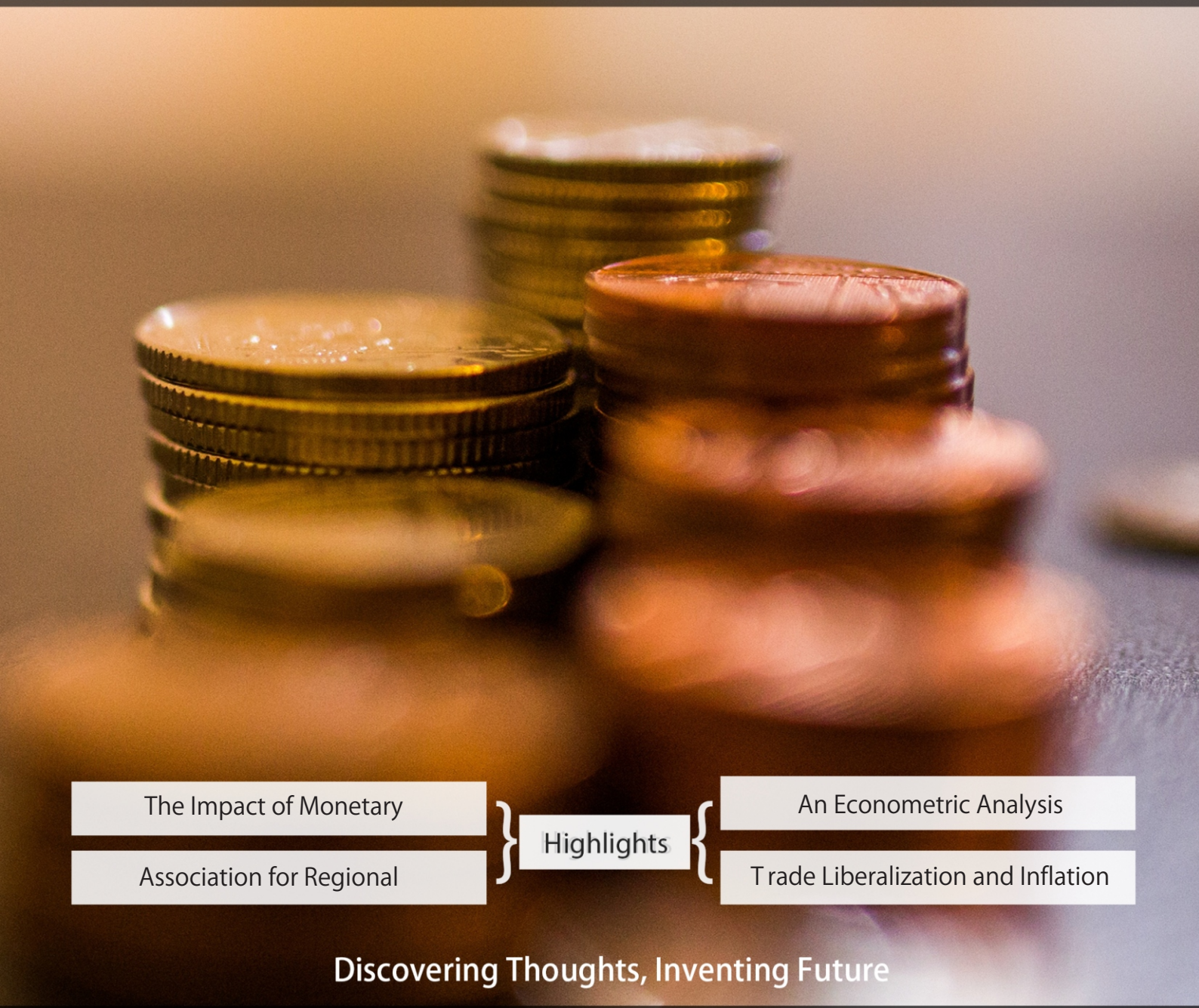
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Highlights

An Econometric Analysis

Trade Liberalization and Inflation

Discovering Thoughts, Inventing Future

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The Effects of Mothers' Profession on their Children's Academic Performance: An Econometric Analysis

By Mohammad Morshedul Hoque, Sultana Tanjima Khanam & Mohammad Nur Nobi

University of Chittagong

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Keywords: *academic outcomes, school children, working mothers, ANCOVA model.*

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The Effects of Mothers' Profession on their Children's Academic Performance: An Econometric Analysis

Mohammad Morshedul Hoque [α], Sultana Tanjima Khanam [σ] & Mohammad Nur Nobi [ρ]

Abstract- This study focuses on school-going children's educational performance of working and non-working mothers. Factors including parents' highest level of education and their profession, family income, family size and the number of school-going siblings in the family were considered as the explanatory variables of educational performance. Based on the primary data collected through a random sample survey of the students from two schools in the Chittagong University campus in Bangladesh and applying the econometric technique, the study found that mothers' level of education and family income have a significantly positive impact on students' academic outcome. Of course, the mothers' employment status has a negative impact except those who are employed in teaching profession. Thus, this study likes to suggest a policy implication that teaching might be an ideal profession for mothers, which plays a vital role on their children's educational performance than the other professions.

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I. Introduction

Students' academic achievement plays an important role in producing the best quality graduates who will become the great leaders and the efficient workforce of a country in the future and thus be responsible for the country's socio-economic development (Ali, et al, 2009). Over the recent few years, in Bangladesh, literacy rate and the level of education have improved remarkably and hence most of the educational institutions are improving in educational quality and creating skilled persons meeting dynamically growing market requirements. This is almost 46% according to a World Bank report. That is a reason a researcher finds out the factors affecting the students' academic performance, especially in the primary level where students are so much naïve that they do not realize what the goal of their study is, and the primary level education is thought to be the foundation of higher studies.

Author α: Assistant Professor, Dept. of Economics, University of Chittagong, Bangladesh. e-mail: mohoque75@yahoo.com
Author σ: Lecturer, Dept. of Economics & Banking, International Islamic University Chittagong, Bangladesh.
e-mail: tanjimhoque@yahoo.com
Author ρ: Associate Professor, Dept. of Economics, University of Chittagong, Bangladesh. e-mail: nobinur@yahoo.com

In the past, most of the studies were related with students' academic performance conducting issues like gender difference, teachers' education and teaching style, class environment, socio-economic factors and educational background of the students' families. The findings of these studies differ significantly from region to region, country to county as well as cities to rural areas. Unlike the previous studies, this paper investigates the effects of mothers' profession on their school children's academic performance through the econometric analysis. For this purpose, it would be better if the study could be conducted for all school children of the country or at least all students of Chittagong city at the primary level. But for time and cost consideration it is not so easy for the author and hence only the students of the primary section of Chittagong University Laboratory School and Nipobon Shishu Biddyaloy were taken as the population.

a) Significance of the Study

A woman has multi-dimensional contributions in a family that affect the happiness of all family members. In almost all societies in the world, they are traditionally assigned to be the primary caregivers to infants and children (UNDP, 1995). Activities carried out by women such as breast feeding, preparing food and drinks, bringing water and collecting fuel, and seeking preventative and curative medical care are crucial for children's healthy development. Women also play their roles to supplement family incomes in households as well as in businesses. In developing countries like Bangladesh this participation of women is quite essential in some cases for minimum survival of a family. Because of constraints in time that women face, however, their roles as caregivers and providers of family income may conflict with one another, with potentially important implications for the welfare of children. Working may rely on other members of the household to provide child care, but the quality of care provided by these substitutes, especially if they are older children, may be poor. On the other hand, the additions of family income from mothers' employment should benefit children's tuition fees, purchasing academic accessories etc. and may more than compensate for any reductions in the quantity or quality of care, implying a net improvement in academic

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outcomes as a result of maternal work. This will be more likely if women have strong preferences for spending their income in ways that benefit their children's education, especially if women have stronger preferences for educating their children. But again the effect may be positive or negative. So the significance of this study will be to determine whether mothers' profession particularly teaching is positively or negatively correlated with children's educational outcomes. Thus, the paper aims at showing whether mothers' profession has any statistically significant influence upon the school children's academic result or not as it is not necessary to mention that in our country it is believed that if a mother goes to work outside the household, her children may be affected in nutritional intake and hence a diverse effect on their education.

b) Research Topic

The research papers over the last twenty to forty years show that the mothers' employment status is not so robust a variable that the simple comparison of the children of employed and non-employed mothers will reveal meaningful differences. In this case, relationships must be examined with attention to other variables that moderate important effects particularly social class, the parents' attitudes, income, gender, number of siblings, nature of the location etc. Obviously, these effects are different in the middle class than in the lower class and different for boys than girls.

In addition, however, the path between the mothers' employment status and children's outcomes is a long one and there are many steps in between. To understand how maternal employment affects the children's academic performance we have to understand how it affects the family because it is through the family that effects take place. In many researches, it was indicated that the particular aspects of the family that are affected by the mothers' employment status and in turn, that affect the children, are the fathers' contributions, the mothers' sense of well-being and the parenting style – that is, how they interact with their children and the goals they hold for them.

c) Objectives of the Study

The main objective of this paper is to explore the impact of mothers' occupation that influences the academic performance of primary school students. In this case, the main explanatory variable is mothers' profession. Besides, some control variables are taken as the influencing factors. However, the specific objectives are as follows:

a) To estimate the variability in students' educational outcomes;
b) To test whether mothers' profession and their level of education significantly affect the kids' scores in the final examination;
c) To make policy recommendations for the society on the basis of empirical findings of the paper.

