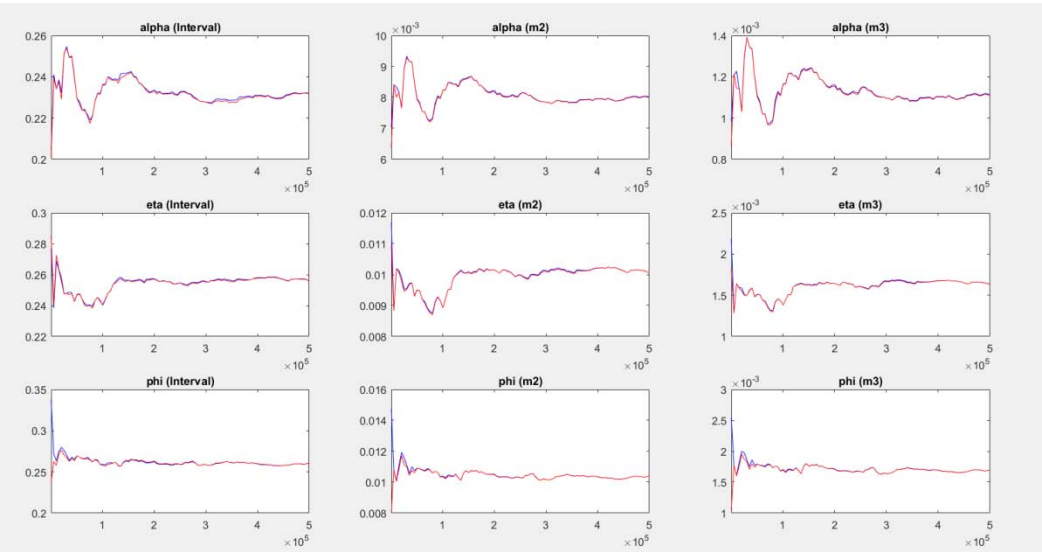
© 2017 Global Journals Inc. (US)

Annexes

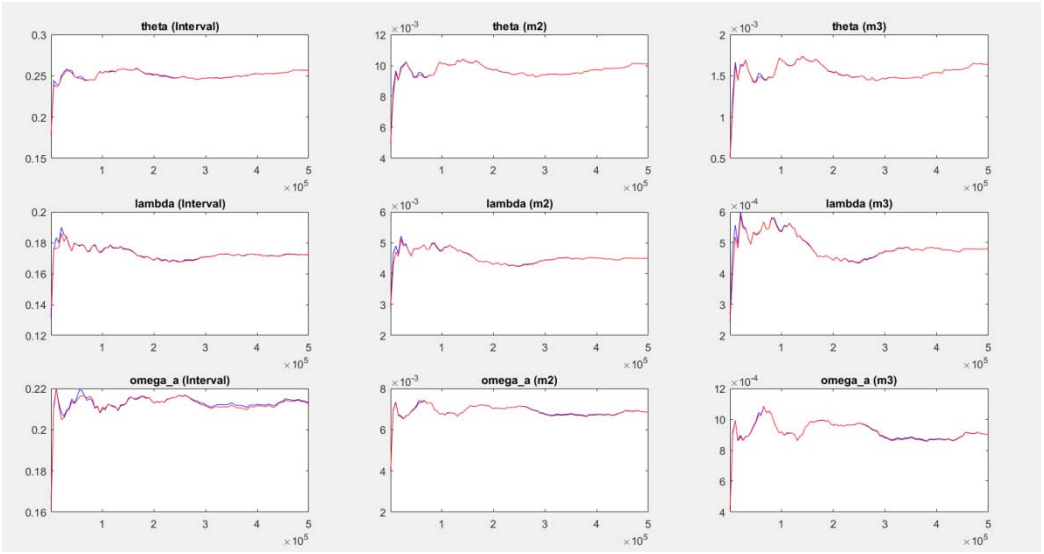
1. MCMC Univariate Convergence diagnostic (Brooks and Gelman, 1998)

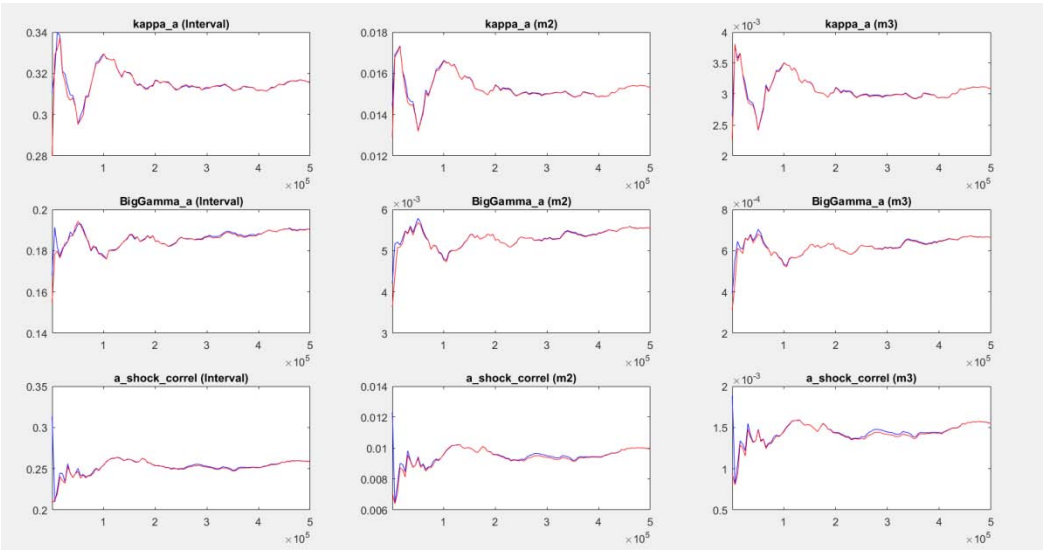


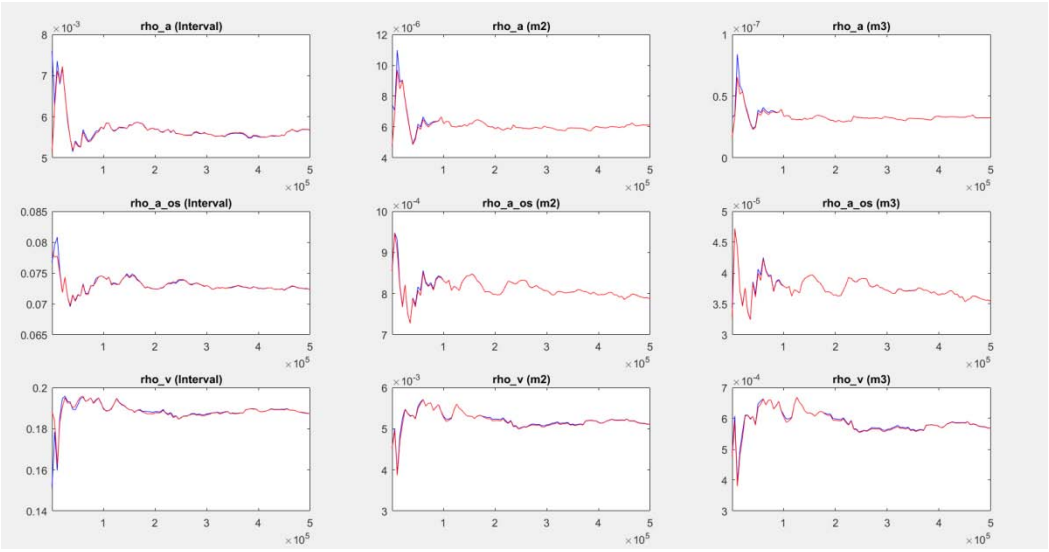




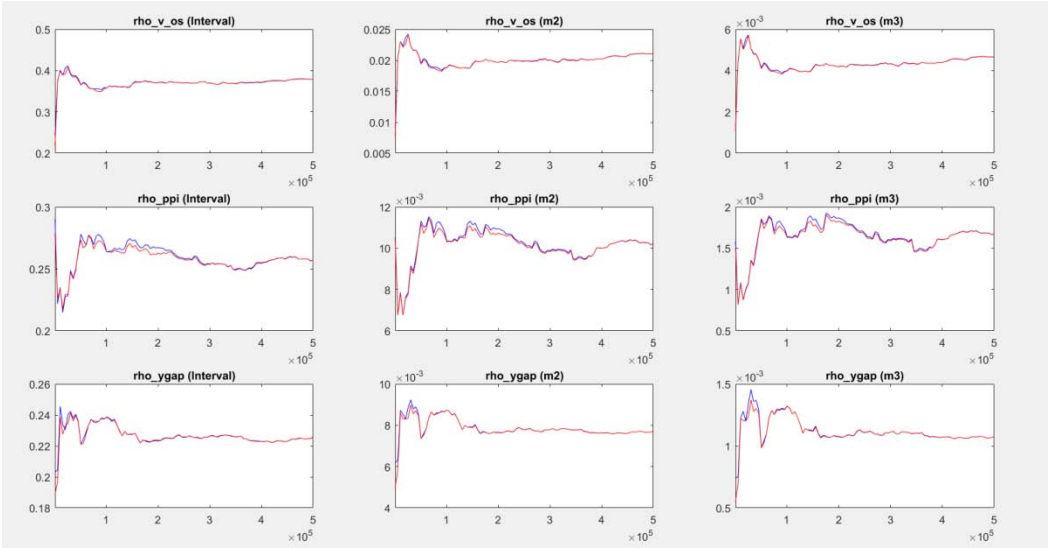
© 2017 Global Journals Inc. (US)

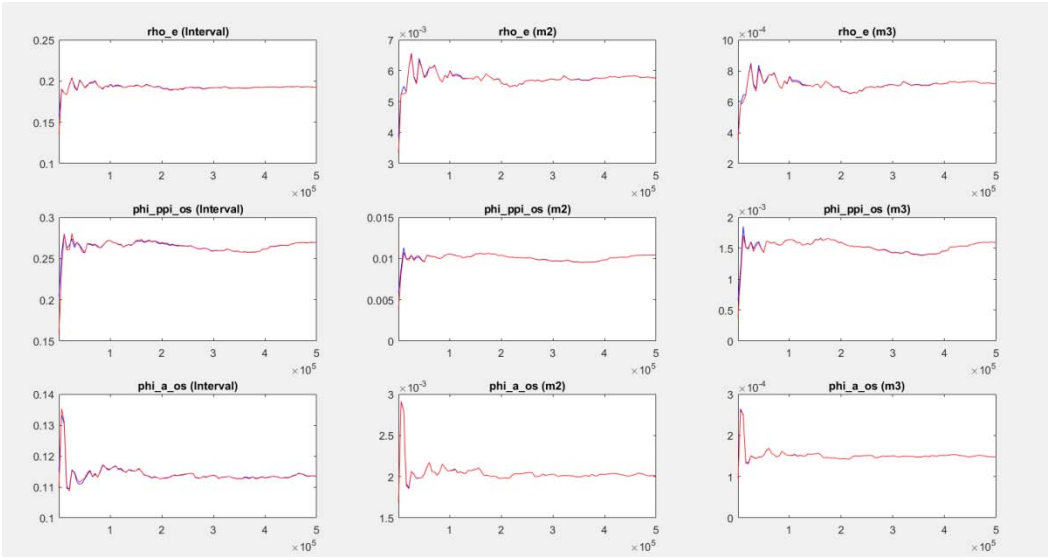


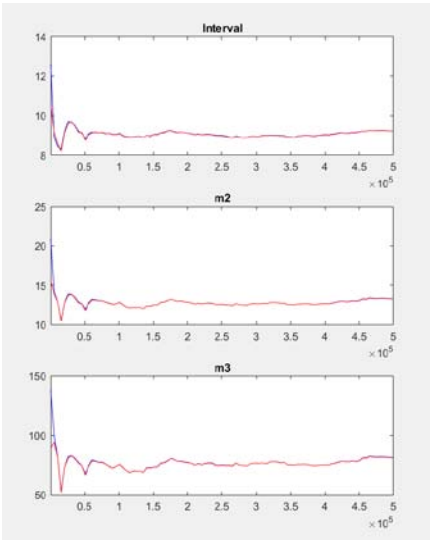




© 2017 Global Journals Inc. (US)

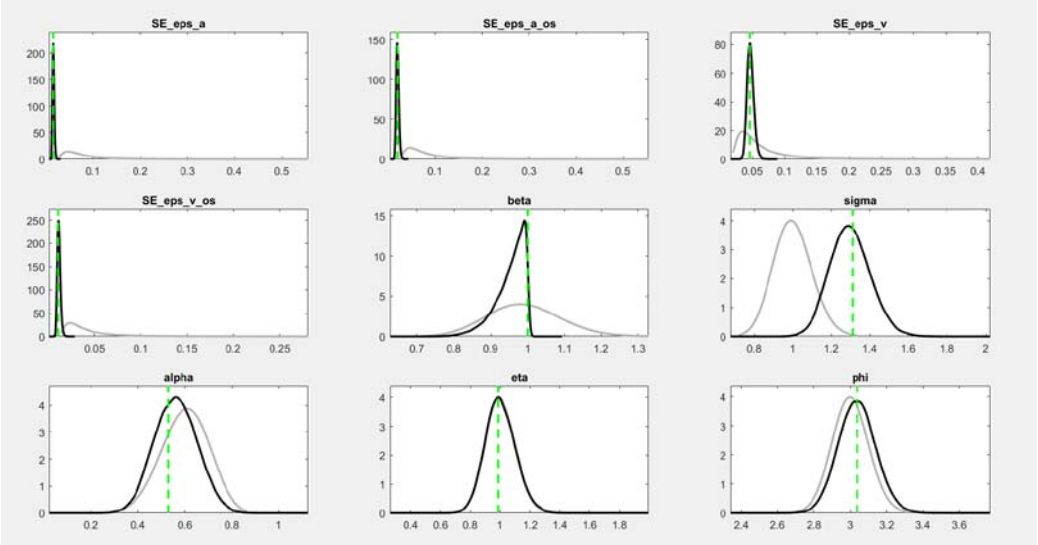


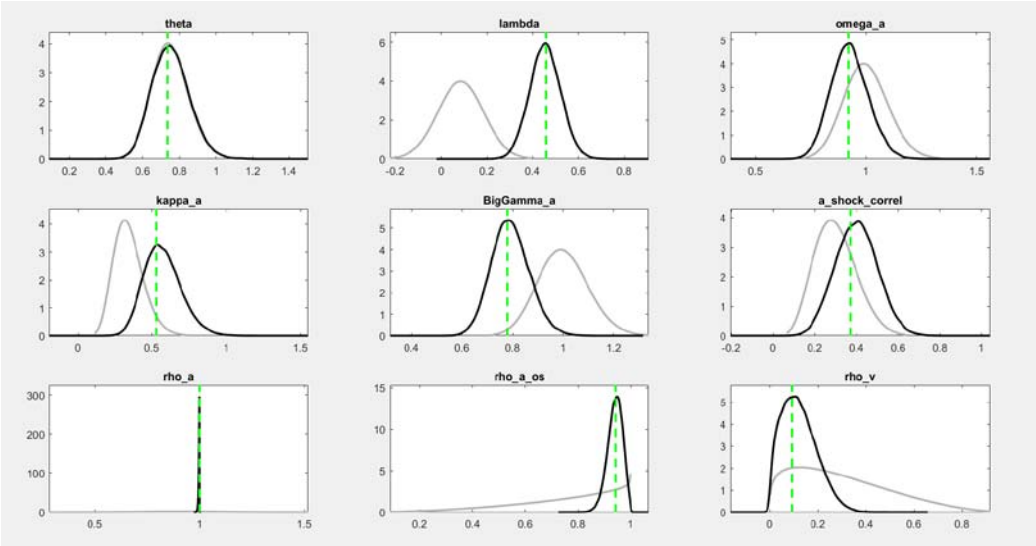


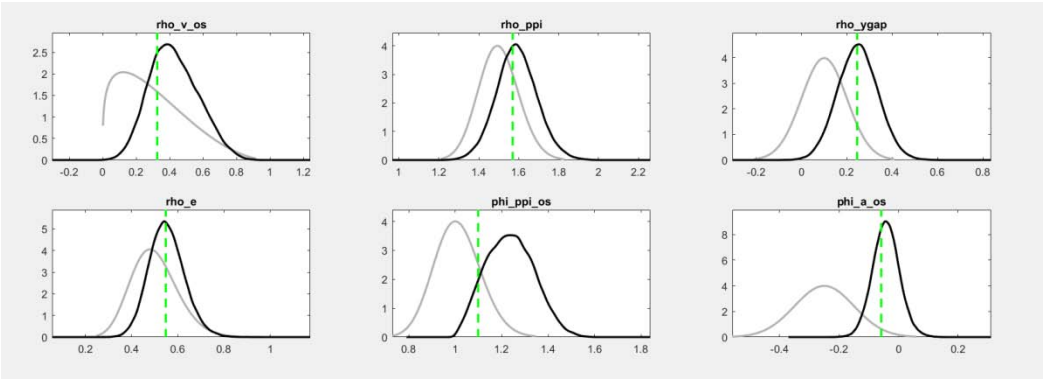


© 2017 Global Journals Inc. (US)