II. Literature Review

Previously a lot of researches have been done on this issue abroad. Many researchers investigated on various variables and a lot of different variables were studied. This research is different in a way that it is, probably, one of the first researches in Bangladesh, for ought the authors' knowledge goes, in which a variable "mothers' profession" is included to study the variation in school children's educational outcomes in the primary level. Our contribution to this study is that we have explored the family background factors that affect the students' academic performance, especially at the primary level.

From a child development perspective, mothers face a trade-off between time devoted to parenting and money deciding on whether to work or not. Both money and time devoted to parenting are believed to have a positive impact on a child's cognitive as well as academic development. It is therefore relevant to estimate the effect of maternal employment on children's academic performance. Is it plausible to think that the direction of this effect changes across countries? Since the socio-economic condition in developing countries is quite different with that of in developed countries, the research findings of these countries on the issue we have selected are also different as they have modern and sophisticated daycare centers, pre-play schools and improved medical care system etc.

Ibn Mafiz et al (2012) conducted a cross-section study to investigate the effects of socio-economic, demographic and internet exposure factors on school performance among 10 grade students of Nilkhet High School, Dhaka. In this study, school performance was measured by the students' class roll number. Class roll numbers were found highly negatively correlated with the factors like family income, monthly tuition fees, number of rooms in the house, number of earning persons in the family, and this correlation was significant at 1% level. A chi-square test was carried out to check for association between the category of these factors and the school performance measured by grades. In the chi-square test, some of the factors, namely, parents' highest level of education and their occupation were statistically significant. This study also found that the school performance measured by students' grades was significantly correlated with the work on internet and the number of friends in Facebook as well.

Raychowdhuri et al (2010) have shown that it was assumed that mothers' education is positively related to the academic performance of the students. An educated as well as working mother can take better care for her child and the result of the study also proved the relation. The coefficient value is 0.17 which was found to

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be significant. It shows that there is statistically and significantly positive relationship between students' academic performance and mothers' education and profession.

Singh, P. (India) said in an investigation that the days are now over when mothers devoted their full life for developing their children. Today, women are becoming more active, independent and prefer progress in their career rather than been recognized as just homemakers. Career-oriented women continue their work soon after completion of their maternity leave. Many working women start the job early due to financial needs of their family. There can be different reasons for women to go to work instead of staying at home.

Dunifon et al (2010) in Denmark associates children's well-being with their academic performance and achievement in school and estimate the causal effect of maternal employment on children's educational outcomes. The study used detailed Danish data on over 125,000 children born between 1987 and 1992. In two out of three model specifications they found a significantly positive correlation between maternal employment and children's school grade. The paper suggests that a child of a woman who works 30 or more hours per week while her child was under the age of four is predicted to have a GPA that is 5.6% on the average higher than a child whose mother works between 10 to 19 hours per week. They found no clear evidence of a negative association between maternal employment and children's grades.

Hoffman, L.W. (1998) shows that full-time employed mothers spend less time with their infants than part-time and non-employed mothers, but this effect diminishes with maternal education and with the age of the child. In addition, the effect is also less when the nature of the interaction is considered. The data indicate that employed mothers tend to compensate for their absence in the proportion of direct interaction and in the amount of time with the child during non-work hours and on weekends. Several studies that used behavioral observations of mother-infant interaction showed that employed mothers were more highly interactive with their infants, particularly with respect to verbal stimulation. Some studies have examined the mothers' sensitivity in interactions with their infants and found no difference between the employed and non-employed mothers.

A particularly active area of maternal employment research since 1980 has involved a comparison of dual-wage and single-wage families with respect to mother-infant attachment. In most of these studies, no significant differences were found. However, in a research by Jay Belsky, it was found that although the majority of mother-infant attachments in the full-time employed-mother group were secured, the number of insecure attachments was higher when the mothers were employed on a full-time basis. Furthermore, in reviews that combined subjects across studies, full-time employed mothers were more likely than part-time employed and non-employed mothers to have insecurely attached infants.

Evidence based on longitudinal data from the United Kingdom and the United States of America generally suggests that full time maternal employment during the first year of a child's life is associated with poorer child outcomes, especially poorer cognitive outcomes. Once their kids are old enough to go to school, many parents depend on class teachers to help them learn crucial academic and life skills. And the media hype around the hiring of better and more qualified teachers in public schools conventionally broadcast the idea that a great teacher can make or break a student's school achievement. But the great classroom teachers are not so. Parents continue to play an important role in their children's education.

Arndt, B. (2000), writes that the great irony of mothers who achieve professional success is that they do so at some costs to their children. But O'Brien can hardly have expected the venom she received when her research became the focus of a BBC Panorama Program entitled "Missing Mums", which claimed that British mothers were jeopardizing their children's future by working long hours.

An Australian research report on child care hit the news, promoting headlines about the risks of informal care for children. But hidden within the federal government report was the startling finding that children in full-time child care in the first two years of their lives were rated by their early primary school teachers as being less effective learners than their peers. There were no consistent effects of the mothers' employment on any aspect of child development. (US Equal Opportunities Commission Report, 1990).

An analysis of six studies looking at 40,000 children over the last 40 years found that there was no link between mothers' continuing their careers and misbehaving. Studies have shown that children born to career-oriented mothers in the seventies to early nineties of the last century did not perform as well with their literacy and numeracy skills about two percent lower. But the latest research by Joshi, H. of the University of London Centre for Longitudinal Studies found that children born since the mid-nineties whose mothers work their early years fared just as well as those whose mothers did not.

III. Methodology

In our study, a typical student's educational outcome measured in terms of his or her scores obtained in the last final examination is assumed to depend on several factors including family income,

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family size, number of school going children in a family, parent's highest level of education, parent's profession and whether the family a student belongs to owns a home or lives in a rental house etc. To explore the effects of these factors on students' school performance we have used a cross-section, the primary data collected from the study area comprising of Chittagong University Laboratory School and Nipobon Shishu Biddyaloy. The population size of these two schools consists of more than five hundred students. But we have surveyed only the students of class four and five and only 51 students were sampled among them. Obviously, this sample size is not sufficiently enough to investigate the variation in the children's educational outcome due to mainly whether the mother of a child is employed or a full time homemaker. But because of time limitation and cost consideration we have to rely upon this size of the sample for the study.

This study used questionnaires as the sole research instruments. These questionnaires were used to collect data from the pupils. However, the students spontaneously responded to answer all of the questions and the school authority helped us seriously. The authors provided sufficient help to the students to fill out the questionnaires and in some cases especially to know the information about the respective families' income we have had contact with the parents of some students. However, a simple random sampling technique was used to sample the required data of 51 students as the sampling procedure in this study.

IV. Analysis of Data and Descriptive Statistics

For the analysis of data we have used Microsoft Excel 2007 and econometric software E-Views 7.0. As the econometric methodology, we have used the multivariate classical linear regression model (CLRM) since the dependent variable (students' educational outcomes measured as marks obtained) is a quantitative variable. Besides, there are some qualitative variables as well.

After having 51 observations regarding the students' academic result and the factors affecting this result, we have calculated descriptive statistics of all the variables such as minimum and maximum scores of sampled students, and mean, median, standard deviation, skewness and kurtosis are shown in Table 1:

Table 1: Descriptive Statistics

Variables	Educatioal Outcome (Y)	Family Income (X_2)	Family Size (X_3)	Mother's Education (D_2)	Mother's Profession (D_3)	Teaching Profession (D_4)	House Ownership (D_5)
Mean	448.58	35,333.33	4.76	2.67	0.41	0.26	0.53
Median	490.00	31,000.00	5.00	3.00	0.00	0.00	1.00
Maximum	619.00	100,000.00	9.00	4.00	1.00	1.00	1.00
Minimum	245.00	5,000.00	2.00	0.00	0.00	0.00	0.00
Std. Dev.	116.55	22,742.62	1.21	1.38	0.50	0.43	0.50
Skewness	– 0.32	1.08	0.94	– 0.49	0.36	1.25	– 0.12
Kurtosis	1.71	3.90	5.23	1.88	1.13	2.56	1.01

There are a total of 51 students in our survey and a student has an average score of 448.58 out of 650 with a minimum score of 245 and a maximum of 619. The distribution of marks obtained by all students is negatively skewed to the left which indicates that average and median score lie below the modal score. A kurtosis of 1.71 implies that this distribution is a platy-kurtic frequency distribution. We have surveyed children of various income families with income ranges from 5,000 to 100,000 BDT where the average income of a family a student comes of is 35,333 BDT per month. There are two types of family in the survey – single and joint and families included in our study have members from two to nine.

On the other hand, among the dummy (qualitative) explanatory variables, the mothers of most of the students have master's degree or above but only 41% mothers are employed on a full-time basis. Of course, 57% of employed mothers are teachers. This is our investigation that whether mothers' profession, especially if mothers are teachers at some educational institutions does have any positive contribution in improving children's quality or not.

V. Empirical Model Specification

In our study, we have used the following empirical model to measure the effects of mothers' profession on students' educational outcome:

$$Y = f(X_2, X_3, D_2, D_3, D_4, D_5)$$

where, Y = Educational outcome of a student measured in terms of marks obtained in the last final or half-yearly examination;

X_2 = Income of the family a student belongs to;
X_3 = Size of a student's family;
D_2 = Mother's education which is a binary variable. In this case, the mother's highest level of education is categorized into four – S.S.C., H.S.C., Graduate and Post-Graduate. To define the level of education of a typical mother $D_2 = 4$ indicates that the mother's highest level of education is master's or above, $D_2 = 3$

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indicates the mother is a graduate and D_2 = 2 and 1 were used for tracing a mother who has only higher secondary or secondary level education respectively. There are some zeros in our data sheet indicating that the mother's education is below the secondary level.

D_3 = Mother's profession which has two conditions – whether the mother is in service or a full time housewife. For an employed mother this dummy variable takes one and for a non-employed mother it takes a value of zero.

D_4 = Teaching profession. If the mother of a student is in service, we tried to trace out whether she is engaged in teaching profession or not and conventionally a D_4 = 1 introduces us a mother of teaching profession and a D_4 = 0 implies otherwise.

Finally, a D_5 = 1 if a family the respective student belongs to owns a house and a D_5 = 0 if it does not.

Considering these factors we have specified the following functional form of regression of educational outcome on the family background factors mentioned above:

$$Y_i = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \gamma_2 D_{2i} + \gamma_3 D_{3i} + \gamma_4 D_{4i} + \gamma_5 D_{5i} + u_i$$

Since there are quantitative as well as qualitative explanatory variables in the model, we are dealing with an **analysis of covariance (ANCOVA)** model. The ANCOVA models are an extension of ANOVA models in the sense that they provide a method of statistically controlling the effects of quantitative regressors, called covariates or control variables, in a model that includes both the quantitative and dummy regressors.

VI. Empirical Findings and Interpretation of Results

Since ANOVA or ANCOVA models do not violate the assumptions of the so-called classical linear regression model, the ordinary least-squares method is quite fit to run the regression results and hence based on the above mentioned ANCOVA model, we have estimated the following empirical results:

Table 2: Empirical Results

Dependent Variable: MARKS (Y)				
Included observations: 51				
Variable	Coefficient	Std. Error	*t*-Statistic	*p*-value
C	392.0007	73.57258	5.328082	0.0000
Family Income (X_2)	0.001824	0.000673	2.709604	0.0096
Family Size (X_3)	-6.716305	11.75156	-0.571524	0.5706
Mother's Education (D_2)	20.27946	11.29606	1.795269	0.0795
Mother's Profession (D_3)	-55.95592	36.34112	-1.539741	0.1308
Teaching Profession (D_4)	89.07502	43.86481	2.030671	0.0484
House Ownership (D_5)	-52.63608	27.72153	-1.898744	0.0642
R^2	0.431778	Adjusted R^2		0.354293
Explained variations	93.65518	Sum of squared residuals		385936.9
F-statistic	5.572412	Prob. (F-statistic)		0.000229
Durbin-Watson statistic	1.747684			

The sample regression line of the model is as follows:

$$\hat{Y}_i = 392.0007 + 0.001824 X_{2i} - 6.716305 X_{3i} + 20.27946 D_{2i} - 55.95592 D_{3i} + 89.07502 D_{4i} - 52.63608 D_{5i}$$

Now we can interpret the ordinary least-squares estimates of the ANCOVA model as,

i) The intercept (392.0007) of the regression indicates the average effects of all those factors not included in the model but are responsible for the variation in a student's academic result e.g. type and location of the school, availability of recreational facilities, motivation of students and so many other factors.

ii) $\hat{\beta}_2$ = 0.001824 suggests that *ceteris paribus*, as the income of the family a typical student belongs to goes up by one thousand taka per month a student is expected to improve his or her numerical grade on an average by 1.82 out of 650 in the next examination. In this case, the sign of the estimated slope coefficient is important not the magnitudes. Since the *t*-ratio of this coefficient is statistically significant we can conclude here that the child of a wealthier family will do better than a child of a relatively less wealthy family. This scenario is practically true because the children of richer families will enjoy so many advantages in favor of better education that the children of poorer families can never expect, such as the number of tutors, the purchasing power of required number of textbooks and other reading materials, access to internet and television facilities, food and nutrition intake, school dresses and other educational equipments to build up confidence of a student, family environment, partial dependence on the children to provide financial supports to poorer families and so on.

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iii) $\hat{\beta}_3 = -6.716305$ indicates that if the size of a family increases a student's average academic scores will be lower by approximately 7 out of 650 which is not so significant as the *t*-ratio of this coefficient is smaller than two in absolute sense. In this respect, our statement is that it may happen because if the member of a family increases in number over time a student will not get enough room facilities for a sound study. Furthermore, if the income of a family will not rise proportionately with the number of family members it will be very difficult to provide sufficient financial backup for school-going children.

Now let us interpret the dummy variable coefficients:

iv) $\hat{\gamma}_2 = 20.27946$ was found to be significant at 8 percent level. This means that the child of a mother whose highest level of education is S.S.C. or above can achieve on an average of 20 more marks out of 650 from a child of an uneducated mother. This result we expected seriously and we have obtained as our a priori expectation. An educated mother can put strong cognitive power in her kids which is the foundation for their better performance in schools. A highly educated mom can teach better than a house tutor as well as ameliorated social culture that an uneducated or less educated mother cannot do.

v) $\hat{\gamma}_3 = -55.95592$ measures the average effects of a mother's profession on educational outcome of a typical student. As the estimated coefficient is found, it indicates if a mother is employed, her child will get about 56 marks less than a child whose mother is a full time homemaker, though the coefficient is found to be insignificant.

vi) Records across countries as we have described in the literature review show that there is significantly positive relationship between mothers' profession and school students' academic performance. But we did not get this result in our study. There are several reasons behind this insignificant result such as

a) We have selected only two schools as the population. If the data can be collected from more schools from rural and metropolitan areas more significant correlation between mothers' profession and school students' academic performance could be obtained.

b) In our country, especially in city areas when a mother is absent from the family due to her job, there are no responsible persons to take care of the children so that their nutritional intake remains ignored and consequently it will have a diverse impact of the children's education.

vii) $\hat{\gamma}_4 = 89.07502$ implies that controlling on family income and family size as well as other dummy variables the child of an employed mother who is a teacher achieves significantly better score than a child without having it. This is the result we wish to find out from our study. The children of employed mothers can perform worse but if the mothers are in teaching profession it will positively influence a child to do better performance. The causes behind this may be as follows:

a) A mother in teaching profession can better take care of her child regarding home works than any other mothers.

b) The child of a mother of this profession will be more disciplined.

c) The mother who is a teacher might be the '**IDOL**' of her children so that they can try to do better.

viii) $\hat{\gamma}_5 = -52.63608$ is another estimated coefficient which has an a priori wrong sign that a student who lives in own house do not perform better. This finding could also be altered in a large size of sample from different schools.

VII. Testing the Goodness-of-Fit and Overall Significance

In our model, the coefficient of determination R^2 is found to be 0.4318 which indicates that explanatory variables altogether can account for only 43% variation of school students' academic result through the factors we have considered in our study. Thus, the estimated regression line fits the data moderately. Furthermore, the adjusted R^2 is also moderate. Obviously, this is not a high R^2 value that we can conclude that we have trace out the correct set of explanatory variables related with the variability of school students' educational outcome. But this is not so surprising result in a cross-section study.

Though the *t*-ratios of one or more individual coefficients are statistically insignificant which has been explained earlier, the *F*-statistic (= 5.57) is highly significant which does imply that though we cannot disentangle the separate influence of some factors on the marks obtained by the students, we can reject the null hypothesis that family income, family size, mothers' education and profession have statistically significant overall influences on the children's educational outcome.

VIII. Diagnostic Testing of the Model

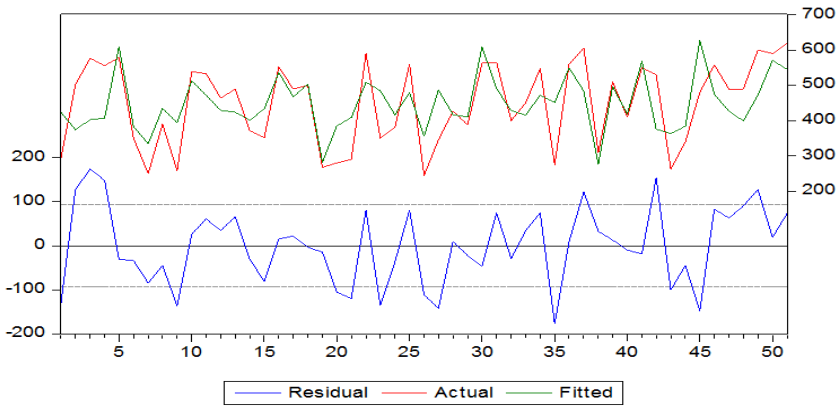
Let us now perform some diagnostic tests on the estimated ANCOVA regression model:

a) Actual vs. Fitted Graph

The actual and fitted curves are shown in the following diagram. In this diagram, the blue and the red

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lines indicate actual and fitted observations of students' marks whereas the green line in the bottom of the box indicates the residuals. Since this line does not show any remarkable patterns, we can assume primarily that the error variances do not vary over the *x*-variables on the right side.



b) Testing Multicollinearity: Condition Index

In our Analysis-of-Covariance regression model, the minimum and maximum eigen values were obtained as 0.020 and 5.032 respectively for which the condition index appears to be 15.86 as defined by the positive square root of the ratio of the maximum eigen value to the minimum. Since this index lies in between 10 to 30, we are sure to assert that the explanatory variables are not highly correlated to one another. Another symptom of high collinearity is that R^2 will be high but one or more *t*-ratios will be insignificant, which is not the case in our model. For this diagnostic test, we have used SPSS 17.0.