2. Priors and Posteriors

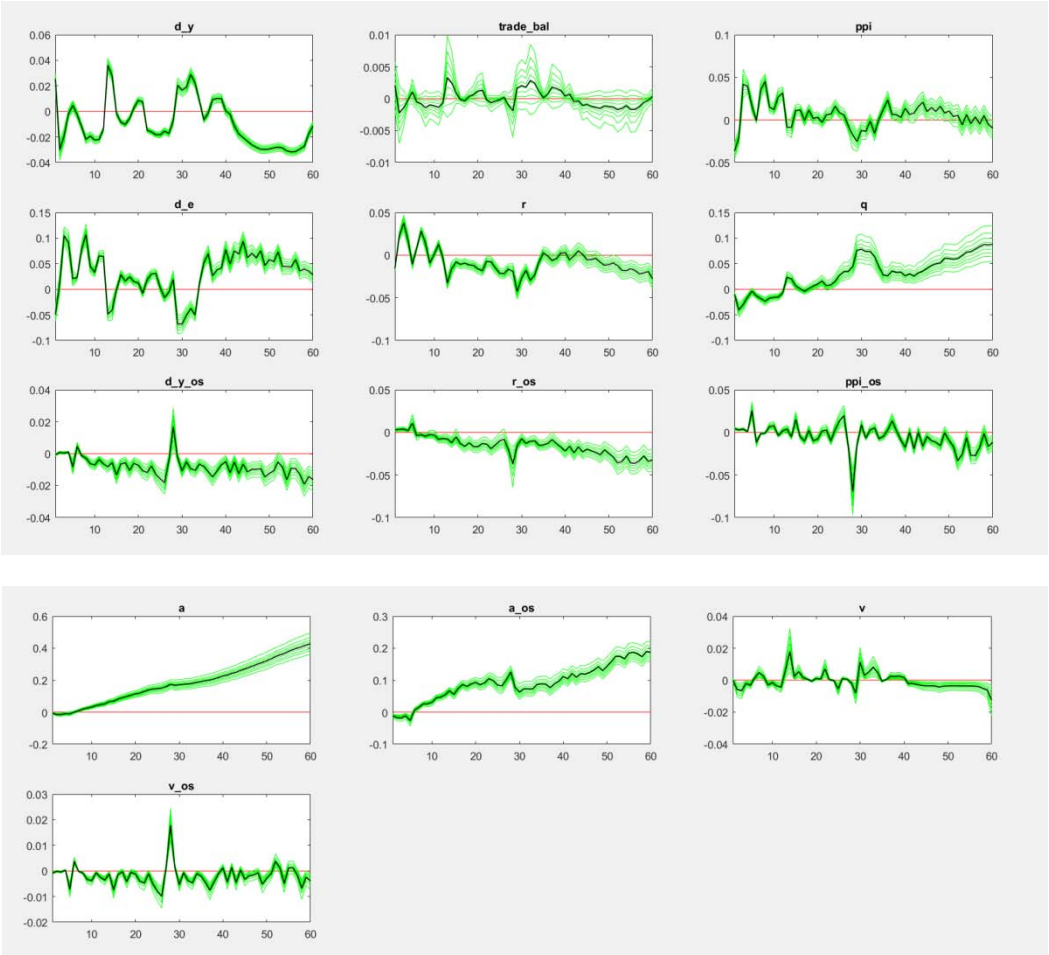






© 2017 Global Journals Inc. (US)

3. One step ahead forecast (filtered variables)



© 2017 Global Journals Inc. (US)

This page is intentionally left blank

© 2017 Global Journals Inc. (US)

Global Journal of HUMAN-SOCIAL SCIENCE: E
Economics
Volume 17 Issue 6 Version 1.0 Year 2017
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-460x & Print ISSN: 0975-587X

Business Cycle, Macroeconomic Variables and Economic Growth in Nigeria (1986-2014); A Time Series Econometric Approach

By Olaniran O. D., Oladipo A.D. & Yusuff A.S

Obafemi Awolowo University

Abstract- This paper examined the dynamic interaction among business cycle, macroeconomic variables and economic growth in Nigeria between 1986 and 2014. The study employed the vector auto regression technique (VAR) to investigate the business cycle effect on economic growth and its interaction with government expenditure and money supply in Nigeria during the study period. Quarterly time series data between 1986 and 2014 was used for the study. Data on the real gross domestic product (RGDP), nominal gross domestic product (NGDP), broad money supply (M2) and government expenditure was sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin. The Impulse Response and Variance Decomposition analysis from the VAR model showed that there is a dynamic relationship among business cycle, macroeconomic variables and economic growth in Nigeria, i.e., shocks to any of the variables affected all other variables used in the study. Business cycle affected growth and the performance of macroeconomic variables in the study period although its effect lacked persistence throughout the study period.

Keywords: business cycle, government expenditure, money supply, hodrick prescott, time series and vector autoregression.

GJHSS-E Classification: FOR Code: 910199



Strictly as per the compliance and regulations of:

© 2017. Olaniran O. D., Oladipo A.D. & Yusuff A.S. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Business Cycle, Macroeconomic Variables and Economic Growth in Nigeria (1986-2014); A Time Series Econometric Approach

Olaniran O. D. [α], Oladipo A.D.[σ] & Yusuff A.S [ρ]

Abstract- This paper examined the dynamic interaction among business cycle, macroeconomic variables and economic growth in Nigeria between 1986 and 2014. The study employed the vector auto regression technique (VAR) to investigate the business cycle effect on economic growth and its interaction with government expenditure and money supply in Nigeria during the study period. Quarterly time series data between 1986 and 2014 was used for the study. Data on the real gross domestic product (RGDP), nominal gross domestic product (NGDP), broad money supply (M2) and government expenditure was sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin. The Impulse Response and Variance Decomposition analysis from the VAR model showed that there is a dynamic relationship among business cycle, macroeconomic variables and economic growth in Nigeria, i.e., shocks to any of the variables affected all other variables used in the study. Business cycle affected growth and the performance of macroeconomic variables in the study period although its effect lacked persistence throughout the study period. Therefore, the paper concludes that business cycle and growth affects each other as against the view of earlier macroeconomists who posits that they are unrelated. Thus, the study proffers the use of stabilization policies for macroeconomic variables as well as ensuring that the business cycle effect is not trivialized in Nigeria.

Keywords: business cycle, government expenditure, money supply, hodrick prescott, time series and vector autoregression.

Abbreviations: Real Gross Domestic Product (RGDP), Business Cycle (BCY), Government Expenditure (GEXP), Broad Money Supply (M2) and Hodrick-Prescott Filter (HP).

I. Introduction

Traditional macroeconomists are of the view that business cycle and growth are unrelated areas of macroeconomics, that is, business cycle does not affect economic growth, and both should be remain separate. However, modern macroeconomists are of the view that business cycle and growth cannot be treated independently because cyclical fluctuations in an economy play a significant role in the growth of such an economy. Kydland and Prescott (1982) were the first to analyze macroeconomic variations in a manner that integrates growth and business cycle theories. Also, Rafferty (2003) argued that if business cycle affects productivity, it might as well influence growth. These arguments have spurred researchers over time, into investigating the relationship between business cycle and growth in developed and developing countries of the world.

Business cycles otherwise called economic cycles are fluctuations in macroeconomic variables, particularly the Gross Domestic Product (GDP).It is defined as the regular ups and downs in a nation's output. It can also becharacterizedas movements in macroeconomic variables measured byups and downs in overall macroeconomic performance (Alimi and Atanda, 2011). These fluctuations typically involve shifts over time between periods of relatively rapid economic growth (booms) and periods of relative stagnation or decline (recessions).The Great Depression of the 1930's in the United States of America and the fluctuations in macroeconomic variables around the time led tothe emergence of the business cycle phenomena.

Nigeria over the years has witnessed periods of booms and recessions. In the 1970s, the economy was expanding due to the large inflow of crude oil income, and between 1981-1985 (when there was a fallin oil revenue), the economy declined, causing a rapid deterioration in the living standard of Nigerians (Chukwuemeka, 2014). This, in turn,led to a decline in the performance of the economy as government revenue fell, the standard of living worsened, debts (both domestic and external) rose followed by a decreasein the GDP.

The Central Bank of Nigeria (CBN) in its effort to manage the effects of the falling oil revenue and dwindling international reserves engaged in currency devaluations. The series of devaluations created transaction losses for local firms and multinational corporations exposed to dollar-denominated debt. Businesses in Nigeria are faced with new and rising cost of doing business due to the business cycle phenomena generated by dwindling foreign reserves, declining oil price, increased government borrowing, political instability coupled with tight monetary and fiscal policy framework. These makes it difficult for the economy to grow as expected.

Author α ρ: Department of Economics, Obafemi Awolowo University, Ile-Ife, Nigeria. e-mail: olanirandotun@gmail.com
Author σ: Department of Economics, Osun State University, Osogbo, Nigeria.

© 2017 Global Journals Inc. (US)

Macroeconomic variables such as the GDP, inflation rate, government expenditure, exchange rates, money supply and oil price are important indicators of economic performance. Shocks to any of these variables can distort the workings of the economy, particularly economic growth. Empirical evidence in the literature over time posit that shocks to some of these variables are key sources of fluctuations to the economy and as such contribute to the business cycle phenomena (Akinleye and Ekpo, 2013). The empirical relationship that exists between these macroeconomic variables, business cycle and economic growth remains a concern to economists, researchers and policy makers especially in a developing country like Nigeria.

Also, there are controversies in the literature by several authors as regards the effects business cycle on economic growth some of which are Lucas(1977), Kydland and Prescott (1982), Canova and Fabio (1994) and Celsa Machado (2001). Some argued that long-term growth and short term fluctuations in output must be explained by the same theory and some others believed it should not be so. However, it has been agreed by most scholars that the effect of business cycle on economic growth may be examined using the Real Business Cycle framework, with emphasis made on short-term fluctuations in both empirical and theoretical studies, and the adoption of the neo-classical growth model (Celsa Magado, 2001).

The crucial point to note here is that Nigeria was and is still experiencing periods of booms and recession and these spurs fluctuations in her macroeconomic variables which generates cyclical variations in the GDP. Nigeria needs to understand how business cycle affects output, the extent to which fluctuations in macroeconomic variables influence economic performance and ways to achieve the desired level of growth in the economy. The scope (period of study) chosen is to cover the eras of structurally driven policies and the attendant cyclical movements in aggregate macroeconomic variables.

II. Literature Review

Different types of business cycles have been discovered over time in the literature and the major ones are the Kitch in inventory cycle of 3-5 years identified by Joseph Kitch in in 1923, Kuznets infrastructural investment cycles of 15-25 years proposed by Simon Kuznets (1958), Kondratiev wave cycle of 45-60 years identified by Nikolai Kondratiev (1922) and the Jugular fixed investment cycle of 7-11 years popularised in the 1860s by Clement Jugular. The Jugular cycle is the most recognized cycle of all others as it relates to the modern concept of business cycle. The global economic meltdown of 2007, the great depression of the 1930s and the events of the 1920s (to mention a few) depicts business cycles, but the great misery is of a higher magnitude and this event triggered off a new wave of intellectual economic thinking.

The great depression describes the economic crisis of the 1930s in the USA that precedes the existence of the Keynesian school of thought. It was a situation when in the face of weak fiscal performance, authorities continued with the laissez-faire policies of the era.Several authors have proffered various explanations to help elucidate the causes of business cycles and in particular the great depression. According to the Austrian School led by Ludwig von Mises, business cycle is caused by the intervention of monetary authorities in the money market. They posit that interest rate is a major factor that guides investment decisions. Gusmorino (1996) stated that the causes of the great depression include inequality in wealth distribution, poor and short-sighted government policies, mass speculation in the US stock market, etc.

Some empirical studies over time have examined the relationship between business cycle and growth in developed and developing countries of the world. Kydland and Prescott (1982) analyzed the extent to which movements in aggregate economic variables affect output in the US under some imposed assumptions. The model formulated was applied to quarterly data of the US economy, and the result showed that the business cycle component, display a moderately high degree of resistance. Consumption is strongly pro-cyclical and fluctuated about a third as much as output in percentage terms; investment is strongly pro-cyclical and oscillated about a third as output.

Similarly, in an attempt to examine what accounts for business cycle fluctuations and long-run movement of output and prices using quarterly data for the period 1951:2 to 1987:2 of the US economy. Shapiro and Watson (1988) adopted a Structural Vector Autoregressive (SVAR) specification to estimate the model and analyze the time series properties of the data. The results show that aggregate demand shocks account for about twenty to thirty percent of output fluctuations, technology shocks account for roughly one-quarter of cyclical movements and shocks that permanently affect labor input account for the balance of fluctuations in output.

Lee *et al.* (2003)applied a VAR model to analyze the role of US and Japanese business cycles on the Australian economy and found that the fluctuations of output in the US and Japan affected the Australian business cycle in addition to oil price shocks. Furthermore, they found that the linkage between the US and Australian business cycles became stronger since the early 1980s, while the relationship between Australia and Japan became weaker after 1990s.

Peiris and Sax egaard (2007), evaluates monetary policy trade-offs in low-income countries using

© 2017 Global Journals Inc. (US)

a DSGE model for Mozambique The study used the Bayesian method to estimate the model covering the period 1996:1 to 2005:4 on 18 macroeconomic variables. The result of the study suggests that exchange rate peg is significantly less effective than inflation targeting at stabilizing the real economy due to higher interest rate volatility. This researchis seemingly one of the few ones to date in macroeconomic modeling in Sub-Sahara Africa with exception of South Africa for which DSGE models have been developed to simulate the economy.

In Nigeria, Olekah and Oyaromade (2007) estimated a DSGE model for the Nigerian economy. This model appears to be one of the earliest DSGEMs on Nigeria. The study presents a small-scale DSGE model of the Nigerian economy with the aim of aiding monetary policy decisions. The authors employ Vector Autoregressive (VAR) method of estimation. The results show that changes in prices are influenced mainly by volatility in real output while exchange rate and inflation account for significant proportion of the variability in the interest rate.

Following the study of Olekah and Oyaromade (2007), a small business cycle model in the spirit of Dynamic Stochastic General Equilibrium (DSGE) model was developed for Nigeria by Alege (2009). The aim was to examine the sources of business cycle and draw implications for policy analysis using the Bayesian method and the Vector Auto regression analysis, between 1970 and 2004. The results obtained in this study showed that the Nigerian business cycle is determinedby both real and nominal shocks.

Also, Alimi and Atanda (2011) investigated the relationship among globalization, business cycle and economic growth in Nigeria between 1970-2010 amidst cyclical fluctuations in foreign investments used an autoregressive model on annual data between this periods. The result showed that globalization has a positive and significant effect on economic growth while the effect of business cycle on economic growth in Nigeria was positive but insignificant.

Fredrick *et al* (2014) employed VAR and Granger Causality Tests to analyze the effect of business cycle on economic growth in Nigeria and the direction of causality between them, using annual data between1970-2012. The result showed that money supply shocks affect the economy more than all other shocks and a bi-directional causality running between money supply and government expenditure and a unidirectional causality between exchange rate and government revenue.

III. Methodology

a) Model Specification

This paper adapts the econometric model adopted by Alimi and Atanda (2011) and Fredrick *et al.* (2014) to investigate business cycle and economic growth in Nigeria. Government expenditure (GEXP)and money supply (M2) are used as the proxy for macroeconomic variables because they are major indicators of output performance in the economy. They are also important sources of business cycle in Nigeria. Real gross domestic product (RGDP) is used as the proxy for economic growth and the business cycle (BCY) component will be generated from Nominal GDP (NGDP) using the Hodrick-Prescott (HP) filter. The reason for this is that nominal GDP has not been corrected for inflation or any smoothening process and the cyclical part of GDPcan be accurately accounted for. The HP filter is used to decompose nominal GDP into its trend and cyclical components. The cyclical component is used as the proxy for business cycle in this paper. Thus, the vector (Z_t) of endogenous variables included in the reduced-form VAR can be expressed as:

$$Z = \begin{Bmatrix} RGDP \\ GEXP \\ M2 \\ BCY \end{Bmatrix} \quad (1)$$

Where RGDPis the gross domestic product, BCY is business cycle generated by the HP filter, M2 is money supply,and GEXP is government expenditure. M2 and GEXP are used as the proxy for macroeconomic variables in this study because they are important macroeconomic variables in Nigeria and they are used by studies such as Agenor *et al.*(2000) and Fredrick *et al.*(2014). In this model, all variables are assumed to be endogenous, affecting each other contemporaneously as well as with lags. In vector form, the equation is specified as:

$$Z_t = k + \beta_1 Z_{t-i} + \beta_2 Z_{t-i} + \beta_3 Z_{t-i} + \ldots\ldots\ldots + \beta_p Z_{t-p} + \mu_{1t} \quad (2)$$

Equation (2) can be expressed clearly as follows:

$$\Delta RGDP_t = \alpha_0 + \sum_{i=1}^{p} \phi_i \Delta GDP_{t-i} + \sum_{i=1}^{q} \beta_i \Delta BCY_{t-i} + \sum_{i=1}^{r} \gamma_i \Delta GEXP_{t-i} + \sum_{i=1}^{s} \sigma_i \Delta M2_{t-i} + \mu_{2t}$$

$$\Delta BCY_t = \alpha_0 + \sum_{i=1}^{q} \beta_i \Delta BCY_{t-i} + \sum_{i=1}^{p} \phi_i \Delta GDP_{t-i} + \sum_{i=1}^{r} \gamma_i \Delta GEXP_{t-i} + \sum_{i=1}^{s} \sigma_i \Delta M2_{t-i} + \mu_{3t}$$

© 2017 Global Journals Inc. (US)

$$\Delta GEXP_t = \alpha_0 + \sum_{i=1}^{r} \gamma_i \Delta GEXP_{t-i} + \sum_{i=1}^{p} \phi_i \Delta GDP_{t-i} + \sum_{i=1}^{q} \beta_i \Delta BCY_{t-i} + \sum_{i=1}^{s} \sigma_i \Delta M2_{t-i} + \mu_{4t}$$
$$\Delta M2_t = \alpha_0 + \sum_{i=1}^{s} \sigma_i \Delta M2_{t-i} + \sum_{i=1}^{p} \phi_i \Delta GDP_{t-i} + \sum_{i=1}^{q} \beta_i \Delta BCY_{t-i} + \sum_{i=1}^{r} \gamma_i \Delta GEXP_{t-i} + \mu_{5t} \quad (3)$$

b) Time Series Properties and Diagnostics Test

To investigate the time-series property of the variables to avoid spurious results, the Phillip-Peron (PP) testwith constant and linear trend is conducted to test for the order or integration of all series. The ADF test is based on the Null Hypothesis that a unit root exists in the autoregressive representation of the time series. However, to adhere strictly to the underlying assumptions for an autoregressive model, both the Breusch-Pagan test for serial correlation and the ARCH test for hetero sced as city are employed as diagnostics test.

IV. Data Source

The quarterly time series data on the real gross domestic product, nominal gross domestic product, government expenditure and money supply were sourced from the Central Bank of Nigeria (CBN) statistical bulletin 2014.

V. Results and Discusion

This section of the study presents the empirical results of the unit root test and regression analysis. Before the discussion of the estimated autoregressive model, the Phillip Peron unit root result is shown in table 4.1:

Table 4.1: Unit Root Test Results

Phillip-Peron (PP) Test			
Variables	Level	1st Difference	Status
RGDP	-2.3456	-10.3151	I(1)
		(0.0000)**	
GEXP	-3.0776	-12	I(1)
		(0.0000)**	
M2	-0.7796	-69.8088	I(1)
		(0.0000)**	
BCY	-4.4767		I(0)
	(-0.0025)**		

*Note: ** represents 5% level of significance*

The result of the unit root test shown in Table 1 revealed that among the considered time series variables, real gross domestic product, government expenditure, and money supply reject the null hypothesis at first difference. This implies that these variables are not stationary at level. However, business cycle, represented by the cyclical component of the nominal gross domestic product rejected the null hypothesis of non-stationarity at level. This indicates that it is non-mean reverting, converges towards its long-run equilibrium and its variance is constant over time. This means that the business cycle component is found to be stationary at level.

The results of the impulse response analysis of the vector auto regression model, are displayed in figures1, 2, 3 and four, while the variance decomposition analyses are presented in Tables 2, 3, 4 and 5.

© 2017 Global Journals Inc. (US)

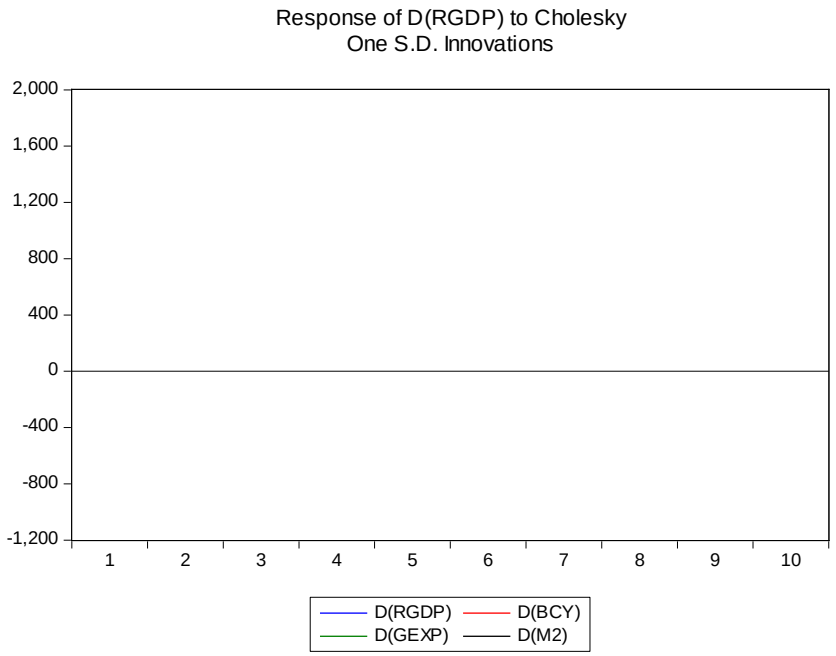


Figure 4.1: Impulse response of real gross domestic product to business cycle, government expenditure, and money supply.

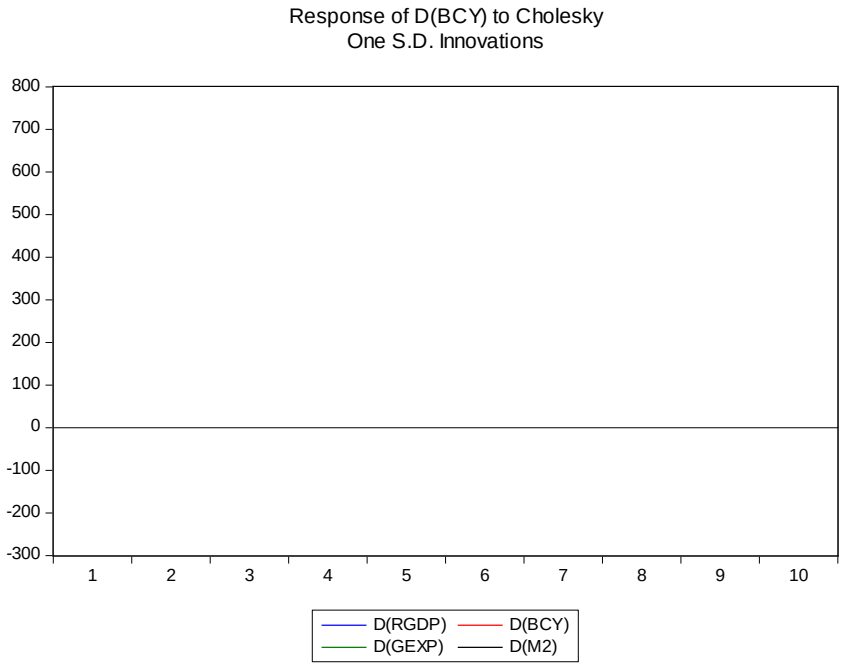


Figure 4.2: Impulse response of business cycle to real gross domestic product, government expenditure, and money supply.

© 2017 Global Journals Inc. (US)

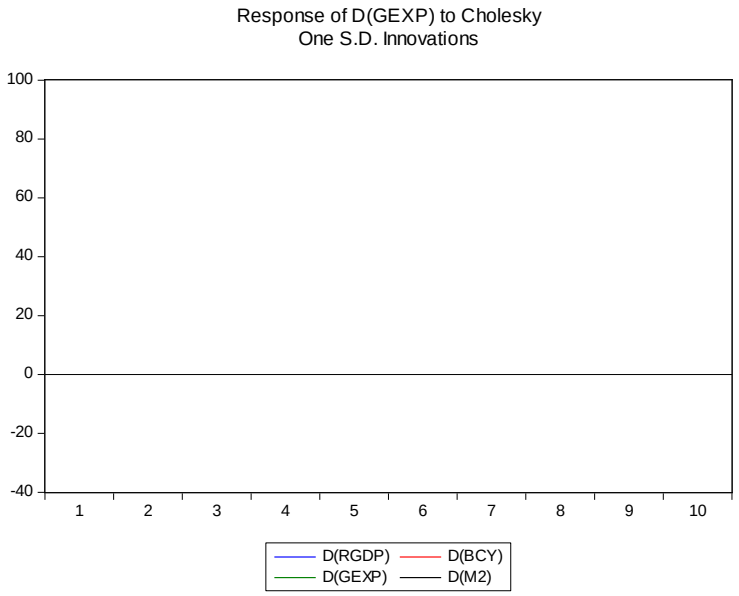


Figure 4.3: Impulse response of government expenditure to real gross domestic product, business cycle, and money supply.

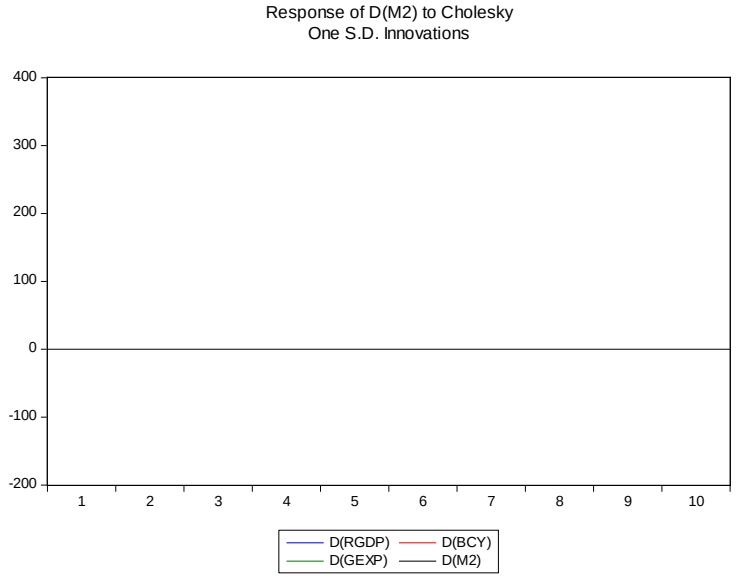


Figure 4.4: Impulse response of money supply to real gross domestic product, business cycle, and government expenditure.

Table 4.2: Variance Decomposition of RGDP

PERIOD	S.E.	D(RGDP)	D(BCY)	D(GEXP)	D(M2)
1	1683.765	100.0000	0.000000	0.000000	0.000000
2	1811.037	87.67649	0.758511	1.799328	9.765669
3	2006.731	71.84905	1.120656	2.105162	24.92513
4	2026.486	71.17638	1.308119	2.592058	24.92345
5	2043.324	70.04579	2.580352	2.729247	24.64461

© 2017 Global Journals Inc. (US)

6	2044.255	69.98807	2.605288	2.776633	24.63001
7	2045.323	70.01213	2.602793	2.779370	24.60571
8	2045.624	70.00427	2.610840	2.778794	24.60610
9	2045.907	69.98910	2.611190	2.778757	24.62095
10	2045.971	69.98477	2.611047	2.779650	24.62453

Table 4.3: Variance Decomposition of BCY

PERIOD	S.E.	D(RGDP)	D(BCY)	D(GEXP)	D(M2)
1	745.5399	8.503424	91.49658	0.000000	0.000000
2	760.9603	8.180712	88.76536	0.540447	2.513482
3	776.1860	7.864670	85.64863	0.813730	5.672970
4	780.3222	8.454987	84.90139	0.939621	5.704001
5	781.9241	8.432341	84.83634	0.940487	5.790835
6	782.2732	8.425138	84.79643	0.940059	5.838377
7	782.3647	8.431018	84.78615	0.940636	5.842200
8	782.4039	8.430813	84.78484	0.941645	5.842702
9	782.4112	8.430668	84.78366	0.941991	5.843677
10	782.4143	8.431114	84.78302	0.941984	5.843884

Table 4.4: Variance Decomposition of GEXP

PERIOD	S.E.	D(RGDP)	D(BCY)	D(GEXP)	D(M2)
1	88.73196	6.916295	3.449014	89.63469	0.000000
2	96.53529	9.352528	2.914309	76.04599	11.68717
3	99.33097	13.34292	2.961000	71.96009	11.73598
4	100.9888	13.75314	4.326003	69.70976	12.21109
5	101.6064	13.61477	4.588173	68.90558	12.89148
6	101.7500	13.59783	4.614829	68.73057	13.05677
7	101.8152	13.58401	4.676916	68.67093	13.06814
8	101.8261	13.58147	4.689250	68.66312	13.06616
9	101.8301	13.58651	4.689478	68.65853	13.06548
10	101.8320	13.58845	4.690139	68.65600	13.06541

Table 4.5: Variance Decomposition of M2

PERIOD	S.E.	D(RGDP)	D(BCY)	D(GEXP)	D(M2)
1	423.5578	13.91803	0.093989	0.692923	85.29506
2	462.5487	19.74015	0.179869	7.955237	72.12474
3	493.2805	17.35894	7.223242	7.008626	68.40919
4	494.8763	17.50529	7.183306	6.971998	68.33940
5	496.9190	17.48928	7.745434	6.945038	67.82025
6	497.1899	17.48261	7.806063	6.953555	67.75777
7	497.3114	17.48181	7.803714	6.951116	67.76336
8	497.3481	17.48789	7.804613	6.951381	67.75611
9	497.3696	17.48773	7.809103	6.951077	67.75209
10	497.3747	17.48741	7.809530	6.950934	67.75213

© 2017 Global Journals Inc. (US)

a) Impulse Response Analysis

Impulse response analysis traces out the responsiveness of the dependent variables in a VAR model to shocks from each of the variables (Brooks 2008). It also shows the effects of disturbances on the adjustment path of the variables. It shows the size of the impact of the shock, plus the rate at which it dissolves. It also shows how each variable reacts dynamically to shocks from other variables. Furthermore, the impulse response function shows the dynamic response of one variable to a one-period standard deviation innovation shock to the other variables.