Table 3: Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.54533	Prob. F(6,44)	0.7708
Obs*R-squared	3.53002	Prob. Chi-Square(6)	0.7400
Scaled explained SS	1.63496	Prob. Chi-Square(6)	0.9500

c) Testing Heteroskedasticity: BPG Approach

In our model, there is no heteroskedasticity as we expect in cross-section data where disturbances have constant variances. Let us examine this through the Breusch-Pagan-Godfrey (BPG) test. Considering σ_i^2 as some function of non-stochastic variables, the BPG test defines a chi-square ratio on the basis of the explained sum of squares (ESS) which has an *F*-statistic and it was found to be 0.54 as shown in Table 3. Since this *F* value is statistically insignificant we can reject the null hypothesis that error variances are heteroskedastic.

d) Testing Autocorrelation: Durbin-Watson Method

The model has no serial correlation, that is, successive disturbances do not show any significant patterns. In our study, the estimated Durbin-Watson statistic was found to be 1.74 which is lower than 2.0 but greater than the upper critical *d* value at one percent level of significance. Thus, we cannot reject the null hypothesis that there is no autocorrelation between errors. This result is highly expected in a cross-section study where the error terms are usually uncorrelated to one another.

e) Ramsey's RESET Test of Model Misspecification

Let us now check whether we have chosen the correct model to explain the variability of students' academic performance in the final examination in our study. Ramsey, J.B. has proposed a general test of specification error called RESET (Regression Specification Error Test) to detect omitted or irrelevant variables, to trace out incorrect functional form or a model that violates the assumptions of the classical linear regression model. For this purpose, first we have to calculate the predicted values of the dependent variable *Y* and then estimate an artificial model by including some polynomial of the fitted term $\hat{Y}$ as additional explanatory variables. If we can reject the null hypothesis that the coefficients of the fitted terms are significantly different from zero, we may encounter the problem of specification error. A failure to reject the H_0 will indicate that the model is not able to detect any kind of specification error.

In this respect, the E-Views output shows that the *F*-ratio (2.50) of the RESET test was found to be significant at 12% level, which indicates that the null

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hypothesis of no model misspecification cannot be rejected at more than 12% level. Obviously, at 12% level of significance, there might be some specification error. According to the author's view, there may be some psychological factors like the understanding of father and mother, father's education, sex of the student as well as some institutional aspects such as the nature of the school a typical student is enrolled, the students' attendance in the class, teacher-student ratio, presence of trained teachers in the school, commuting time to schools from the students' residence etc. But due to time and cost consideration as we have mentioned earlier and since some of the factors are quite sensitive to deal with, it is difficult to collect data on all of these issues, which might be one of limitations of our study.

IX. Conclusion and Policy Recommendation

The study attempts to estimate the educational achievement of school students on the basis of some family background factors and for this purpose we have used the ANCOVA model where some factors were found to be significant and some are insignificant. A survey of a few students might be one of causes of finding some insignificant coefficients which is a limitation of our study. Furthermore, only two schools were selected as the population. It would be better to select more schools in the population. But the authors have to rely on a small size of sample due time and cost considerations.

However, the most important conclusion to be drawn from the analysis presented here is that whether a mother's employment status has a positive or a negative effect on school-aged children's educational outcome is entirely based on the nature of mother's job. The issue, therefore, is not ***whether*** the mother works, but what the level of her paid job is: if she has a laboring job, her work outside the home has a negative effect on her children's educational chances. But if she is a teacher in some educational institution, her kids might perform significantly better than other children and we may recommend a policy for highly educated women who are career-oriented to choose teaching profession.

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The Impact of Monetary Policy on Economic Development: Evidence from Lao PDR

By Khaysy Srithilat & Gang Sun
Dongbei University of Finance and Economics

Abstract- This paper examines the impact of monetary policy on the economic development by using annual time series data from 1989-2016. The unit root testing result suggests that all variables are stationary at first difference; therefore, the Johansen Cointegration and Error Correction Model has been employed to analyze the association between variables. The finding shows that money supply, interest rate and inflation rate negatively effect on the real GDP per capita in the long run and only the real exchange rate has a positive sign. The error correction model result indicates the existence of short run causality between money supply, real exchange rate and real GDP per capita.

Keywords: monetary policy, economic development, laos, VECM, cointegration.

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The Impact of Monetary Policy on Economic Development: Evidence from Lao PDR

Khaysy Srithilat [α] & Gang Sun [σ]

Abstract- This paper examines the impact of monetary policy on the economic development by using annual time series data from 1989-2016. The unit root testing result suggests that all variables are stationary at first difference; therefore, the Johansen Cointegration and Error Correction Model has been employed to analyze the association between variables. The finding shows that money supply, interest rate, and inflation rate negatively effect on the real GDP per capita in the long run and only the real exchange rate has a positive sign. The error correction model result indicates the existence of short-run causality between money supply, real exchange rate and real GDP per capita.

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I. Introduction

Monetary policy is a key factor of macroeconomic management in opened economy to stimulate economic stability and to promote economic development through its impact on economic variables. It is generally believe that monetary policy influences macroeconomic variables which include employment creation, price stability, gross domestic product growth and equilibrium in the balance of payment in developing country (Anowor & Okorie, 2016; Precious, 2014). The role of monetary policy on the economic development and the changing in aggregate economic activity depend on how monetary policy is conducted and the independency of the central bank to choose the appropriate monetary tools to formulate the monetary policy of macroeconomic objectives (Alavinasab, 2016). The accurate information on the effectiveness of the policy on the macro economy is the main issue of the policy maker to successfully implementation of any economic policy in general to achieve the sustainable output growth, the authority and policy maker always targets on the intermediate variables include the short-term interest rate, money supply, and exchange rate, which is considered as the most powerful instrument of monetary policy(Artus & Barroux, 1990; Fasanya, Onakoya, & Agboluaje, 2013).

Author α: 1st School of Finance, Dongbei University of Finance & Economics, Dalian, China, and Department of Economics, Faculty of Economics & Business Management, National University of Laos. e-mail: k.srithilat@nuol.edu.la

Author σ: School of Finance, Dongbei University of Finance & Economics, Jianshan Street, Shahekou District, Dalian, Liaoning Province, 116025, PR China. e-mail: gangsun@dufe.edu.cn

Though many literatures and empirical studies supported the effectiveness of monetary policy on the macroeconomic variables but some argued that changing in money supply changes only the of nominal magnitude gross domestic product and it does not have any effect on the real economic variables, further more, rising of the money supply can only lead inflation such as: (Friedman, 1995; and Jeffrey M. Lacker, 2014). The recent empirical study of more than 100 countries by (Romer & Romer, 2002) the correlation between money supply and real economics activities found in only developed countries.(Lashkary & Kashani, 2011) study on the impact of monetary variables on economic growth in Iran by using monetarist's approach, the finding suggests that there is no relationship between money and real economic variables such as gross domestic product, employment. Nevertheless, the consensus of the role of monetary policy on the economic development and the real economic activity are not conclusively on the macroeconomic policy research context.

Since Lao People's Democratic Republic had changed its policy from centrally planned economy to market-oriented economy in 1986, the Bank of Laos (BoL) has played an important role boosting economic activities and economic stability. The transition toward a market oriented-economy was accompanied by the expansion on monetary policy, that can be seen by the money supply as the proportion of gross domestic product increased rapidly from 20% in 1999 to 58% in 2015 and interest rate decreased from 30% in 1990 to 20% in 1999 and 3.5% in 2015 respectively, the annual gross domestic product grew up by 8% averagely. Nevertheless, the Lao economy also suffered high fluctuation of inflation and dollarization continuously. During the Asian financial crisis; inflation rate hit the new historical record at 128% in 1999. The exchange rate mechanism is not reflex the actual economic condition due to the existence of high dollarization, the percentage of foreign currency as the proportion of aggregate money supply hit 72% and 80% in 1998 and 1999. The monetary policy is limited and incomplete[1]. It is mainly base on issuing bond and reserve requirement in order to serve the government economic policy and economic liquidity. Therefore, this study aims to analysis

[1] Somphao Phaysith, Bank of Lao PDR

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the impact of monetary policy on the economic development in Lao PDR, Despite, the percentage of using foreign currency and the inflation rate has been decreased recently, and the Lao economy continues to benefit with high level of economic growth. In order to stimulate sustainable growth in the long run and maintain the economic stability, the Lao authority and policy makers needs better understand on the crucial effectiveness of monetary policy instruments on macroeconomic variables deeply.