From figure 1, RGDP has a positive response to innovations from business cycle (BCY), government expenditure (GEXP) and money supply (M2) in the first period. It responded negatively in the second phase but became positive by the third period. BCY remained positive between the third period and the seventh period. Its response became negative in the eighth period and had no response in the ninth and tenth periods. This implies that the effect of shocks to the other variables on RGDP lacked persistence in Nigeria as it faded away in the last two periods. This is contrary to the findings of Chris and Anyingang (2012) who argued that shocks affect output only in the short run. These findings show that BCY affects RGDP in most of the periods and does not support the view of traditional macroeconomics that there is no relationship between business cycle and growth.

Figure 2, BCY responded positively to a one standard deviation shock in RGDP, GEXP, and M2 in the first period. However, it responded negatively to shocks in RGDP, GEXP and M2 between the second and sixth period but became positive in the sixth and seventh period. BCY did not respond to shocks to these variables in the subsequent periods. The implication of this is that the effect of the shocks to RGDP, M2 and GEXP on BCY lacks persistence in all the periods as it faded away in the last three periods. This also means that BCY's response to shocks in RGDP, M2 and GEXP is observed majorly in the short run and quite negligible in the long run in Nigeria. This supports the findings of Chris and Anyingang (2012) but is contrary to the findings of Bouzid (2012) and the general traditional macroeconomic argument that posits that business cycle and growth are unrelated areas of macro-economics.

In Figure 3, GEXP responded positively to a standard deviation shock to RGDP, BCY and M2 in the first period. It became negative in the second period but responded positively to the shock in RGDP, BCY, and M2 in the third period. GEXP further responded positively to shocks to these variables between the third and fifth period. However, its response was negative in the sixth period but showed no response in the subsequent periods. This means that fluctuations in GEXP in Nigeria may be attributed to shocks affecting RGDP, BCY, and M2 in the short run. This is because the effect of the shock is not persistent in all the periods as it faded away in the long run (ninth and tenth periods). This finding supports the findings of Bergoeing and Soto (2000).

In figure 4, M2 reacted positively to a standard deviation shock to RGDP, BCY, and GEXP in the first two periods. Its response is negative in the third period but became positive in the fourth period. M2's response is negative in the fifth and sixth periods but became positive in the seventh period. However, it had no response to shocks to RGDP, BCY and GEXP in the subsequent periods because shocks to these variables did not persist throughout the periods as it faded away in the latter periods. This is similar to the findings of Ibrahim *et al.* (2014).

b) Variance Decomposition

Variance decomposition analysis provides a means of determining the relative importance of shocks in explaining variations in the variable of interest (Andren, 2007). It offers information about the importance of each random innovation to the variables in the VAR model.

In Table 2, BCY, GEXP, and M2 did not give explanation to the variation in RGDP. In the third period, 1.12%, 2.10% and 24.93% of the variations in RGDP are explained by shocks to BCY, GEXP, and M2 respectively. The effect of the shocks to these variables increased in the subsequent periods. As at the seventh period, 2.60%, 2.77% and 24.61% of the variations in RGDP were explained by BCY, GEXP, and M2 respectively. This implies that M2 has the highest power and BCY has the lowest power to explain the variations in RGDP in Nigeria. This supports the findings of Fredrick *et al*, (2014).

In Table 3, 8.5% of the variation in BCY is explained by RGDP while GEXP and M2 did not contribute to the variation in BCY in the first period. GEXP and M2's contribution to variations in BCY increased in the third period by explaining 0.81% and 5.67% of the variations in BCY respectively. The contribution of RGDP, GEXP and M2 continued to increase in the subsequent periods as 8.43%, 0.94% and 5.84% of the variation in BCY is explained by these variables. It is observed that RGDP affects BCY in Nigeria more than M2 and GEXP respectively. This supports the findings of Rafferty (2003).

In Table 4, RGDP and BCY explained 6.92% and 3.44% of the variation in GEXP respectively in the first period, but M2 does not affect GEXP in this period. The influence of RGDP and M2 in explaining the variations in GEXP increased in the third period while the influence of BCY reduced. However, in the subsequent periods, the influence of RGDP, BCY and M2 continued

© 2017 Global Journals Inc. (US)

to increase (though slightly) till the tenth period as 13.59%, 4.69% and 13.06% of the variation in GEXP were explained respectively. Hence, RGDP and M2 have more power to explain variations in GEXP than BCY in Nigeria. This is similar to the findings of Agenor, Mc Dermort, and Presad (2000) and Fredrick *et al*. (2014).

In Table 5, 13.91%, 0.09% and 0.69% of the variation in M2 is explained by RGDP, BCY, and GEXP respectively in the first period. By the third period, BCY, and GEXP's contribution to variation in M2 drastically increased by explaining 7.22% and 7.01% of the variation in M2 while RGDP explained 17.22% of the variation in M2. The effects of RGDP, BCY and GEXP on the variations in M2 did not noticeably increase in the subsequent periods. The largest share of the variations in M2 is absorbed by RGDP, and this implies that the variations in M2 are best explained by RGDP in Nigeria. This is similar to the findings of Fredrick *et al.* (2014) and Alege (2009).

VI. Conclusion and Recommendations

This research paper analyzed the relationship among business cycle, macroeconomic variables (proxied by government expenditure and inflation) and economic growth in Nigeria between 1986 and 2014. The ve.ctor auto regression (VAR) models employed revealed that business cycle affects growth and the macroeconomic variables used in this paper through the variance decomposition and impulse response analysis. This implies that business cycle shocks affect economic growth and other macroeconomic in Nigeria, although its effect on growth lacked persistence throughout the period of study as it faded away in the latter period. Also, shocks to each of the variables affected other variables in the VAR model which establishes a dynamic interaction among the variables.

This study thus concludes that business cycle fluctuations affect growth and the macroeconomic variables used in this study in Nigeria in the last three decades. This explains to some extent the slow growth, high level of poverty and the economic recession experienced over time especially in the recent years. The business cycle-growth debate has always been inconclusive among scholars as some believe it hinders growth while some believe its effect on growth is negligible. The overall challenge to policymakers is to ensure that policies enhances the stability of macroeconomic variables are put in place as shocks to these variables affects the growth process in Nigeria. The effects of business cycle on the performance of the economy should not be trivialized as it has far-reaching effects on the economy as a whole.

References Références Referencias

1. Agenor, P.R. Mc Dermort, C.J. and Prasad, E.S. (2000) "Macroeconomic Fluctuations in Developing Countries: Some Stylized Facts", *World Bank Economic Review*
2. Akinleye S.O and Ekpo S (2013) Oil Price Shocks and Macroeconomic Performance in Nigeria. *Economia Mexicana, Nueva Epoca,* vol 2, 2013, pp 565-624
3. Alege, P. O. (2009). A Business Cycle Model for Nigeria: *African Econometrics Societ Conference 3*(1).
4. Alimi, O.Y and Atanda A.A, (2011). Globalization, Business Cycle and Economic growth in Nigeria. *African Journal of Scientific Research.* Vol 7, No 1(2011).
5. Bergoeing, R. and Soto, R. (2002), "Testing the Real Business Cycle Models in an Emerging Economy", Burnside, Craig, Martin Eichenbaum and Jonas Fisher (2004), "Assessing the Effects of Fiscal Shocks", *Journal of Economic Theory*, 115: 89-117
6. Bouzid, A. (2012) The Relationship of Oil Prices and Economic Growth in Tunisia: A Vector Error Correction Model Analysis. The Romanian Economic Jounal., March 2012.
7. Canova, F. (1994) "Does Detrending Matter for the determination of the Reference cycle and the selection of turning point?" *Economic Journal, Royal Economic Society,* vol. 109(452), pp 126-150
8. Celsa, M. (2001) Measuring business cycles: The Real Business Cycle Approach and Related
9. Controversies.http://www.fep.up.pt/investigacao/workingpapers/wp107.pdf
10. Chris, O. and Anyingang. R. (2012), The Effect of Interest Rate Fluctuation on the Economic Growth of Nigeria. *International Journal of Business and Social Science;* Vol. 3 No. 20
11. Chukwuemeka, O(2014)The Historical Perspective of Business Cycles in Nigeria; *International Journal of Economic Development Research and Investment,* Volume 5, Number 1; April 2014.
12. Fredrick,*O.,*Ugwuanyi R.,Obidike.,O.,and Eze A, Analysis of Business Cycles and Economic Growth in Nigeria. *International Journal of Innovative Research & Development;* Vol 3 Issue 13
13. Gusmorino, P. A., (1996) "Main causes of the Great Depression"http://www.gusmorino.com/pag3/great depression/index.html
14. Hodrick, J. and Prescott, E.C. (1997), "Post-War US Business Cycle: An Empirical Investigation," *Journal of Money, Credit and Banking*, 29 (1), 1-16
15. Ibrahim A, Adesanya O and Bolarinwa A, (2014); Empirical Investigation between Budget Deficit, Inflation and Money Supply in Nigeria: *European Journal of Business and Social Sciences,* Vol. 2, No.12 , pp 120-134
16. Kydland, F. and Prescott, E. C. (1982). Time to Build and Aggregate Fluctuations. *Econometrica: Journal of the Econometric Society*, 3(5): pp. 1345-1370.

© 2017 Global Journals Inc. (US)

17. Lagos Business School (2015) Lagos Business School. www.lbs.edu.ng
18. Lucas, R.E. (1977), "Understanding Business Cycles"", in *Stabilization of the Domestic and International Economy*, (ed.) Karl Brunner and Allan H. Meltzer, *Carnegie-Rochester Series on Public Policy* 5:7-29, Amsterdam North Holland.
19. Lucas, R. E. and Farley, J. (1968), Estimation and Inference for Linear Models. http//:amstat. tandfonline.com
20. Olekah, J. K. A. and Oyaromade, R. (2007). Estimating a DSGE Model of the Nigerian Economy. In *Draft Presented at the* (Vol. 12).
21. Peiris, J. and Saxegaard, K. (2007), An estimated DSGE Model for Monetary Policy Analysis. in Low Income Countries. "*IMF working papers"*. Papers.ssrn.com.

Appendix

Vector Autoregression Estimates
Date: 04/11/16 Time: 23:16
Sample (adjusted): 4 116
Included observations: 113 after adjustments
Standard errors in ( ) & t-statistics in [ ]

	D(RGDP)	D(BCY)	D(GEXP)	D(M2)
D(RGDP(-1))	-0.185004	-0.048833	-0.003481	-0.064572
	(0.10837)	(0.04799)	(0.00571)	(0.02726)
	[-1.70709]	[-1.01765]	[-0.60948]	[-2.36858]
D(RGDP(-2))	0.375489	-0.030576	0.004058	0.006215
	(0.11459)	(0.05074)	(0.00604)	(0.02882)
	[3.27695]	[-0.60265]	[0.67196]	[0.21562]
D(BCY(-1))	0.300309	-0.116188	-0.001957	0.014713
	(0.23278)	(0.10307)	(0.01227)	(0.05856)
	[1.29011]	[-1.12728]	[-0.15956]	[0.25126]
D(BCY(-2))	-0.099750	-0.052974	-0.003175	-0.162063
	(0.22911)	(0.10144)	(0.01207)	(0.05763)
	[-0.43538]	[-0.52219]	[-0.26293]	[-2.81198]
D(GEXP(-1))	2.284562	-0.795355	-0.029258	1.456636
	(1.90261)	(0.84244)	(0.10026)	(0.47861)
	[1.20075]	[-0.94411]	[-0.29181]	[3.04348]
D(GEXP(-2))	1.418370	-0.102434	0.162894	0.255110
	(1.92497)	(0.85234)	(0.10144)	(0.48423)
	[0.73683]	[-0.12018]	[1.60577]	[0.52683]
D(M2(-1))	1.446784	0.308408	-0.084366	0.091867
	(0.44542)	(0.19722)	(0.02347)	(0.11205)
	[3.24814]	[1.56375]	[-3.59418]	[0.81990]
D(M2(-2))	-1.878481	0.369154	0.032128	-0.078393
	(0.46325)	(0.20512)	(0.02441)	(0.11653)
	[-4.05504]	[1.79973]	[1.31604]	[-0.67272]
C	152.3874	-63.11430	16.63916	158.3706
	(182.895)	(80.9823)	(9.63828)	(46.0079)
	[0.83320]	[-0.77936]	[1.72636]	[3.44225]

© 2017 Global Journals Inc. (US)

R-squared	0.283780	0.079234	0.228892	0.266640
Adj. R-squared	0.228687	0.008406	0.169576	0.210228
Sum sq. resids	2.95E+08	57806293	818829.5	18657729
S.E. equation	1683.765	745.5399	88.73196	423.5578
F-statistic	5.150859	1.118676	3.858855	4.726628
Log likelihood	-995.1038	-903.0450	-662.5258	-839.1527
Akaike AIC	17.77175	16.14239	11.88541	15.01155
Schwarz SC	17.98897	16.35962	12.10264	15.22878
Mean dependent	160.0527	13.02743	9.636763	167.2414
S.D. dependent	1917.194	748.6931	97.37110	476.6085

Determinant resid covariance (dof adj.)	1.56E+21
Determinant resid covariance	1.12E+21
Log likelihood	-3379.637
Akaike information criterion	60.45375
Schwarz criterion	61.32265

© 2017 Global Journals Inc. (US)

This page is intentionally left blank

© 2017 Global Journals Inc. (US)

Global Journal of HUMAN-SOCIAL SCIENCE: E
Economics
Volume 17 Issue 6 Version 1.0 Year 2017
Type: Double Blind Peer Reviewed International Research Journal
Publisher: Global Journals Inc. (USA)
Online ISSN: 2249-460x & Print ISSN: 0975-587X

Development Policies for Eradication of Street Begging in Bangladesh

By Md. Arif Billah & Mohammad Manjur Alam

International Islamic University Chittagong

Abstract- The purpose of this paper is to examine the situation of social exclusion of street beggar; this paper also examines the development policies for beggar in Bangladesh and to understand how the existing policies can protect street beggars' right and how they could enjoy country's currently available facilities. It explored the linkage between beggars' right in Bangladesh and inclusion of street beggar in development policies to improve their situation, besides it is pointed the weakness of policies for not showing expected outcomes. The data had been collected from analytical review of available literature on street begging in Bangladesh along with government and international organizations reports regarding this matter. The findings of this work demonstrated less concentration about street begging in development policies for beggar, together with not covering all street begging in running projects. This study also revealed that due to societal neglect, physically handicapped street beggars, in contrast to other categories of street beggars, have no option except to depend on other people for their daily bread. The analysis advocated micro credit or collateral free loan or qard e hasana and Zakat as the prior policy for them to ensure the fundamental rights as a human being in Bangladesh.

Keywords: *fundamental rights, street beggar, human development.*

GJHSS-E Classification: *FOR Code: 149999*



Strictly as per the compliance and regulations of:

© 2017. Md. Arif Billah & Mohammad Manjur Alam. This is a research/review paper, distributed under the terms of the Creative Commons Attribution-Noncommercial 3.0 Unported License http://creativecommons.org/licenses/by-nc/3.0/), permitting all non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Development Policies for Eradication of Street Begging in Bangladesh

Md. Arif Billah [α] & Mohammad Manjur Alam [σ]

Abstract- The purpose of this paper is to examine the situation of social exclusion of street beggar; this paper also examines the development policies for beggar in Bangladesh and to understand how the existing policies can protect street beggars' right and how they could enjoy country's currently available facilities. It explored the linkage between beggars' right in Bangladesh and inclusion of street beggar in development policies to improve their situation, besides it is pointed the weakness of policies for not showing expected outcomes. The data had been collected from analytical review of available literature on street begging in Bangladesh along with government and international organizations reports regarding this matter. The findings of this work demonstrated less concentration about street begging in development policies for beggar, together with not covering all street begging in running projects. This study also revealed that due to societal neglect, physically handicapped street beggars, in contrast to other categories of street beggars, have no option except to depend on other people for their daily bread. The analysis advocated micro credit or collateral free loan or qard e hasana and Zakat as the prior policy for them to ensure the fundamental rights as a human being in Bangladesh.

Keywords: fundamental rights, street beggar, human development.

I. Introduction

Begging is an ancient and universal phenomenon. While it is an act of mercy to help an individual genuinely in need and unable to earn a living, begging in itself, as an occupation is considered a sin as 'the beggar deceives and exploits others in order to support himself rather than make use of his physical and spiritual strength' (crestinortodox.ro, 2013). Begging is widely found in developing countries as in developed countries 'patterns of social integration are institutionalized and fairly clearly defined, but mostly developing states where, must define firstly what is 'normal' and, therefore, what is outside accepted norms is more complicated' (Ruhi, 2007). South Asia, especially India as well as Bangladesh, Cambodia, Nepal, etc. is home to the largest number of beggars, reflecting the large proportion of the population living below the poverty line; while some of the beggars live the extensive slums of New Delhi, Mumbai, Chennai or Calcutta (Kundu, 2003), others are homeless (Goyal, 2005) and their children are exposed to these dangerous informal activities (http: //www. streetchildren.org.uk). In Africa, where child exploitation, malnutrition and extreme poverty are common, begging is also prevalent in most of the large cities throughout the continent, from the West, in Nigeria (Esan, 2009; Onoyase, 2010) to the East in Ethiopia (Abebe, 2008). In larger cities in South and Central America begging is an issue on the agenda of both local and central authority's which attempt to reduce its prevalence through urban planning initiatives. While in Quito, the capital of Ecuador, most beggars are indigenous people, especially women and children (Swanson, 2010), in Mexico City, children are largely involved in street begging (Mongelluzzo, 2006). In the European Union, these issues are the subject of the European platform for combating poverty and social exclusion that member states must subscribe to.

In many urban areas, street beggars are found everywhere in public spaces, such as filling stations, restaurants, banks, super markets, mosques, churches, etc. Deviant behaviors such as theft, thuggery (violent and criminal behavior), and vandalism are listed as some of the vices associated with street begging (Adedibu & Jelili, 2011; Tambawal, 2010; Adedibu, 1989 cited by Ogunkan & Fawole, 2009).The phenomenon of street begging is a result of a number of factors, such as poverty (real or imagined), religion, physical disability, culture, national disaster, civil war, bad habits (drug, alcohol, and gambling dependencies), family heritage, uncontrolled rural–urban migration, and psychiatric disabilities and disorders(Amman, 2006; Ogunkan & Fawole, 2009; Namwata et al., 2011).The focus of this study is to examine the categories of street beggars and factors that influence begging activities in Bangladesh.

II. Objective of the Study

The main objective of this study is to examine the development policies for beggar in Bangladesh. Inter alia objectives of this study are as follows:

1. To examine the situation of social exclusion of street beggar;
2. To understand how the existing policies can protect street beggar's rights;

Author α: Assistant Professor of Economics Department of QSIS International Islamic University Chittagong (IIUC).
e-mail: abillah55@yahoo.com
Author σ: Lecturer Dept. of Computer Science and Engineering International Islamic University Chittagong (IIUC).
e-mail: manjuralam44@yahoo.com

© 2017 Global Journals Inc. (US)

3. To suggest some necessary measures in policy formulation regarding street begging in Bangladesh.

III. Methodology of the Study

The paper is based on analytical literature review by following qualitative method as a research strategy because quantitative data are not collected or generated (Bryman, 2004:266) by myself directly from the field; rather the paper is dealing with secondary sources for data. Documents have been used as sources of data since it's realistic. Moreover the qualitative approach helps researchers to address social problem and have possibilities of widespread influence among policy making community (Silverman, 2006:305). Therefore as research strategy we have chosen qualitative method in analyzing exclusion street beggars in Bangladesh to address this social problem and to gain attention of policy makers regarding this issue. To find the answers of research questions and from my personal interest I started searching published articles about beggar rights in Bangladesh from February 2012 to December 2013, from the IIUC online library, newspaper articles also has been collected at that time. Daily newspaper and reports has been used as primary sources. A research work on street beggar in Bangladesh has done to understand the context of street beggar and its problem.

IV. Conceptual Issues

a) Street Begging

Begging remains the subject of various social, urban and environmental debates. The interest in the extent of this phenomenon started in 1948, the year the Universal Declaration of Human Rights was adopted. The first scientific studies into begging appeared after 1960 in France (Silver, 1994). The focus of these first studies was defining beggars. Researchers in various specialisms took different approaches in its analysis. While psychologists associate begging with mental health problems and low self-esteem, social scientists link it to poverty (Fawole, Ogunkan & Omoruan, 2011) and social exclusion, focusing mainly on homeless individuals (Kennedy & Fitzpatrick, 2001) or the poverty afflicted lower classes of society (Jenks & Paterson, 1991). Oxford Dictionary defines a beggar as 'a person, typically a homeless one, who lives by asking for money or food'. (Adugna, 2006) held the view that street beggars have generally been categorized in terms of their abilities and disabilities based on how they make their living from the streets. There have also individuals who do not show any externally observable deformities or disabilities. Street begging or gathering alms is defined as the solicitation of a voluntary gift, most often money or food, in public places. Street beggars use various begging strategies to make a living for themselves and their families. These techniques include portraying themselves as sick or as lacking bus fare to a village; pretending to be blind, deaf, or crippled; sending children into the street to beg (both children and parents as beggars); sitting in strategic places such as banks, hotels, churches, temples, mosques, or bars; entering offices with a medical referral letter; presenting a supporting letter for soliciting scholarly necessities either by children or parents; or claiming to have financial difficult by Using official letters to solicit funds and Sitting by the roadside begging from passersby.

Ogunkan and Fawole (2009), Ogunkan (2009), Amman (2006), and Tambawal (2010) and Jelili (2006) indicate that poverty is mentioned as the most notable reason. As a result, the poor are trapped into a begging lifestyle, with little chance of escape. In such a vicious cycle, poverty is maintained across generations. To meet their basic needs, the poor, resort to begging.

b) Street Begging in Bangladesh

Street beggars in Bangladesh cited physical disabilities or challenges as one of the important factors for begging in Bangladesh. This study revealed that due to societal neglect, physically handicapped street beggars, in contrast to other categories of street beggars, have no option except to depend on other people for their daily bread.

One of the more common reasons rural women are forced to take up begging is displacement caused by flooding from rivers swollen in the monsoon season (Women's Environment & Development Organization - WEDO, 2008).

Climate-related disasters are increasing the economic pressure on families, causing both seasonal and permanent displacement which tends to rise street begging in Bangladesh. Most poverty-alleviation programs do not reach those forced into a life of begging, particularly in rural areas, leaving them to subsist on the margins of society (Barua, 2006).

Similar findings are reported by the Centre for Services and Information on Disability (2008). In a developing country such as Bangladesh, persons with disabilities face many challenges and barriers, as well as competition for jobs. In this situation, it is almost impossible for persons with disabilities to find jobs or to start economic activities. They face not only immense competition from people who are not disabled but also unfair barriers that are created because of the negative attitudes of employers. Even if a few people are employed, they find themselves in an environment that is generally unfriendly and unsuitable with respect to their disability.

Although it is not possible to know the specific number of beggars, according to the finance minister, Abul Mal Abdul Muhit, it was around 6, 00,000 to 7, 00,000 across the country a few years ago, but has increased substantially. AKM Nurun Nabi, professor of population sciences at Dhaka University, pointed out

© 2017 Global Journals Inc. (US)

that it is not surprising that the number of beggars is continuously rising in Dhaka, as the population of the city almost doubled over the last few decades. 'They are trapped in the vicious cycle of poverty,' said Qazi Kholiquzzaman, an economist with the Bangladesh Development Council (Associated Press, May 17, 2009). Population growth in the country still remains high. At the same time, natural calamities such as storms and river erosion are making many people homeless. These homeless people often come to Dhaka to find work and finally end up begging on the streets. (home/newage/public_html/newspaper1/right.php) It is estimated that Bangladesh has more than 700,000 beggars. While this is only a small fraction of the population of more than 155 million, the concentration of beggars in the capital, Dhaka, and other large cities is a problem for both the beggars and society at large. There is no question that these beggars are among the poorest of the poor in Bangladesh, and many women come to the cities as a result of losing their homes to "river erosion, divorce, death of the earning member in the family, unemployment or disability" (Barua, 2006).

V. Results and Discussion

a) Recommended Development Policies to Eradicate Street Begging in Bangladesh

Here we can recommend some development policies for eradicating street begging in Bangladesh.

b) Special Struggling Members Program (SSMP)

The beggar represents the lowest form of economic activity in Bangladesh with their very existence completely reliant on handouts given by anyone of better circumstance who happens to pass by. The central authority took an innovative approach to challenge the social isolation of beggars by making them *Special Struggling Members (SSM)* with flexible access to credit without interest or benevolent loan from Zakat and Waqf fund and most of the services better healed members of the Islami Bank are entitled to. Without directly prohibiting begging the Special Struggling Members program helped these poor people grow the self-confidence and basic skills needed to become petty traders and begin building better lives for themselves and their families, gradually leaving the stigma of being a beggar behind.

c) Islamic Microfinance Program for Street Beggar

Over the past three decades, Islamic banking has grown significantly at annual rate of over 15% with an overall capitalization of US$1.3 trillion at present. (UN-HABITAT, 2005). Compared to Islamic banking, Islamic micro-credit is an evolving concept with an outreach in mostly the Arab world and has grown considerably to more than 700, 000 borrowers in 2003.As an effective alternative to conventional micro financing, Islamic micro-financing institutions are evolving in different countries as well.

d) Building an Integrated Operation of Islamic Microfinance, Zakat and Waqf

Diversion of micro-credit for consumption purpose by the borrowers is one of the important sources of credit default in conventional micro-finance. Besides this, charging a generalized interest and at a higher rate has also hindered poverty alleviation through credit rationing and adverse selection problems. These basic challenges of conventional micro-finance can be resolved if an Islamic Micro-Finance Institution is designed in an integrated manner by incorporating the two basic and traditional institution of Islam, the Waqf and the Zakah with Islamic Micro-finance into a single framework.

e) Compulsory Transfer Payment (Zakat) for Street Beggar

Islam establishes Zakat as a compulsory for all well off Muslims. Zakat is a unique instrument for poverty alleviation as wealth is transferred from well-off people to worse-off people. Islam identifies Zakat as one of the five pillars. Anybody denying obligation of Zakat ceases to be a Muslim.

According to the Quran

"The Zakat is meant only for the poor and needy, those who collect the tax, those whose hearts are to be won over, for the freeing of human beings from bondage, for the relief of those overwhelmed by debts, for the cause of Allah, and for the wayfarer: [this is] an ordinance from Allah- and Allah is All-Knowing, Wise". (9:60).

f) Recommended or Voluntary Transfers (Charity) Payment for Street Beggar

Islam encourages charity and acts of benevolence rather than mandatory transfers like Zakat and Sadaqat al-Fitr. The Quran teaches us:
(i)"And in your wealth, are obligations beyond Zakat."(ii) "In their wealth, there is a known right for those who ask for it and for the deprived."(70:24-25).

Thus, charity and other acts of benevolence are highly recommended. In the case of strong economic disparity or poverty, such transfers would become obligatory (Sadeq, 1995).

g) State Responsibility for Street Beggar

In the Islamic system, the state should be held responsible for maintaining a favorable environment for legal business and economic activities. The state should also protect its citizens from malpractice of any form. Finally, the state should enhance the institution of Zakat and provide equal opportunities for all.

h) Establishing Baitul Mal for Street Beggar

One of the most interesting ideas in this regard is the idea of "Baitul Mal." Literally, it means "the house of wealth." Technically, Baitul Mal is the public treasury or "the Exchequer of an Islamic State."(EDWIN E. HITTI,

© 2017 Global Journals Inc. (US)

2007) It was first established by the Prophet Muhammad (P) and was then further developed at the time of Caliph Omar Ibn el Kattab (May God is pleased with him).The idea of Baitul Mal is similar to that of an insurance company (KHAN, 2003). It was where the revenues of the state were collected and where any citizen facing a financial crisis found sanctuary. Baitul Mal constituted a pool where all taxes were collected and spent whenever a citizen needed financial help. The revenues of Baitul Mal included that from Al Zakah (mandatory charity), Al Sadaquat (voluntary charities), Al Ushr (the tithe or import tax),Al Khums (the fifth),(Quran, 8: 39) Al Jizyah (a poll tax), (Bakhit et al. eds., 2000),Al Kharaj (a tax on land and agricultural products), Al Fay (spoils accruing to Muslim armies without a war (Quran, 59: 07) and the wealth of those who have no heirs. As for those who were entitled to receive money from the Baitul Mal.

The Holy Quran defines them in the following verse:

"Voluntary charities are for the poor, the needy, the workers who collect (the charities), the new converts, to free the slaves, to those burdened by sudden expenses, in the cause of Allah, and to the traveling alien. Such is God's commandment. Allah is Omniscient, Most Wise." Quran [9:60]

Accordingly, Baitul Mal also served for the redistribution of wealth to achieve a balance between the rich and the poor and to diminish the gaps between the classes of society. It can be the greatest source for eradicating street begging in Bangladesh.

i) Enhancing Qard-E-Hasana Investment Mode

Al Quard Al Hassan is an interest-free loan. The sole obligation of the borrowers of a Quard Hassan is to repay the amount of the loan. Most Islamic finance institutes limit such interest-free loans to the needy. (ENNEW & WAITE, supra note 67, at 195). The capital for such loans usually originates from the Zakah and Sadaqah deposited previously at the IFIs by other wealthy Muslims. The Quran emphasizes the idea of the Quard Hassan several times. It encourages Muslims to give loans with lenient repayment terms and not claim back the money at all if possible. Qur'an states:

"If the debtor is unable to pay, wait for a better time. If you give up the loan as a charity, it would be better for you, if you only knew." [2:280].

The Prophet Muhammad (P) in many of his Hadith also encouraged giving interest-free loans to the needy. The Prophet Muhammad (P) specifically told lenders not to claim their money back if they can afford such generosity and they feel that claiming back the loan would excessively burden the borrower.

Jabir bin 'Abdullah (may Allah be pleased with him) narrated that the Prophet Muhammad (P) said, "May Allah's mercy be on him who is lenient in his buying, selling and in demanding back his money"(Bukhari).

VI. Conclusion and Policy Recommendation

The findings of this work demonstrated less concentration of Bangladesh government about street begging in development policies for beggar, together with not covering all street begging in running projects. The present study also revealed that due to societal neglect, improper government program, corrupted and inefficient administration of present government, lack of good governance, unemployment, physical challenges, death of both parents, and family disintegration are the main causes of increasing street begging in Bangladesh. As a result, they have no option except to depend on other people for their daily bread. Street beggars used various begging strategies, including disguising themselves to appear sick; pretending to be blind, deaf, or crippled; sending children into the street to beg; sitting in strategic places; moving into offices with medical referral letters; etc.

To address the problem of street beggars and begging activities in Bangladesh a limited number of key recommendations can be identified:

* The ministry of social welfare and different social service institutions has to play a pioneering role. Rehabilitation programs should be designed and implemented. Otherwise, eradication attempts taken by law enforcement forces will not be successful.
- Policy planners must adopt multi-faceted, multi-targeted, and multi-tiered approaches if they are to have any impact on the lives of street beggars in all four categories. Specific policies and other legislative frameworks are needed in terms of age, sex, disability, and family-related issues to effectively address the begging problem. In this regard, both preventative and responsive interventions are needed instead of rehabilitative solutions for each category of street beggars.
- More efforts should be placed on changing community attitudes towards beggars who are children with disabilities and emphasizing the necessity of educating children with disabilities in order to enable them to face their future as independent individuals.
- In as much as begging activities are not good at all, government and other stakeholders should create opportunities for street beggars to make a living by other means.