II. Literature Review

Monetary is geared toward achieving the economic growth and economic performance. The earlier empirical study such as (Zhang & Sun, 2017) analysis the confidence in monetary policy in China response by the entrepreneur. the private sector will had more inspiration when the central bank adapt an easing monetary policy, thus leads to better economic environment and higher economic growth. (Alavinasab, 2016) examine the impact of monetary policy on economics growth in Iran by using time series data which appropriate with error correction model (ECM), the finding of regression show that money supply, exchange rate and inflation had a long run significantly relationship on economics growth (Anowor & Okorie, 2016) also adopting the error correction model with time serried data from 1982-2013, the result show that increasing on cash reserve ratio led to increase in economic growth in Nigeria, which supports the study of the previous literature (Fasanya et al., 2013) found that : inflation, exchange rate, and external reserve are important force driving economic growth in Nigeria, (Sylvie NIBEZA, 2015) deployed on Johansen for integration and Vector Error Correction to check the existing for long run association between variable , the result of the analysis found that there is an integration among variable , exchange rate and money supply had a significantly effect on economic growth of Rwanda. (Fernald, Spiegel, & Swanson, 2014) examine the monetary effectiveness in China, the finding indicates that increases in bank reserve requirements reduce economic activity and changes in interest rates also have the impacts on economic activity and price level, (Gul, Mughal, & Rahim, 2012) found that interest rate has negative impact on the output and he also found that money supply has strongly positive impact on the output, which supports (Alavinasab, 2016; Fasanya et al., 2013; Sylvie NIBEZA, 2015), (Bollard & Hunt, 1960) suggests that New Zealand's monetary policy framework is likely to have played a role in lifting economic performance, along with many other factors, most notably the widespread economic reforms. (Precious, 2014) investigates the impact of monetary policy in promoting economic growth in the South African economy over the period 2000-2010, by using Johansen co-integration and the Error Correction Mechanism to identify the long-run and short-run dynamics between variables. The finding shows that money supply, repo rate and exchange rate had the positive impact on economic growth in South African countries.

(Jeffrey M. Lacker, 2014) agree with (Friedman, 1995) Argued that monetary policy can determine the long-run path of inflation, but its effect on real economic activity is limited and temporary. The contribution of central bank to economic growth is very low. The transmission process can be expressed through the IS-LM model. For example, if the central bank uses expansionary monetary policy by open market leads to right ward shift in LM curve, it is meaning that interest rate decreases and the gross domestic product goes up. However, these consequences is considered as the immediate short-run effect of monetary policy , then the price level would increase, thus the LM curve snapping back gain. (Artus & Barroux, 1990) and (Cover, 1992) using monthly data from 1951-1087 examine the symmetric effect of positive and negative of money supply shock, the finding implied that uncertainty about the future path of money supply has a negative impact on the output, (Romer & Romer, 2002) studies 110 countries over a 30 year period, the finding suggests that growth rate of money supply are very high, but there is no correlation between money supply and output in many countries, accept for some developed countries. (Babatunde & Shuaibu, 2011) Examines money supply, inflation and economic growth in Nigeria, the finding shows negative relationship between inflation and economic growth, (Bhattarai, 2011) investigated on impact of exchange rate and money supply on growth, inflation and interest rate in the UK found that depreciation of Sterling and higher interest rate have negative impact on economic growth (Ehigiamusoe, Uyi Kizito, 2013) studied on The Link between Money Market and Economic Growth in Nigeria: using the Vector Error Correction Model Approach found that money supply is significantly negative impact on economic growth and the link between money market and the real sector is very weak. (Vimaly Savannarideth, 2015) examine the money-output Granger causality in Lao PDR found that money supply does not Granger-cause output.

On the other hand, some researchers found there is no relationship between monetary policies on real economic growth. (Ho & Yeh, 2010) examined on monetary policy for a small open economy with heavily managed exchange rates with sign restrictions to the Taiwanese case, where existing studies found no clear effect of monetary policy shocks on the output and price level (Khabo & Harmse, 2005) studied on evaluates the impact of monetary policy on the economic growth of a small and open economy of South Africa , the finding show : money supply and inflation are not significantly related to the change of economic growth, (Babatunde

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& Shuaibu, 2011) Also confirmed there is no relationship between money supply and economic growth.

III. Data and Methodology

To analysis the impact of monetary policy on economic development in Laos, the time serried data established by World Bank, world development indicator (WDI 2015) and the annual time serried data from an annual economic report of the Bank of Lao PDR (BoL) from 1989-2016[2] have been taken to analyze the relationship between variables. The specific model can be formulated as below:

$$GDP = f(M2, REX, IR, INF) \quad (1)$$

To transform the above model (3) to a multiple regression form can be written like this:

$$GDP = \beta_0 + \beta_1 M2 + \beta_2 REX + \beta_3 IR + \beta_4 INF + \varepsilon \quad (2)$$

Where GDP is real gross domestic product per capital, $M2$ is broad money, REX is real exchange rate USD/Kip, IR is the interest rate, INF is inflation rate, ε is error term, β_0 is intercept, $\beta_1, \beta_2, \beta_3, \beta_4$ is the coefficient of the independent variable.

In presence study, we have used time series data, therefore, checking for stationary technique needs to apply to check whether all series stationary or not. Regarding to the previous study found that most of the economic time series data are found to be non stationary and a non-stationary time series may produce spurious regression, (Phillips & Perron, 1988).

a) Unit Root Test

This study employs the Augmented Dickey-Fuller (ADF) test as test of unit root to check the stationary of the series in order to avoid spurious regression problem. The testing is base on the assumption of serially correlated error terms, which their contribution considers with intercept and with intercept and trend. The ADF test is specific as:

$$\Delta Y_t = \alpha_0 + \gamma Y_{t-1} + \alpha_2 t + \sum_{i=1}^{\rho} \emptyset \, \Delta Y_{t-1} + \varepsilon_i \quad (3)$$

Table 1: Unit Root test

Variable	ADF			
	Level		First difference	
	Intercept	Trend & intercept	Intercept	Trend & intercept
GDP	-1.77003 (1)	-1.3551 (0.0897)	-2.655729 (0.1931)	-3.646583* (0.0388)
IR	-1.681742 (-.4288)	-1.862036 (0.646)	-4.455371** (0.00017)	-4.619912 (0.0055)
INF	-2.795595 (0.0722)	-3.54485 (0.0552)	-5.10645** (0.0004)	-4.980416** (0.0002)
M2	-2.071664 (0.2568)	-1.468972 (0.8143)	-2.594819 (1.0683)	-4.675812** (0.00076)
REX	-1.630776 (0.4532)	-1.742369 (0.7029)	-2.201475 (0.2105)	-2.125487* (0.0346)

Note: The value in () is macKinnon (1996) one-side p-values
** And ** significant at 5% and 1% respectively.*

The ADF unit root test confirm the stationary of interest rate (IR) in the first difference of intercept with significant level at 1% , and also confirmed significantly the stationary of real gross domestic product per capita, broad money and real exchange rate in first difference with trend and intercept at significant level at 1% for M2 and INF at 5% for GDP and REX. Since checking all time series data indicates that all series are stationary in first difference, consequently, the Johansen cointegration and Error Correction Model (VECM) are appropriate technique to analyze the impact of monetary policy on economic development in Lao PDR.

Table 2: Lag length selection

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1080.425	NA	1.26E+30	83.49421	83.73615	83.56388
1	-875.9335	314.6018	1.32E+24	69.68719	71.13884	70.10521
2	-827.4592	55.93187*	2.76e+23*	67.88148*	70.54283*	68.64785*

*Notes: * Indicates lag order selected by the criterion: sequential modified LR test statistic LR; final prediction* error FPE; Akaike information criterion AIC; Schwarz information criterion SC; Hannan–Quinn information criterion HQ at significant level at 5%.

[2] The statistic center of Lao PDR has been starting record time series data from 1989.

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b) Johansen Cointegration

The study has used Johansen's cointegration test according to the above unit root testing result and the comparative advantage of Johansen integrated technique that can be applied when there are more than three variables in the model. The Maximum Likelihood testing procedure has been developed by (Johansen, 1988) and (Johansen & Juselius, 1990) including the VAR of order p. The form of equation can be formulated below:

$$\Delta Y_t = \delta_1 Y_{t-1} + \cdots \delta_k \Delta Y_{t-k+1} + \Pi Y_{t-k} \varphi + e_t \qquad (4)$$

Where δ_k and Π are coefficient matrices, and determination of the rank (r) of matrix δ_k is the main point of conducting the cointegration procedure that developed by Johansen. The feasible outcome of integration equation includes: 1. Full rank $(r = n)$, 2. $(r = 0)$ and finally, when there are at most r co-integrating vectors $(0 \leq r \leq n)$. Johansen's cointegration procedure deals with two likelihood ratio test statistics such as trace test and the maximum eigenvalue test.