* Moreover, the government has to take steps to eradicate street begging and affectively supervise the policies and programmes taken for alleviating street begging. Most of the beggars get involved in beggary through the vicious cycle of poverty. It is also necessary to provide economic assistance to the widows and aged people. In addition to this, the masterminds behind begging business, who force

© 2017 Global Journals Inc. (US)

the poor, helpless people into begging by physically impairing them or promising them food, have to be brought to justice and given exemplary punished.

References Références Referencias

1. Abebe, T. (2008), *Earning a living on the margins: begging, street work and the socio spatial experiences of children in Addis Ababa.* Swedish Society for Anthropology and Geography 90 (3), 217-312.
2. Abdul Hasan, M. Sadeq (1995), *"Awqaf, perpetual charity and poverty alleviation",* p. 137.
3. Adedibu, A.A.(1989), *Begging and poverty in third world cities: A case study of Ilorin, Nigeria.* Ilorin Journal of Business and Social Sciences, 1: 25–40.
4. Adedibu, A.A. & M.O. Jelili (2011), *Package for controlling street begging and rehabilitating beggars and the physically challenged in Nigeria:* Paper for policy consideration. Global
5. Adugna, G. (2006) *Livelihoods and Survival Strategies among Migrant Children in Addis Ababa*.A Dissertation submitted as partial fulfillment of the requirement of the Master of
6. Philosophy in Development Studies, Norwegian University of Science and Technology
7. Amman, A.A. (2006), *Street Begging: Exposing the Bankruptcy of Blatant Paying of Lip Service.* Online. http://www.gamji.com/article8000/NEWS8196.htm (Accessed September10, 2009.
8. Barua, Chandra (2006), *"Five Cents a Day: Innovative Programs for Reaching the Destitute with Micro credit, No-interest Loans, and other Instruments: The Experience of Grameen Bank"*, Paper presented at Global Micro credit Summit, Halifax, 2006.
9. Bryman, Alan, (2004), *Social Research Methods'*, Oxford University Press, Oxford.
10. Edwin E. Hitti (2007), *Basic Mechanics of Islamic Capitalism.*
11. Esan, O. I. (2009), *Panhandlers as Rhetics: Discourse Practices of peripatetic beggars in Southwestern Nigeria,* California Linguistic Notes, 34 (2), 1-18.
12. Fawole, O.A., D.V. Ogunkan & A. Omoruan (2010), *The menace of begging in Nigerian cities:*A sociological analysis. International Journal of Sociology and Anthropology, 3(1): 9–14.Online. http://www.acade-micjournals.org/ijsa (Accessed January 5, 2011).
13. Goyal, O. P. (2005), *Anti-social patterns of begging and beggars,* Delhi, Isha books. 321
14. Kundu, N. (2003), Kalkota, India, UN-Habitat (2003), Global Report on Human Settlements 2003, *The Challenge of Slums, Earthscan, London;* Part IV: "Summary of City Case Studies", 195-228
15. Kennedy, C., Fitzpatrick, S. (2001), *Begging, Rough Sleeping and Social Exclusion: Implications for Social Policy.* Urban Studies, 38 (11), 2001-2016.
16. Mongelluzzo, N. D. (2006), Street stories of Mexico: A comparative case study of elderly Women beggars, Pro Quest data base on line, accessed on 9 December 2011.
17. M.A. Al-Bakhit, et al. eds., (2000), *History of Humanity*: Volume IV: From the Seven to the Sixteenth Century. This is also known as the "protected people's tax." This tax was paid by the Christians and Jews and all other non-Muslims living in the Islamic State. While Muslims paid their taxes in the form of Zakah, the non-Muslims paid their taxes in the form of Jizyah. Not all non-Muslims were obliged to pay the Jizyah. Women, children, priests, elderly, slaves, the mentally ill, and all those who could not afford it were exempt from paying Jizyah.
18. Khan Muhammad Akram (2003), *Islamic Economics and Finance:* A Glossary 32 (2 ed.2003)
19. Namwata, B.M.L., M.R. Mgabo & P. Dimoso (2010), *Dynamics of Street Beggars and Begging Life in Urban Areas of Central Zone Tanzania: The Case of Dodoma and Singida Municipalities.* Draft report submitted to Research on Poverty Alleviation (REPOA), Dar Es Salaam, Tanzania
20. Ogunkan, D.V. & O.A. Fawole (2009), *Incidence and socio-economic dimensions of begging in Nigerian cities: The case of Ogbomoso.* International NGO Journal, 4(12): 498–503.
20. Ogunkan, D.V. & O.A. Fawole (2009), *Incidence and socio-economic dimensions of begging in Nigerian cities: The case of Ogbomoso.* International NGO Journal, 4(12): 498–503.
21. Ogunkan, D. V. & Jelili, M. O. (2010), *The influence of land use on the spatial variation of Begging in Ogbomoso, Nigeria.* Journal of Geography and Regional Planning Vol. 3 (4), 73-83.
22. Ogunkan D.V. 2009. Socio-*economic Implication of Begging in Ogbomoso, Nigeria.* Unpublished BSc Dissertation. Department of Sociology, University of Ilorin, Ilorin, Nigeria
23. Ruhi, Shait (2007), *Social Exclusion - The Concept and Application to Developing*
24. *Countries, in Stewart,* F., Saith, R. and Harriss-White, B., (eds.), 2007, *Defining Poverty in the Developing World, Basingstoke: Palgrave Macmillan*, 75-90.
25. Silverman, David, editor, (2004), *Qualitative Research: Theory, Method and Practice'*, Sage London.
26. Silver, H. (1994). Social Exclusion and Social Solidarity: Three Paradigms, *International Labor Review*, 133, 5-6.
27. Swanson, K. (2007), *Revanchist Urbanism Heads South: The Regulation of Indigenous.*
28. *Beggars and Street Vendors in Ecuador*, Antipode Journal, 39 (4), 708-728.
29. Tambawal, M.U. 2010. *The Effects of Street Begging on the National Development: Counselling*

© 2017 Global Journals Inc. (US)

Implications. Paper presented at the 1st National Conference of the Counselling Association of Nigeria (CASSON) Katsina State Chapter, 7–10 June 2010. Faculty of Education and Extension Services, Department of Educational Foundations, Usmanu Danfodiyo University Sokoto.

30. www.crestinortodox.ro/carti-ortodoxe/pravila-biseri-ceasca/ cersetoria-81908.html accessed on 25 May, 2013.
31. home/newage/public_html/newspaper1/right.php on line

Quran 8:41(These are the spoils of war that the Muslims won after actual fighting with an enemy. Four-fifths of the spoils go to the winning army and one-fifth goes to Baitul Mal as property of God and his Apostle. "And know that out of all the booty that ye may acquire (in war), one-fifth shall go to Allah and the messenger, and to his near relatives, the orphans, the needy, and the wayfarer, if ye do believe in God and in the revelation We sent down to our servant on the day of the decision, the day the two armies clash. For God hath power over all things."). 41. Quran 59:7 (explaining that Al Fay is what the opponent left behind voluntarily, either in fear of being attacked or just for the impossibility of taking it along) (The revenues accruing from Fay were to be distributed according to the verses of the holy Quran as follows: "Whatever Allah has given to His Messenger as spoils from the people of the towns is for Allah and for the Messenger and for the near of kin and the orphans and the needy and the wayfarer, so that it may not circulate only among those of you who are rich.").

UN-HABITAT (2005), *Islam, Land & Property Research Series*; Paper 8: Islamic Credit and Micro-finance, p.05.

© 2017 Global Journals Inc. (US)

Global Journals Inc. (US) Guidelines Handbook 2017

www.GlobalJournals.org

FELLOWS

FELLOW OF ASSOCIATION OF RESEARCH SOCIETY IN HUMAN SCIENCE (FARSHS)

Global Journals Incorporate (USA) is accredited by Open Association of Research Society (OARS), U.S.A and in turn, awards "FARSHS" title to individuals. The 'FARSHS' title is accorded to a selected professional after the approval of the Editor-in-Chief/Editorial Board Members/Dean.



- The "FARSHS" is a dignified title which is accorded to a person's name viz. Dr. John E. Hall, Ph.D., FARSS or William Walldroff, M.S., FARSHS.

FARSHS accrediting is an honor. It authenticates your research activities. After recognition as FARSHS, you can add 'FARSHS' title with your name as you use this recognition as additional suffix to your status. This will definitely enhance and add more value and repute to your name. You may use it on your professional Counseling Materials such as CV, Resume, and Visiting Card etc.

The following benefits can be availed by you only for next three years from the date of certification:

FARSHS designated members are entitled to avail a 40% discount while publishing their research papers (of a single author) with Global Journals Incorporation (USA), if the same is accepted by Editorial Board/Peer Reviewers. If you are a main author or co-author in case of multiple authors, you will be entitled to avail discount of 10%.

Once FARSHS title is accorded, the Fellow is authorized to organize symposium/seminar/conference on behalf of Global Journal Incorporation (USA). The Fellow can also participate in conference/seminar/symposium organized by another institution as representative of Global Journal. In both the cases, it is mandatory for him to discuss with us and obtain our consent.





You may join as member of the Editorial Board of Global Journals Incorporation (USA) after successful completion of three years as Fellow and as Peer Reviewer. In addition, it is also desirable that you should organize seminar/symposium/conference at least once.

We shall provide you intimation regarding launching of e-version of journal of your stream time to time.This may be utilized in your library for the enrichment of knowledge of your students as well as it can also be helpful for the concerned faculty members.

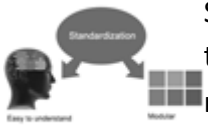


© Copyright by Global Journals Inc.(US) | Guidelines Handbook

The FARSHS can go through standards of OARS. You can also play vital role if you have any suggestions so that proper amendment can take place to improve the same for the benefit of entire research community.

As FARSHS, you will be given a renowned, secure and free professional email address with 100 GB of space e.g. johnhall@globaljournals.org. This will include Webmail, Spam Assassin, Email Forwarders,Auto-Responders, Email Delivery Route tracing, etc.





The FARSHS will be eligible for a free application of standardization of their researches. Standardization of research will be subject to acceptability within stipulated norms as the next step after publishing in a journal. We shall depute a team of specialized research professionals who will render their services for elevating your researches to next higher level, which is worldwide open standardization.

The FARSHS member can apply for grading and certification of standards of the educational and Institutional Degrees to Open Association of Research, Society U.S.A. Once you are designated as FARSHS, you may send us a scanned copy of all of your credentials. OARS will verify, grade and certify them. This will be based on your academic records, quality of research papers published by you, and some more criteria. After certification of all your credentials by OARS, they will be published on your Fellow Profile link on website https://associationofresearch.org which will be helpful to upgrade the dignity.



The FARSHS members can avail the benefits of free research podcasting in Global Research Radio with their research documents. After publishing the work, (including published elsewhere worldwide with proper authorization) you can upload your research paper with your recorded voice or you can utilize chargeable services of our professional RJs to record your paper in their voice on request.



The FARSHS member also entitled to get the benefits of free research podcasting of their research documents through video clips. We can also streamline your conference videos and display your slides/ online slides and online research video clips at reasonable charges, on request.

© Copyright by Global Journals Inc.(US)| Guidelines Handbook



The FARSHS is eligible to earn from sales proceeds of his/her researches/reference/review Books or literature, while publishing with Global Journals. The FARSHS can decide whether he/she would like to publish his/her research in a closed manner. In this case, whenever readers purchase that individual research paper for reading, maximum 60% of its profit earned as royalty by Global Journals, will be credited to his/her bank account. The entire entitled amount will be credited to his/her bank account exceeding limit of minimum fixed balance. There is no minimum time limit for collection. The FARSS member can decide its price and we can help in making the right decision.

The FARSHS member is eligible to join as a paid peer reviewer at Global Journals Incorporation (USA) and can get remuneration of 15% of author fees, taken from the author of a respective paper. After reviewing 5 or more papers you can request to transfer the amount to your bank account.



MEMBER OF ASSOCIATION OF RESEARCH SOCIETY IN HUMAN SCIENCE (MARSHS)

The ' MARSHS ' title is accorded to a selected professional after the approval of the Editor-in-Chief / Editorial Board Members/Dean.



The "MARSHS" is a dignified ornament which is accorded to a person's name viz. Dr John E. Hall, Ph.D., MARSHS or William Walldroff, M.S., MARSHS.

MARSHS accrediting is an honor. It authenticates your research activities. Afterbecoming MARSHS, you can add 'MARSHS' title with your name as you use this recognition as additional suffix to your status. This will definitely enhance and add more value and repute to your name. You may use it on your professional Counseling Materials such as CV, Resume, Visiting Card and Name Plate etc.

The following benefitscan be availed by you only for next three years from the date of certification.



MARSHS designated members are entitled to avail a 25% discount while publishing their research papers (of a single author) in Global Journals Inc., if the same is accepted by our Editorial Board and Peer Reviewers. If you are a main author or co-author of a group of authors, you will get discount of 10%.

As MARSHS, you willbegiven a renowned, secure and free professional email address with 30 GB of space e.g. johnhall@globaljournals.org. This will include Webmail, Spam Assassin, Email Forwarders,Auto-Responders, Email Delivery Route tracing, etc.



© Copyright by Global Journals Inc.(US) | Guidelines Handbook



We shall provide you intimation regarding launching of e-version of journal of your stream time to time.This may be utilized in your library for the enrichment of knowledge of your students as well as it can also be helpful for the concerned faculty members.

The MARSHS member can apply for approval, grading and certification of standards of their educational and Institutional Degrees to Open Association of Research, Society U.S.A.





Once you are designated as MARSHS, you may send us a scanned copy of all of your credentials. OARS will verify, grade and certify them. This will be based on your academic records, quality of research papers published by you, and some more criteria.

It is mandatory to read all terms and conditions carefully.

© Copyright by Global Journals Inc.(US)| Guidelines Handbook

AUXILIARY MEMBERSHIPS

Institutional Fellow of Open Association of Research Society (USA) - OARS (USA)

Global Journals Incorporation (USA) is accredited by Open Association of Research Society, U.S.A (OARS) and in turn, affiliates research institutions as "Institutional Fellow of Open Association of Research Society" (IFOARS).



The "FARSC" is a dignified title which is accorded to a person's name viz. Dr. John E. Hall, Ph.D., FARSC or William Walldroff, M.S., FARSC.

The IFOARS institution is entitled to form a Board comprised of one Chairperson and three to five board members preferably from different streams. The Board will be recognized as "Institutional Board of Open Association of Research Society"-(IBOARS).

The Institute will be entitled to following benefits:

The IBOARS can initially review research papers of their institute and recommend them to publish with respective journal of Global Journals. It can also review the papers of other institutions after obtaining our consent. The second review will be done by peer reviewer of Global Journals Incorporation (USA) The Board is at liberty to appoint a peer reviewer with the approval of chairperson after consulting us.

The author fees of such paper may be waived off up to 40%.

The Global Journals Incorporation (USA) at its discretion can also refer double blind peer reviewed paper at their end to the board for the verification and to get recommendation for final stage of acceptance of publication.





The IBOARS can organize symposium/seminar/conference in their country on behalf of Global Journals Incorporation (USA)-OARS (USA). The terms and conditions can be discussed separately.

The Board can also play vital role by exploring and giving valuable suggestions regarding the Standards of "Open Association of Research Society, U.S.A (OARS)" so that proper amendment can take place for the benefit of entire research community. We shall provide details of particular standard only on receipt of request from the Board.



The board members can also join us as Individual Fellow with 40% discount on total fees applicable to Individual Fellow. They will be entitled to avail all the benefits as declared. Please visit Individual Fellow-sub menu of GlobalJournals.org to have more relevant details.

© Copyright by Global Journals Inc.(US) | Guidelines Handbook

We shall provide you intimation regarding launching of e-version of journal of your stream time to time. This may be utilized in your library for the enrichment of knowledge of your students as well as it can also be helpful for the concerned faculty members.



After nomination of your institution as "Institutional Fellow" and constantly functioning successfully for one year, we can consider giving recognition to your institute to function as Regional/Zonal office on our behalf.
The board can also take up the additional allied activities for betterment after our consultation.

The following entitlements are applicable to individual Fellows:



Open Association of Research Society, U.S.A (OARS) By-laws states that an individual Fellow may use the designations as applicable, or the corresponding initials. The Credentials of individual Fellow and Associate designations signify that the individual has gained knowledge of the fundamental concepts. One is magnanimous and proficient in an expertise course covering the professional code of conduct, and follows recognized standards of practice.

Open Association of Research Society (US)/ Global Journals Incorporation (USA), as described in Corporate Statements, are educational, research publishing and professional membership organizations. Achieving our individual Fellow or Associate status is based mainly on meeting stated educational research requirements.



Disbursement of 40% Royalty earned through Global Journals : Researcher = 50%, Peer Reviewer = 37.50%, Institution = 12.50% E.g. Out of 40%, the 20% benefit should be passed on to researcher, 15 % benefit towards remuneration should be given to a reviewer and remaining 5% is to be retained by the institution.

We shall provide print version of 12 issues of any three journals [as per your requirement] out of our 38 journals worth $ 2376 USD.

Other:

The individual Fellow and Associate designations accredited by Open Association of Research Society (US) credentials signify guarantees following achievements:

- The professional accredited with Fellow honor, is entitled to various benefits viz. name, fame, honor, regular flow of income, secured bright future, social status etc.

© Copyright by Global Journals Inc.(US)| Guidelines Handbook

- In addition to above, if one is single author, then entitled to 40% discount on publishing research paper and can get 10%discount if one is co-author or main author among group of authors.
- The Fellow can organize symposium/seminar/conference on behalf of Global Journals Incorporation (USA) and he/she can also attend the same organized by other institutes on behalf of Global Journals.
- The Fellow can become member of Editorial Board Member after completing 3yrs.
- The Fellow can earn 60% of sales proceeds from the sale of reference/review books/literature/publishing of research paper.
- Fellow can also join as paid peer reviewer and earn 15% remuneration of author charges and can also get an opportunity to join as member of the Editorial Board of Global Journals Incorporation (USA)
- • This individual has learned the basic methods of applying those concepts and techniques to common challenging situations. This individual has further demonstrated an in–depth understanding of the application of suitable techniques to a particular area of research practice.

Note :

"

- In future, if the board feels the necessity to change any board member, the same can be done with the consent of the chairperson along with anyone board member without our approval.
- In case, the chairperson needs to be replaced then consent of 2/3rd board members are required and they are also required to jointly pass the resolution copy of which should be sent to us. In such case, it will be compulsory to obtain our approval before replacement.
- In case of "Difference of Opinion [if any]" among the Board members, our decision will be final and binding to everyone.

"

Process of submission of Research Paper

The Area or field of specialization may or may not be of any category as mentioned in 'Scope of Journal' menu of the GlobalJournals.org website. There are 37 Research Journal categorized with Six parental Journals GJCST, GJMR, GJRE, GJMBR, GJSFR, GJHSS. For Authors should prefer the mentioned categories. There are three widely used systems UDC, DDC and LCC. The details are available as 'Knowledge Abstract' at Home page. The major advantage of this coding is that, the research work will be exposed to and shared with all over the world as we are being abstracted and indexed worldwide.

The paper should be in proper format. The format can be downloaded from first page of 'Author Guideline' Menu. The Author is expected to follow the general rules as mentioned in this menu. The paper should be written in MS-Word Format (*.DOC,*.DOCX).

The Author can submit the paper either online or offline. The authors should prefer online submission.Online Submission: There are three ways to submit your paper:

(A) (I) First, register yourself using top right corner of Home page then Login. If you are already registered, then login using your username and password.

(II) Choose corresponding Journal.

(III) Click 'Submit Manuscript'. Fill required information and Upload the paper.

(B) If you are using Internet Explorer, then Direct Submission through Homepage is also available.

(C) If these two are not conveninet , and then email the paper directly to dean@globaljournals.org.

Offline Submission: Author can send the typed form of paper by Post. However, online submission should be preferred.

© Copyright by Global Journals Inc.(US)| Guidelines Handbook

Preferred Author Guidelines

MANUSCRIPT STYLE INSTRUCTION (Must be strictly followed)

Page Size: 8.27" X 11'"

- Left Margin: 0.65
- Right Margin: 0.65
- Top Margin: 0.75
- Bottom Margin: 0.75
- Font type of all text should be Swis 721 Lt BT.
- Paper Title should be of Font Size 24 with one Column section.
- Author Name in Font Size of 11 with one column as of Title.
- Abstract Font size of 9 Bold, "Abstract" word in Italic Bold.
- Main Text: Font size 10 with justified two columns section
- Two Column with Equal Column with of 3.38 and Gaping of .2
- First Character must be three lines Drop capped.
- Paragraph before Spacing of 1 pt and After of 0 pt.
- Line Spacing of 1 pt
- Large Images must be in One Column
- Numbering of First Main Headings (Heading 1) must be in Roman Letters, Capital Letter, and Font Size of 10.
- Numbering of Second Main Headings (Heading 2) must be in Alphabets, Italic, and Font Size of 10.

You can use your own standard format also.
Author Guidelines:

1. General,

2. Ethical Guidelines,

3. Submission of Manuscripts,

4. Manuscript's Category,

5. Structure and Format of Manuscript,

6. After Acceptance.

1. GENERAL

Before submitting your research paper, one is advised to go through the details as mentioned in following heads. It will be beneficial, while peer reviewer justify your paper for publication.

Scope

The Global Journals Inc. (US) welcome the submission of original paper, review paper, survey article relevant to the all the streams of Philosophy and knowledge. The Global Journals Inc. (US) is parental platform for Global Journal of Computer Science and Technology, Researches in Engineering, Medical Research, Science Frontier Research, Human Social Science, Management, and Business organization. The choice of specific field can be done otherwise as following in Abstracting and Indexing Page on this Website. As the all Global

Journals Inc. (US) are being abstracted and indexed (in process) by most of the reputed organizations. Topics of only narrow interest will not be accepted unless they have wider potential or consequences.

2. ETHICAL GUIDELINES

Authors should follow the ethical guidelines as mentioned below for publication of research paper and research activities.

Papers are accepted on strict understanding that the material in whole or in part has not been, nor is being, considered for publication elsewhere. If the paper once accepted by Global Journals Inc. (US) and Editorial Board, will become the copyright of the Global Journals Inc. (US).

Authorship: The authors and coauthors should have active contribution to conception design, analysis and interpretation of findings. They should critically review the contents and drafting of the paper. All should approve the final version of the paper before submission

The Global Journals Inc. (US) follows the definition of authorship set up by the Global Academy of Research and Development. According to the Global Academy of R&D authorship, criteria must be based on:

1) Substantial contributions to conception and acquisition of data, analysis and interpretation of the findings.

2) Drafting the paper and revising it critically regarding important academic content.

3) Final approval of the version of the paper to be published.

All authors should have been credited according to their appropriate contribution in research activity and preparing paper. Contributors who do not match the criteria as authors may be mentioned under Acknowledgement.

Acknowledgements: Contributors to the research other than authors credited should be mentioned under acknowledgement. The specifications of the source of funding for the research if appropriate can be included. Suppliers of resources may be mentioned along with address.

Appeal of Decision: The Editorial Board's decision on publication of the paper is final and cannot be appealed elsewhere.

Permissions: It is the author's responsibility to have prior permission if all or parts of earlier published illustrations are used in this paper.

Please mention proper reference and appropriate acknowledgements wherever expected.

If all or parts of previously published illustrations are used, permission must be taken from the copyright holder concerned. It is the author's responsibility to take these in writing.

Approval for reproduction/modification of any information (including figures and tables) published elsewhere must be obtained by the authors/copyright holders before submission of the manuscript. Contributors (Authors) are responsible for any copyright fee involved.

3. SUBMISSION OF MANUSCRIPTS

Manuscripts should be uploaded via this online submission page. The online submission is most efficient method for submission of papers, as it enables rapid distribution of manuscripts and consequently speeds up the review procedure. It also enables authors to know the status of their own manuscripts by emailing us. Complete instructions for submitting a paper is available below.

Manuscript submission is a systematic procedure and little preparation is required beyond having all parts of your manuscript in a given format and a computer with an Internet connection and a Web browser. Full help and instructions are provided on-screen. As an author, you will be prompted for login and manuscript details as Field of Paper and then to upload your manuscript file(s) according to the instructions.



To avoid postal delays, all transaction is preferred by e-mail. A finished manuscript submission is confirmed by e-mail immediately and your paper enters the editorial process with no postal delays. When a conclusion is made about the publication of your paper by our Editorial Board, revisions can be submitted online with the same procedure, with an occasion to view and respond to all comments.

Complete support for both authors and co-author is provided.

4. MANUSCRIPT'S CATEGORY

Based on potential and nature, the manuscript can be categorized under the following heads:

Original research paper: Such papers are reports of high-level significant original research work.

Review papers: These are concise, significant but helpful and decisive topics for young researchers.

Research articles: These are handled with small investigation and applications

Research letters: The letters are small and concise comments on previously published matters.

5.STRUCTURE AND FORMAT OF MANUSCRIPT

The recommended size of original research paper is less than seven thousand words, review papers fewer than seven thousands words also.Preparation of research paper or how to write research paper, are major hurdle, while writing manuscript. The research articles and research letters should be fewer than three thousand words, the structure original research paper; sometime review paper should be as follows:

Papers: These are reports of significant research (typically less than 7000 words equivalent, including tables, figures, references), and comprise:

(a)Title should be relevant and commensurate with the theme of the paper.

(b) A brief Summary, "Abstract" (less than 150 words) containing the major results and conclusions.

(c) Up to ten keywords, that precisely identifies the paper's subject, purpose, and focus.

(d) An Introduction, giving necessary background excluding subheadings; objectives must be clearly declared.

(e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition; sources of information must be given and numerical methods must be specified by reference, unless non-standard.

(f) Results should be presented concisely, by well-designed tables and/or figures; the same data may not be used in both; suitable statistical data should be given. All data must be obtained with attention to numerical detail in the planning stage. As reproduced design has been recognized to be important to experiments for a considerable time, the Editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned un-refereed;

(g) Discussion should cover the implications and consequences, not just recapitulating the results; conclusions should be summarizing.

(h) Brief Acknowledgements.

(i) References in the proper form.

Authors should very cautiously consider the preparation of papers to ensure that they communicate efficiently. Papers are much more likely to be accepted, if they are cautiously designed and laid out, contain few or no errors, are summarizing, and be conventional to the approach and instructions. They will in addition, be published with much less delays than those that require much technical and editorial correction.

The Editorial Board reserves the right to make literary corrections and to make suggestions to improve briefness.

It is vital, that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.

Format

Language: The language of publication is UK English. Authors, for whom English is a second language, must have their manuscript efficiently edited by an English-speaking person before submission to make sure that, the English is of high excellence. It is preferable, that manuscripts should be professionally edited.

Standard Usage, Abbreviations, and Units: Spelling and hyphenation should be conventional to The Concise Oxford English Dictionary. Statistics and measurements should at all times be given in figures, e.g. 16 min, except for when the number begins a sentence. When the number does not refer to a unit of measurement it should be spelt in full unless, it is 160 or greater.

Abbreviations supposed to be used carefully. The abbreviated name or expression is supposed to be cited in full at first usage, followed by the conventional abbreviation in parentheses.

Metric SI units are supposed to generally be used excluding where they conflict with current practice or are confusing. For illustration, 1.4 l rather than 1.4 × 10-3 m3, or 4 mm somewhat than 4 × 10-3 m. Chemical formula and solutions must identify the form used, e.g. anhydrous or hydrated, and the concentration must be in clearly defined units. Common species names should be followed by underlines at the first mention. For following use the generic name should be constricted to a single letter, if it is clear.

Structure

All manuscripts submitted to Global Journals Inc. (US), ought to include:

Title: The title page must carry an instructive title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) wherever the work was carried out. The full postal address in addition with the e-mail address of related author must be given. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining and indexing.

Abstract, used in Original Papers and Reviews:

Optimizing Abstract for Search Engines

Many researchers searching for information online will use search engines such as Google, Yahoo or similar. By optimizing your paper for search engines, you will amplify the chance of someone finding it. This in turn will make it more likely to be viewed and/or cited in a further work. Global Journals Inc. (US) have compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

Key Words

A major linchpin in research work for the writing research paper is the keyword search, which one will employ to find both library and Internet resources.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy and planning a list of possible keywords and phrases to try.

Search engines for most searches, use Boolean searching, which is somewhat different from Internet searches. The Boolean search uses "operators," words (and, or, not, and near) that enable you to expand or narrow your affords. Tips for research paper while preparing research paper are very helpful guideline of research paper.

Choice of key words is first tool of tips to write research paper. Research paper writing is an art.A few tips for deciding as strategically as possible about keyword search:

- One should start brainstorming lists of possible keywords before even begin searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in research paper?" Then consider synonyms for the important words.
- It may take the discovery of only one relevant paper to let steer in the right keyword direction because in most databases, the keywords under which a research paper is abstracted are listed with the paper.
- One should avoid outdated words.

Keywords are the key that opens a door to research work sources. Keyword searching is an art in which researcher's skills are bound to improve with experience and time.

Numerical Methods: Numerical methods used should be clear and, where appropriate, supported by references.

Acknowledgements: Please make these as concise as possible.

References

References follow the Harvard scheme of referencing. References in the text should cite the authors' names followed by the time of their publication, unless there are three or more authors when simply the first author's name is quoted followed by et al. unpublished work has to only be cited where necessary, and only in the text. Copies of references in press in other journals have to be supplied with submitted typescripts. It is necessary that all citations and references be carefully checked before submission, as mistakes or omissions will cause delays.

References to information on the World Wide Web can be given, but only if the information is available without charge to readers on an official site. Wikipedia and Similar websites are not allowed where anyone can change the information. Authors will be asked to make available electronic copies of the cited information for inclusion on the Global Journals Inc. (US) homepage at the judgment of the Editorial Board.

The Editorial Board and Global Journals Inc. (US) recommend that, citation of online-published papers and other material should be done via a DOI (digital object identifier). If an author cites anything, which does not have a DOI, they run the risk of the cited material not being noticeable.

The Editorial Board and Global Journals Inc. (US) recommend the use of a tool such as Reference Manager for reference management and formatting.

Tables, Figures and Figure Legends

Tables: Tables should be few in number, cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g. Table 4, a self-explanatory caption and be on a separate sheet. Vertical lines should not be used.

Figures: Figures are supposed to be submitted as separate files. Always take in a citation in the text for each figure using Arabic numbers, e.g. Fig. 4. Artwork must be submitted online in electronic form by e-mailing them.

Preparation of Electronic Figures for Publication

Even though low quality images are sufficient for review purposes, print publication requires high quality images to prevent the final product being blurred or fuzzy. Submit (or e-mail) EPS (line art) or TIFF (halftone/photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Do not use pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings) in relation to the imitation size. Please give the data for figures in black and white or submit a Color Work Agreement Form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution (at final image size) ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs) : >350 dpi; figures containing both halftone and line images: >650 dpi.

Color Charges: It is the rule of the Global Journals Inc. (US) for authors to pay the full cost for the reproduction of their color artwork. Hence, please note that, if there is color artwork in your manuscript when it is accepted for publication, we would require you to complete and return a color work agreement form before your paper can be published.

Figure Legends: Self-explanatory legends of all figures should be incorporated separately under the heading 'Legends to Figures'. In the full-text online edition of the journal, figure legends may possibly be truncated in abbreviated links to the full screen version. Therefore, the first 100 characters of any legend should notify the reader, about the key aspects of the figure.

6. AFTER ACCEPTANCE

Upon approval of a paper for publication, the manuscript will be forwarded to the dean, who is responsible for the publication of the Global Journals Inc. (US).

6.1 Proof Corrections

The corresponding author will receive an e-mail alert containing a link to a website or will be attached. A working e-mail address must therefore be provided for the related author.