Table 3: Johansen Cointegration test result.

Null Hypothesis	Alt Hypothesis	Trace test	Critical value	Prob
$r = 0$	$r > 0$	184.336**	69.81889	0
$r \leq 1$	$r \geq 1$	114.3727**	47.85613	0
$r \leq 2$	$r \geq 2$	64.03572**	29.79707	0
$r \leq 3$	$r \geq 3$	26.47584**	15.49471	0.0008
$r \leq 4$	$r \geq 4$	6.195244*	3.841466	0.0128
Null Hypothesis	**Alt Hypothesis**	**Max Eigenvalue**	**Critical value**	**Prob**
$r = 0$	$r \neq 0$	69.96326*	33.87687	0
$r = 1$	$r \neq 1$	50.33702*	27.58434	0
$r = 2$	$r \neq 2$	37.55988*	21.13162	0.0001
$r = 3$	$r \neq 3$	20.28059*	14.2646	0.005
$r = 4$	$r \neq 4$	6.195244*	3.841466	0.0128

- Trace test indicates 5 cointegrating eqn(s) at 5% and 1%
- Max eigenvalue test indicates 5 cointegrating eqn(s) at 5% and 1%
** and **: denotes rejection of the hypothesis at 5% and 1% respectively.*

Table 3 is observed that both Trace test and the Max-Eigenvalue test indicates 5 cointegrating equation at 5% level of significance. The null hypothesis of no cointegration has been rejected. Hence there exist the long run association among all variables.

Table 4: Long Run Model Based on normalized Cointegrating Coefficient

Dependent variable: *GDP*			
Variable	Coefficient	Standard Error	t-Statistics
M2	-22.22802*	-7.0817	-3.138797181
REX	135.3105*	-16.163	8.371413193
IR	-79128.65*	-14172	5.58344976
INF	-34372.26*	-3868.1	-8.886083607

*Note: * significantly.*

Table (4) exists the long run dynamic relationship of monetary policy variables on the real gross domestic product per capita. Rising on money supply decreases the real gross domestic product per capital as it has the negative sign and statistically significant. The long run relationship base on the normalized cointegrating coefficient analysis indicates that the broad money supply increases by 1 billion Kip, while keeps the others factor constant, real gross domestic product per capita would decrease 22.22 kip (or 0.003 US dollar)[2]. Even though money supply has an impact on real GDP per capital, but the degree of its relationship is very weakly compare with another variables.

The negative sign of money supply is also confirmed by the negative relationship of inflation rate on the real gross domestic product per capita, 1% increase in inflation would cause to decreasing on real GDP per capita by 34373.36 kip, due to Laos experienced with

[3] 1 USD is exchanged rate approximately 8000 kip in December 2016

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high inflation for several years continuously. Since the beginning of its transformation from centrally planned economy to the market-oriented economy in 1986, the Lao government has used expansionary monetary policy to boost its economic development that would leads Laos faces with high inflation rate increased up to 61% in 1989 and 35% in 1990. During the Asian economic crisis in 1997, the inflations rate was hit new historical record again up to 90% and 128% in 1998 and 1999. This phenomenon supports the finding on long-run relationship between money supply, inflation and real GDP per capita of Laos and confirms the previous literature which suggested that increasing money supply could not try to attend long term output. The results would only be the progressively increasing cycle of higher inflation (Friedman, 1995), (Felices & Tuesta, 2013)(Khabo & Harmse, 2005)(Langdana, 2009)(Jeffrey M. Lacker, 2014).

The real exchange rate is positively affect on real gross domestic product per capita, 1 unit depreciation on domestic currency between Lao kip and US dollar would increase 135.3105 kip on real GDP per capita due to domestic currency depreciation would make the price of export goods cheaper, thus increasing the number of total export significantly. Meanwhile, the interest rate is the most powerful variable influences on real GDP per capita; the relationship between interest rate and the real gross domestic product is the negative sign. By 1% increase of interest rate would decreases 79128.65 Kip of annual real GDP per capital of Laos. The finding also confirmed the previous literatures such as: (Friedman, 1995), (Friedman et al., 1974) and (Alavinasab, 2016), (Vimaly Savannarideth, 2015)(Lashkary & Kashani, 2011).

c) Granger Causality Test Based on Vector Error Correction Mechanism (VECM)

The short-run relationship between variable can be examined by the subsequent vector error correction model (VECM) as equations below:

$$\Delta GDP_t = \theta_0 + \sum_{i=1}^{p} \theta_1 \Delta M2_{t-i} + \sum_{i=1}^{p} \theta_2 \Delta REX_{t-i} + \sum_{i=1}^{p} \theta_3 \Delta IR_{t-i} + \sum_{i=1}^{p} \theta_4 \Delta INF_{t-i} + ECT_{t-1} + \mu_t \quad (5)$$

$$\Delta M2_t = \theta_5 + \sum_{i=1}^{p} \theta_6 \Delta DP_{t-i} + \sum_{i=1}^{p} \theta_7 \Delta REX_{t-i} + \sum_{i=1}^{p} \theta_8 \Delta IR_{t-i} + \sum_{i=1}^{p} \theta_9 \Delta INF_{t-i} + ECT_{1t-1} + \mu_{1t} \quad (6)$$

$$\Delta REX_t = \theta_{10} + \sum_{i=1}^{p} \theta_{11} \Delta GDP_{t-i} + \sum_{i=1}^{p} \theta_{12} \Delta M2_{t-i} + \sum_{i=1}^{p} \theta_{13} \Delta IR_{t-i} + \sum_{i=1}^{p} \theta_{14} \Delta IR_{t-i} + ECT_{2T-1} + \mu_{2t} \quad (7)$$

$$\Delta IR_t = \theta_{15} + \sum_{i=1}^{p} \theta_{16} \Delta GDP_{t-i} + \sum_{i=1}^{p} \theta_{17} \Delta REX_{t-i} + \sum_{i=1}^{p} \theta_{18} \Delta M2_{3t-i} + \sum_{i=1}^{p} \theta_{19} \Delta INF_{t-i} + ECT_{3t-1} + \mu_{3t} \quad (8)$$

$$\Delta INF_t = \theta_{20} + \sum_{i=1}^{p} \theta_{21} \Delta GDP_{t-i} + \sum_{i=1}^{p} \theta_{22} \Delta REX_{t-i} + \sum_{i=1}^{p} \theta_{24} \Delta M2_{3t-i} + \sum_{i=1}^{p} \theta_{23} \Delta IR_{t-i} + ECT_{4t-1} + \mu_{4t} \quad (9)$$

where Δ is the first difference , ECT is error correction term or speed adjustment to the long term equilibrium, $\theta_0 - \theta_{23}$ are intercept and short run coefficient , μ is error term, p is lag length.

The VECM equation (5)-(9) is used to explain the short run causality regarding to the standard Granger causality testing approach. The equation (6) investigates the causation between explanatory variable (money supply, interest rate, exchange rate and inflation) to gross domestic product per capita. It exists the long run causality among variable, if the coefficient of the error term becomes negative and significant, therefore, the joint F-value or Wald statistic (x^2) of each equation is used to identify the short run Granger causality with lag 2 of each equation. Before running the Granger causality testing, the diagnostic test by Breusch- Godfrey Serial Correlation LM Test, Jarque-berla test and heteroskedasticity (ARCH) are applied on all equations to check for the standard assumption of the model. The result of the Granger causality test base on the vector error correction model VECM are summery in the table 5.

Table 5. Multivariate Granger Causality Tests Based On Block Exogeniety Wald Tests

Dependence Variables	Independence Variables					$\sum x^2$	$ECT(-1)$
	ΔGDP_t	$\Delta M2_t$	ΔREX_t	ΔIR_t	ΔINF_t		
ΔGDP_t	-	10.7735** [0.0046]	5.706* [0.0477]	1.1060 [0.575]	3.8034 [0.1493]	19.366* [0.0130]	-0.164* [0.0129]
$\Delta M2_t$	8.1687* [0.0168]	-	2.3338 [0.3113]	2.2652 [0.3222]	0.3457 [0.8412]	18.9445* [0.0152]	-0.0059 [0.8163]
ΔREX_t	3.6943 [0.1577	0.8552 [0.6521]	-	0.9695 [0.6158]	11.5274** [0.0031]	22.678** [0.0038]	0.0022* [0.0246]
ΔIR_t	7.9586* [0.0187]	4.2840 [0.1174]	11.0615** [0.0040]	-	3.3793** [0.0092]	16.597* [0.0346]	-1.26* [0.040]

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ΔINF_t	1.293 [0.5238]	1.4781 [0.4776]	1.5996 [0.4494]	0.1310 [0.9366]	-	10.3466 [0.245]	5.27 (0.119)

*The value in [] is p statistic * And ** significant at 5% and 1% respectively*

The negative sign on error correction term appearing in the GDP equation and it is statistically significant at 5%. That means there is a long run causality running from monetary policy to economic development in Laos. Table 5 shows the x^2 statistic for both individual and joint significant of variables. In case of equation GDP, the joint x^2 implied that there exist the short run causality between explanatory variables and dependent variable. The individual x^2 is also significantly for Money supply M2 and real exchange rate REX, but not for interest rate IR and inflation INF.

IV. Conclusion

The present study attempts to examine the impact of monetary policy on Lao economy using Johansen cointegration and Vector Error Correction Mechanism (VECM). The finding reflexes the actual economic condition of Lao PDR. The finding revealed that changing on the stock of money supply would have a negatively effect on the economic development in the long run. The relationship between money supply and gross domestic product per capita is negatively significant. Moreover, the crucial element of monetary policy instrument which driven the economic development of Lao PDR in the long run are interest rate and exchange, these two independent variables have a positive sign and their contribution to gross domestic product per capita are much more higher than money supply, the long run coefficient of interest rate and real exchange are 79128.65 and 34372.25 respectively. However, the long-run relationship between inflation also confirms the negative relationship between money supply and real gross domestic product per capita, meaning that whenever the money supply has been rising would increase inflation and decreases in real output (Friedman et al., 1974)(Jeffrey M. Lacker, 2014). Meanwhile, the Granger causality base on the error correction model indicates that money supply and real exchange rate have a short run causality relationship with gross domestic product per capita. According to the result of this study suggests that the Lao authority needs to reconsider to apply on monetary policy to boost economic development by employ the most effective instrument as interest rate and the exchange rate rather than purely increase of money supply, due to avoiding negative impact of hyperinflation in order to maintain the economic stability and economic development in the long run.

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Is Healthier Wealthier? Evidence from Member Countries of South Asian Association for Regional Cooperation (Saarc)

By Mohammad Taslim Uddin & Hasina Akter

University of Chittagong

Abstract- This paper examines the association between a variety of health indicators and GDP growth rates over the period 1972-2011, using a balanced panel dataset consisting of seven members of the South Asian Association for Regional Cooperation (SAARC), excluding Afghanistan. We explicitly accounted for interactions between survival rates and lagged GDP levels as well as endogeneity issues. The findings revealed that the survival rate and other health indicators are positively associated with GDP growth. Accordingly, investments that promote improvements in health outcomes in South Asian countries could potentially accelerate economic development in the region.

Keywords: human capital; economic growth; gdp; survival rate; mortality rate; SAARC; panel data; endogeneity.

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Is Healthier Wealthier? Evidence from Member Countries of South Asian Association for Regional Cooperation (Saarc)

Mohammad Taslim Uddin [α] & Hasina Akter [σ]

Abstract- This paper examines the association between a variety of health indicators and GDP growth rates over the period 1972-2011, using a balanced panel dataset consisting of seven members of the South Asian Association for Regional Cooperation (SAARC), excluding Afghanistan. We explicitly accounted for interactions between survival rates and lagged GDP levels as well as endogeneity issues. The findings revealed that the survival rate and other health indicators are positively associated with GDP growth. Accordingly, investments that promote improvements in health outcomes in South Asian countries could potentially accelerate economic development in the region.

Keywords: human capital; economic growth; gdp; survival rate; mortality rate; SAARC; panel data; endogeneity.

I. Introduction

While traditional models of economic growth focused primarily on physical capital accumulation, beginning in the 1960s economists began to acknowledge the contribution of human capital. Initially, human capital was narrowly conceptualized in terms of educational attainment; however, more recent literature began to recognize health status as a crucial component of human capital and hence an important contributor to economic development.

Sustained economic growth requires investments in the stock of human capital through improvements in education and training as well as in the quality of health status which requires not merely healthcare delivery, but also possibly in infrastructure (e.g. higher quality drinking water) and promotion of positive health behaviour (e.g. investment in smoking cessation programmes). The effects of human capital variables imply that higher level of health and better education result in more investment; both these variables evolve systematically according to levels of development, and such changes may be linked to increases in the investment rate (Lopez et al. 2005). Health is instrumental to an individual's or community's capability to undertake desired activities or functions (Sen, 1999). Consequently, when health is jeopardized the achievement of economic objectives may also be compromised and, conversely, improvements in population health can contribute to a nation's economic goals. Indeed, economic evidence confirms that a 10% improvement in life expectancy (LE) at birth is associated with a rise in economic growth of some 0.3-0.4 percentage points a year (Frenk, 2004).

Better health enables the labour force remain effective on the labour market and increases labour force productivity by reducing incapacity, weakness, and the number of days lost to sick leave and thus promotes economic development (Lopez et al. 2005). Furthermore, health indirectly increases worker productivity by facilitating investment in education and training. Additionally, household or community resources that would otherwise be used for preventative health investment as well as for addressing any current health issues can be allocated to other priorities. Finally, a healthier population can be expected to save more, both because illness and disability reduce labour market earnings (Bloom et al., 2004), and also because increasing life expectancy may result alter household rates of time preference. Although improvements in health may lead to a more ambiguous effect on savings, the dominant effect of increased life expectancy appears to be higher savings rates because the effect of increased longevity on retirement income outweighs the effect of improved health on the length of desired working life, thereby increasing the need for retirement income (Bloom et al., 2005).In turn, increased saving accelerates accumulation of physical capital, further promoting labour force productivity and economic growth (Weil, 2005).

Although life expectancy has consistently increased in many developing countries for the past 60 years, it continues to lag well behind levels observed in the developed countries, and many people in low-income countries still encounter poor health (Howitt, 2005). Life expectancy at birth in South Asia is 67 years, which is not only substantially lower than the OECD average (79 years), but also markedlylower than other Asian countries (Asian overall: 71, East Asia: 76, West Asia: 73, South-east Asia: 71, and Central Asia: 68). On the overall health status of the population in the South Asian region, the World Bank's regional Director for Human Development, Michel Rutkowski, has observed that "South Asia is at a crossroad with rising inequality;

Author α: Assistant Professor of Economics University of Chittagong, Bangladesh PhD Candidate, University of Manitoba, Canada.
e-mail: mtucu79@gmail.com
Author σ: Lecturer in Management International Islamic University Chittagong, Bangladesh.

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poor people struggling to get access to quality health, education, and infrastructure service; a growing share of the population ageing unhealthily; and with health systems that are failing to adjust to people" (Engelgau, 2011).

Since health is theorized to be a key contributor to economic growth, and given that South Asian nations are classified as lower-income or lower-middle income countries, examining the extent to which economic development in the region is driven by the health of its population is an important area of research. This study therefore investigates the proximate determinants of economic growth in South Asian countries with special emphasis on the health of its population.

The remainder of this paper is structured as follows. Section 2 of the study presents a literature review. Section 3 describes the methodology, which includes a description of data set as well as method used in the analysis and outlines the conceptual framework and econometric model devised by the authors to study the relationship between population health and economic growth. A brief overview of the demographic, economic, and population health features of SAARC countries is provided in Section 4. Section 5 discusses estimation issues, indicates how they were resolved, and presents empirical results. Finally, Section 6 summarizes the key findings emerging from the analysis, and offers a series of policy recommendations to help promote both regional population health and economic development objectives in SAARC countries.

II. Literature Review

A growing body of theoretical and empirical research offers support for the argument that human capital exerts a positive effect on economic growth. Until the late-1990s, human capital was conceptualized primarily in terms of education, although a few authors acknowledged the importance of other factors such as health (Lopez et al. 2005). Mankiw et al. (1992) were among the first to identify health and nutrition as components of human capital. Subsequent authors, including and Barro (1996), then began to explore the relationship between health and economic growth.

Barro (1996) study the relationship between life expectancy (LE), fertility rate (FR), and other relevant variables on growth rate with reference to a panel of approximately one hundred countries over the period from 1960 to 1990, determining that growth is stimulated by higher LE and lower, given an initial level of GDP per capita. While studying the same period, Rivera and Currais (1999) focus specifically on OECD member countries; using per capita health care expenditure to proxy for health status, they showed that nations with larger health expenditures also enjoy higher levels of economic growth. Arora (2001) focus on a still narrower subset of industrialized countries over a significantly larger time span (100 to 125 years). Considering LE at birth, and during childhood, adolescence, and young adulthood as health indicators, the study concluded that nations with better health status experienced 30-40% higher levels of long-term economic growth.

More recent econometric analyses have focused on understanding the nature of the causal relationships between health and economic growth. For example, while failing to identify what instruments used for this purpose, Bhargava *et al.* (2001) attempt to address potential endogeneity and reverse causality. Treating the adult survival rate (ASR) as a proxy for health status, and accounting for the interaction between ASR and lagged GDP, the authors identify a positive relationship between ASR and GDP growth rates. Using data for the period from 1970-1992 and treating health care expenditure (HCE) as a proxy for health capital, Heshmati (2001) estimates the augmented Solow model suggested by Mankiw et al. (1992) to study variation across OECD countries, attributing this to differences in their respective levels of education, and savings and population growth rates. The study furthermore finds that causality between GDP and HCE runs from HCE to GDP, concluding that health care expenditures contribute to economic growth and the speed of convergence.

Mayer (2001) examined Granger-type causality for growth regression considering the probability of adult survival by gender and age group for 1950-1990 as a measure of health status. The study concluded with thirty-year conditional causality from health to income in eighteen Latin American countries in general, and specifically in Brazil and Mexico. One remarkable observation was that the growth impact of improved health was higher for females compared with that of their male counterparts.