Acrobat Reader will be required in order to read this file. This software can be downloaded

(Free of charge) from the following website:

www.adobe.com/products/acrobat/readstep2.html. This will facilitate the file to be opened, read on screen, and printed out in order for any corrections to be added. Further instructions will be sent with the proof.

Proofs must be returned to the dean at dean@globaljournals.org within three days of receipt.

As changes to proofs are costly, we inquire that you only correct typesetting errors. All illustrations are retained by the publisher. Please note that the authors are responsible for all statements made in their work, including changes made by the copy editor.

6.2 Early View of Global Journals Inc. (US) (Publication Prior to Print)

The Global Journals Inc. (US) are enclosed by our publishing's Early View service. Early View articles are complete full-text articles sent in advance of their publication. Early View articles are absolute and final. They have been completely reviewed, revised and edited for publication, and the authors' final corrections have been incorporated. Because they are in final form, no changes can be made after sending them. The nature of Early View articles means that they do not yet have volume, issue or page numbers, so Early View articles cannot be cited in the conventional way.

6.3 Author Services

Online production tracking is available for your article through Author Services. Author Services enables authors to track their article - once it has been accepted - through the production process to publication online and in print. Authors can check the status of their articles online and choose to receive automated e-mails at key stages of production. The authors will receive an e-mail with a unique link that enables them to register and have their article automatically added to the system. Please ensure that a complete e-mail address is provided when submitting the manuscript.

6.4 Author Material Archive Policy

Please note that if not specifically requested, publisher will dispose off hardcopy & electronic information submitted, after the two months of publication. If you require the return of any information submitted, please inform the Editorial Board or dean as soon as possible.

6.5 Offprint and Extra Copies

A PDF offprint of the online-published article will be provided free of charge to the related author, and may be distributed according to the Publisher's terms and conditions. Additional paper offprint may be ordered by emailing us at: editor@globaljournals.org .



Before start writing a good quality Computer Science Research Paper, let us first understand what is Computer Science Research Paper? So, Computer Science Research Paper is the paper which is written by professionals or scientists who are associated to Computer Science and Information Technology, or doing research study in these areas. If you are novel to this field then you can consult about this field from your supervisor or guide.

TECHNIQUES FOR WRITING A GOOD QUALITY RESEARCH PAPER:

1. Choosing the topic: In most cases, the topic is searched by the interest of author but it can be also suggested by the guides. You can have several topics and then you can judge that in which topic or subject you are finding yourself most comfortable. This can be done by asking several questions to yourself, like Will I be able to carry our search in this area? Will I find all necessary recourses to accomplish the search? Will I be able to find all information in this field area? If the answer of these types of questions will be "Yes" then you can choose that topic. In most of the cases, you may have to conduct the surveys and have to visit several places because this field is related to Computer Science and Information Technology. Also, you may have to do a lot of work to find all rise and falls regarding the various data of that subject. Sometimes, detailed information plays a vital role, instead of short information.

2. Evaluators are human: First thing to remember that evaluators are also human being. They are not only meant for rejecting a paper. They are here to evaluate your paper. So, present your Best.

3. Think Like Evaluators: If you are in a confusion or getting demotivated that your paper will be accepted by evaluators or not, then think and try to evaluate your paper like an Evaluator. Try to understand that what an evaluator wants in your research paper and automatically you will have your answer.

4. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

5. Ask your Guides: If you are having any difficulty in your research, then do not hesitate to share your difficulty to your guide (if you have any). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work then ask the supervisor to help you with the alternative. He might also provide you the list of essential readings.

6. Use of computer is recommended: As you are doing research in the field of Computer Science, then this point is quite obvious.

7. Use right software: Always use good quality software packages. If you are not capable to judge good software then you can lose quality of your paper unknowingly. There are various software programs available to help you, which you can get through Internet.

8. Use the Internet for help: An excellent start for your paper can be by using the Google. It is an excellent search engine, where you can have your doubts resolved. You may also read some answers for the frequent question how to write my research paper or find model research paper. From the internet library you can download books. If you have all required books make important reading selecting and analyzing the specified information. Then put together research paper sketch out.

9. Use and get big pictures: Always use encyclopedias, Wikipedia to get pictures so that you can go into the depth.

10. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right! It is a good habit, which helps to not to lose your continuity. You should always use bookmarks while searching on Internet also, which will make your search easier.

11. Revise what you wrote: When you write anything, always read it, summarize it and then finalize it.

12. Make all efforts: Make all efforts to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in introduction, that what is the need of a particular research paper. Polish your work by good skill of writing and always give an evaluator, what he wants.

13. Have backups: When you are going to do any important thing like making research paper, you should always have backup copies of it either in your computer or in paper. This will help you to not to lose any of your important.

14. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several and unnecessary diagrams will degrade the quality of your paper by creating "hotchpotch." So always, try to make and include those diagrams, which are made by your own to improve readability and understandability of your paper.

15. Use of direct quotes: When you do research relevant to literature, history or current affairs then use of quotes become essential but if study is relevant to science then use of quotes is not preferable.

16. Use proper verb tense: Use proper verb tenses in your paper. Use past tense, to present those events that happened. Use present tense to indicate events that are going on. Use future tense to indicate future happening events. Use of improper and wrong tenses will confuse the evaluator. Avoid the sentences that are incomplete.

17. Never use online paper: If you are getting any paper on Internet, then never use it as your research paper because it might be possible that evaluator has already seen it or maybe it is outdated version.

18. Pick a good study spot: To do your research studies always try to pick a spot, which is quiet. Every spot is not for studies. Spot that suits you choose it and proceed further.

19. Know what you know: Always try to know, what you know by making objectives. Else, you will be confused and cannot achieve your target.

20. Use good quality grammar: Always use a good quality grammar and use words that will throw positive impact on evaluator. Use of good quality grammar does not mean to use tough words, that for each word the evaluator has to go through dictionary. Do not start sentence with a conjunction. Do not fragment sentences. Eliminate one-word sentences. Ignore passive voice. Do not ever use a big word when a diminutive one would suffice. Verbs have to be in agreement with their subjects. Prepositions are not expressions to finish sentences with. It is incorrect to ever divide an infinitive. Avoid clichés like the disease. Also, always shun irritating alliteration. Use language that is simple and straight forward. put together a neat summary.

21. Arrangement of information: Each section of the main body should start with an opening sentence and there should be a changeover at the end of the section. Give only valid and powerful arguments to your topic. You may also maintain your arguments with records.

22. Never start in last minute: Always start at right time and give enough time to research work. Leaving everything to the last minute will degrade your paper and spoil your work.

23. Multitasking in research is not good: Doing several things at the same time proves bad habit in case of research activity. Research is an area, where everything has a particular time slot. Divide your research work in parts and do particular part in particular time slot.

24. Never copy others' work: Never copy others' work and give it your name because if evaluator has seen it anywhere you will be in trouble.

25. Take proper rest and food: No matter how many hours you spend for your research activity, if you are not taking care of your health then all your efforts will be in vain. For a quality research, study is must, and this can be done by taking proper rest and food.

26. Go for seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.



© Copyright by Global Journals Inc.(US)| Guidelines Handbook

27. Refresh your mind after intervals: Try to give rest to your mind by listening to soft music or by sleeping in intervals. This will also improve your memory.

28. Make colleagues: Always try to make colleagues. No matter how sharper or intelligent you are, if you make colleagues you can have several ideas, which will be helpful for your research.

29. Think technically: Always think technically. If anything happens, then search its reasons, its benefits, and demerits.

30. Think and then print: When you will go to print your paper, notice that tables are not be split, headings are not detached from their descriptions, and page sequence is maintained.

31. Adding unnecessary information: Do not add unnecessary information, like, I have used MS Excel to draw graph. Do not add irrelevant and inappropriate material. These all will create superfluous. Foreign terminology and phrases are not apropos. One should NEVER take a broad view. Analogy in script is like feathers on a snake. Not at all use a large word when a very small one would be sufficient. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Amplification is a billion times of inferior quality than sarcasm.

32. Never oversimplify everything: To add material in your research paper, never go for oversimplification. This will definitely irritate the evaluator. Be more or less specific. Also too, by no means, ever use rhythmic redundancies. Contractions aren't essential and shouldn't be there used. Comparisons are as terrible as clichés. Give up ampersands and abbreviations, and so on. Remove commas, that are, not necessary. Parenthetical words however should be together with this in commas. Understatement is all the time the complete best way to put onward earth-shaking thoughts. Give a detailed literary review.

33. Report concluded results: Use concluded results. From raw data, filter the results and then conclude your studies based on measurements and observations taken. Significant figures and appropriate number of decimal places should be used. Parenthetical remarks are prohibitive. Proofread carefully at final stage. In the end give outline to your arguments. Spot out perspectives of further study of this subject. Justify your conclusion by at the bottom of them with sufficient justifications and examples.

34. After conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print to the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects in your research.

Informal Guidelines of Research Paper Writing

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form, which is presented in the guidelines using the template.
- Please note the criterion for grading the final paper by peer-reviewers.

Final Points:

A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

The introduction will be compiled from reference matter and will reflect the design processes or outline of basis that direct you to make study. As you will carry out the process of study, the method and process section will be constructed as like that. The result segment will show related statistics in nearly sequential order and will direct the reviewers next to the similar intellectual paths throughout the data that you took to carry out your study. The discussion section will provide understanding of the data and projections as to the implication of the results. The use of good quality references all through the paper will give the effort trustworthiness by representing an alertness of prior workings.

Writing a research paper is not an easy job no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record keeping are the only means to make straightforward the progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear

· Adhere to recommended page limits

Mistakes to evade

- Insertion a title at the foot of a page with the subsequent text on the next page
- Separating a table/chart or figure - impound each figure/table to a single page
- Submitting a manuscript with pages out of sequence

In every sections of your document

· Use standard writing style including articles ("a", "the," etc.)

· Keep on paying attention on the research topic of the paper

· Use paragraphs to split each significant point (excluding for the abstract)

· Align the primary line of each section

· Present your points in sound order

· Use present tense to report well accepted

· Use past tense to describe specific results

· Shun familiar wording, don't address the reviewer directly, and don't use slang, slang language, or superlatives

· Shun use of extra pictures - include only those figures essential to presenting results

Title Page:

Choose a revealing title. It should be short. It should not have non-standard acronyms or abbreviations. It should not exceed two printed lines. It should include the name(s) and address (es) of all authors.



© Copyright by Global Journals Inc.(US)| Guidelines Handbook

Abstract:

The summary should be two hundred words or less. It should briefly and clearly explain the key findings reported in the manuscript--must have precise statistics. It should not have abnormal acronyms or abbreviations. It should be logical in itself. Shun citing references at this point.

An abstract is a brief distinct paragraph summary of finished work or work in development. In a minute or less a reviewer can be taught the foundation behind the study, common approach to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Yet, use comprehensive sentences and do not let go readability for briefness. You can maintain it succinct by phrasing sentences so that they provide more than lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study, with the subsequent elements in any summary. Try to maintain the initial two items to no more than one ruling each.

- Reason of the study - theory, overall issue, purpose
- Fundamental goal
- To the point depiction of the research
- Consequences, including definite statistics - if the consequences are quantitative in nature, account quantitative data; results of any numerical analysis should be reported
- Significant conclusions or questions that track from the research(es)

Approach:

- Single section, and succinct
- As a outline of job done, it is always written in past tense
- A conceptual should situate on its own, and not submit to any other part of the paper such as a form or table
- Center on shortening results - bound background information to a verdict or two, if completely necessary
- What you account in an conceptual must be regular with what you reported in the manuscript
- Exact spelling, clearness of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else

Introduction:

The **Introduction** should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable to comprehend and calculate the purpose of your study without having to submit to other works. The basis for the study should be offered. Give most important references but shun difficult to make a comprehensive appraisal of the topic. In the introduction, describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will have no attention in your result. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here. Following approach can create a valuable beginning:

- Explain the value (significance) of the study
- Shield the model - why did you employ this particular system or method? What is its compensation? You strength remark on its appropriateness from a abstract point of vision as well as point out sensible reasons for using it.
- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
- Very for a short time explain the tentative propose and how it skilled the declared objectives.

Approach:

- Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done.
- Sort out your thoughts; manufacture one key point with every section. If you make the four points listed above, you will need a least of four paragraphs.

- Present surroundings information only as desirable in order hold up a situation. The reviewer does not desire to read the whole thing you know about a topic.
- Shape the theory/purpose specifically - do not take a broad view.
- As always, give awareness to spelling, simplicity and correctness of sentences and phrases.

Procedures (Methods and Materials):

This part is supposed to be the easiest to carve if you have good skills. A sound written Procedures segment allows a capable scientist to replacement your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt for the least amount of information that would permit another capable scientist to spare your outcome but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section. When a technique is used that has been well described in another object, mention the specific item describing a way but draw the basic principle while stating the situation. The purpose is to text all particular resources and broad procedures, so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step by step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

- Explain materials individually only if the study is so complex that it saves liberty this way.
- Embrace particular materials, and any tools or provisions that are not frequently found in laboratories.
- Do not take in frequently found.
- If use of a definite type of tools.
- Materials may be reported in a part section or else they may be recognized along with your measures.

Methods:

- Report the method (not particulars of each process that engaged the same methodology)
- Describe the method entirely
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures
- Simplify - details how procedures were completed not how they were exclusively performed on a particular day.
- If well known procedures were used, account the procedure by name, possibly with reference, and that's all.

Approach:

- It is embarrassed or not possible to use vigorous voice when documenting methods with no using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result when script up the methods most authors use third person passive voice.
- Use standard style in this and in every other part of the paper - avoid familiar lists, and use full sentences.

What to keep away from

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings - save it for the argument.
- Leave out information that is immaterial to a third party.

Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part a entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently.You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.



© Copyright by Global Journals Inc.(US)| Guidelines Handbook

Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or in manuscript form.

What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

Approach

- As forever, use past tense when you submit to your results, and put the whole thing in a reasonable order.
- Put figures and tables, appropriately numbered, in order at the end of the report
- If you desire, you may place your figures and tables properly within the text of your results part.

Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

Discussion:

The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a argument should be. Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly described. Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved with prospect, and let it drop at that.

- Make a decision if each premise is supported, discarded, or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."
- Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work
- You may propose future guidelines, such as how the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One research will not counter an overall question, so maintain the large picture in mind, where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

- When you refer to information, differentiate data generated by your own studies from available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.

Please carefully note down following rules and regulation before submitting your Research Paper to Global Journals Inc. (US):

Segment Draft and Final Research Paper: You have to strictly follow the template of research paper. If it is not done your paper may get rejected.

- The **major constraint** is that you must independently make all content, tables, graphs, and facts that are offered in the paper. You must write each part of the paper wholly on your own. The Peer-reviewers need to identify your own perceptive of the concepts in your own terms. NEVER extract straight from any foundation, and never rephrase someone else's analysis.

- Do not give permission to anyone else to "PROOFREAD" your manuscript.

- Methods to avoid Plagiarism is applied by us on every paper, if found guilty, you will be blacklisted by all of our collaborated research groups, your institution will be informed for this and strict legal actions will be taken immediately.)
- To guard yourself and others from possible illegal use please do not permit anyone right to use to your paper and files.



© Copyright by Global Journals Inc.(US)| Guidelines Handbook

Criterion for Grading a Research Paper (Compilation) by Global Journals Inc. (US)

Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals Inc. (US).

Topics	Grades		
	A-B	**C-D**	**E-F**
Abstract	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
Introduction	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
Methods and Procedures	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
Result	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
Discussion	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

Index

A

Asymptotically · 54
Aversion · 1, 5

B

Berrospide · 2, 20

C

Cambodian · 38, 39, 42, 44, 45, 46, 47, 48
Contamination · 27

I

Idiosyncratic · 50, 53, 54

L

Lubricants · 25

M

Macroprudential · 1, 2, 7, 11, 13, 20

P

Plankton · 25
Presumably · 4, 2

Z

Zooplanktons · 25



save our planet



Global Journal of Human Social Science

Visit us on the Web at www.GlobalJournals.org | www.SocialScienceResearch.org
or email us at helpdesk@globaljournals.org



ISSN 975587

© Global Journals