Bloom et al. (2004) used panel data for the period 1960-90 and followed a production function approach to estimate the model of aggregate economic growth. They found good health having a positive and sizeable impact on aggregate output even after controlling for experience of the workforce. However, their model captured only the direct effect of education and health on output, while consideration about potential endogeneity between health and income is important.

Based on the cross-country and historical data on average height of adult men, ASR for men, and age at menarche, Weil (2005) used microeconomic estimates of the effect of health on individual outcomes to construct macroeconomic estimates of the proximate effect of health on GDP per capita. The finding of the study that health is an important determinant of income variation was robust to using a variety of different microeconomic and macroeconomic estimates of the return to health, as well as to using alternative estimates of the mapping between different health indicators and

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adjusting for the role of AIDS in affecting mortality in the 1990s. However, this study examined only the proximate effect of health on GDP per worker. Moreover, some indirect channels through which health affects a country's output, such as, the effect of better health in encouraging the accumulation of human and physical capital, population growth, and so on were not addressed in this study.

Based on the panel data for 2001-2009 Peykarjou et al (2011) studied the relationship between health and economic growth in the Organization of Islamic Conference (OIC) member countries. They found higher LE and lower FR to lead to enhanced economic growth in those countries.

It is evident from above literature review that most of the researchers proxied the health variable with life expectancy, mortality rate or health expenditure per capita for different region in the world other than South Asia, a fastest growing region in the world since the last quarter of 2014 and home to a vast array of people. They used different methodologies and different data sets—panel and time series— and most of the studies found health to have a positive significant impact on economic growth. To the best of the authors' knowledge, however, no studies focused on cross-country evidence on the health-growth relationship for SAARC countries, which jointly account for about 40% of Asia's population (or over 24% of world's population) and each of these communities shares some common health and economic attributes together with their country-specific own unique cultures and backgrounds. Hence, this paper is an attempt to fill the gap in the extant literature. It focuses on the scenario of SAARC countries' health status and examines if the SAARC countries manifest the positive impact of health outcomes on economic growth.

III. Methodology

a) Dataset

In this study, we examine how health status (as proxied by survival rate and fertility rate) is associated with economic growth. We employ a balanced panel data set covering the period from 1972 to 2011, consisting of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.* The data used were obtained primarily from the World Bank database (WDI series) and Penn World Tables (PWT), Version 8.1 (Feenstra et al. 2015). We use the WDI for data on GDP series, the investment-GDP ratio, and the openness indicator, while relying on the PWT for the remaining variables. Where applicable (e.g., for national income accounts data), data are converted into 2005 constant dollars.

*Due to severe data limitations, Afghanistan (another SAARC member) was excluded from the regression analysis.

b) The Method

The regression analysis has been carried out using standard panel data techniques. "A longitudinal, or panel, data set is one that follows a given sample of individuals over time, and thus provides multiple observations on each individual in the sample" (Hsiao, 2014, page 1). Panel data allows for the introduction of temporal-spatial variables, while time series or cross-sectional approaches may not have this ability (Baltagi, 1995). "Panel data usually give the researcher a large number of data point, increasing the degrees of freedom, and reducing the collinearity among explanatory variables – hence improving the efficiency of econometric estimates" (Hsiao,2014, page 3). Working with panel data provides the analyst with more information, greater validity, less collinearity, and higher efficiency and can better represent adjustment (e.g., matching or correction) dynamics (Somayeh et al. 2014). In addition, panel data models enable us to control for unobserved country-specific effects and thereby reduce estimation biases (Eggoh et al., 2015). Furthermore, the panel data approach can help to disentangle some of the associations between demographic, health, and economic variables and growth, which could otherwise be problematic because the countries included in the sample are at different stages of development (Bhargava *et al*. 2001).

c) Conceptual Framework

Following economic theory we include both health and education in assessing the association between human capital and economic growth. We incorporate two proxies for health status, namely the proportion of the age cohort surviving to age 65 (SR), which accommodates both the life expectancy (LE) and mortality rate (MR), and fertility rate (FR). We also take life expectancy at birth (LE) separately into consideration as a substitute for SR to check for robustness. Life expectancy or survival rate is a broad measure of population health, and does not directly reflect labor force productivity. That said,capital formation—which is central to economic development—requires that a high proportion of the skilled labor force remains active for many years, an objective to which good health clearly contributes. In fact, investments in education and training critically depend on survival expectancies. All these factors, especially the health indicators, are potentially important in explaining growth outcomes (Bloom and Canning, 2000). However, the size of impact of population health status on growth rates is expected to depend upon a country's current GDP; in particular, SR or LE should be more important for explaining economic growth at low levels of economic development (Bhargava et al, 2001). We use school enrollment (secondary) to proxy for the educational component of the stock of human capital a country possesses at any given time. We could, of course, use

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the post-secondary school enrolment for this purpose, but unfortunately data for this category are not available for all countries in the sample.

Following the literature on determinants of growth, we control for other factors to assess the strength of the relationship between human capital and economic growth. We use the sum of exports and imports as a share of GDP to capture the degree of openness of each economy. Two alternative variables have been used as measures of investment in prior studies, namely the investment-GDP ratio and the ratio of gross fixed capital formation (GFC), net increase in the fixed capital, to GDP. Age dependency ratio (ADR) reflects the impacts of demographic changes on economic growth. It can be defined as the number dependents (aged zero to 14 and over the age of 65) to the total population, aged 15 to 64. This indicator gives an insight into the amount of burden (number of people of nonworking age) the population in working age has to face. A higher ADR could retard economic development by reducing productivity growth and investment rates (i.e., as a consequence of lower savings rates), as well as by increasing government expenditures associated with pensions and healthcare expenditures.

d) Econometric Framework

This study investigates how GDP growth is related to key health indicators (i.e., survival and fertility rates) and a range of other variables (i.e., age dependency ratio, school enrolment, openness to trade, investment-GDP ratio, etc.). We used a trans-logarithmic model for economic growth, maintaining a specification as close as possible to that of Bhargava *et al* (2001). In time-series analysis logarithmic transformations are often observed to stabilize the variance of a series, which for many economic variables can result in substantial improvements in the predictive capability of models incorporating those variables (Lütkepohl and Fang 2012). In fact, potential nonlinearity in the relationship between economic growth and the explanatory variables listed above may necessitate such a transformation (Eggoh et al., 2015).However, we also recognize and attempt to account for the possibility that the presence of endogeneity could results in inconsistent parameter estimates.

The model can be summarized using the following expression:

$$y_{it} = \delta_i + \sum_{j=1}^{n_1} x_{1ijt}\beta_j + \sum_{j=n_1+1}^{n} x_{2ijt}\,\beta_j + u_{it}\ (i = 1, \ldots .7;\ t = 1, \ldots \ldots, 40) \quad (1)$$

Here y denotes GDP growth, x_1 and x_2 refer to vectors of exogenous variables (i.e., age dependency ratio (ADR), openness, lagged GDP, and lagged investment/GDP ratio) and endogenous variables (i.e., survival rate (SR), fertility rate (FR), and interaction between SR and GDP), δ_i denotes unobserved country-specific effects, and u_{it} is the error term. Finally, i and t denote cross-sectional units and time periods, while j indicates the number of variables.

As the expression above suggests, we suspect the presence of endogeneity between GDP growth and a subset of explanatory variables. If true, these variables could be correlated with the disturbance term. Applying simultaneous equation techniques would enable us to address this issue. Alternatively, we can include lagged values for each variable, since their past values cannot be affected by the current level of GDP or by GDP growth rates. We choose to adopt the latter approach.

We employ three distinct regression techniques to estimate the parameters of Eq. (1), namely pooled OLS, weighted least squares (WLS), and the random effect (RE) model. We believe this will allow for more robust findings as they relate to the relationship between health indicators and GDP growth rates, especially since South Asian communities are highly heterogeneous with regards to ethnicity, religion, culture, language, demographics, and economic characteristics. Estimating WLS and/or heteroscedasticity-corrected pooled model should enable us to address potential heteroscedasticity. Furthermore, estimating the RE model should allow us to control for unobserved heterogeneity, assuming that individual effects are uncorrelated with the independent variables, whereas the heterogeneity time-constant and correlated with the independent variables. We run the Hausman test to determine if the RE model is more efficient than the fixed effects (FE) model, finding evidence in favor of the former.

Thus, the regression used as the basis for our analysis is the following:

$$y_{it} = \beta_0 + \beta_1 ADR_{it} + \beta_2 O_{it} + \beta_3 S_{it} + \beta_4 \ln(FR)_{it-1} + \beta_5 \ln(SR)_{it-1} + \beta_6 \ln\left(\frac{inv}{GDP}\right)_{it-1} + \beta_7 \ln(GDP)_{it-1} + \beta_8 ln(SR \times GDP)_{it-1} + u_{it} \quad (2)$$

The variables incorporated into the model are summarizes in the table below:

Table 1: Summary of model variables

Variable	Variable name	Data sources
Y	GDP growth rate	WDI
ADR	Age dependency ratio	PWT
O	Openness to trade	WDI
S	School enrolment (secondary)	PWT

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FR	Fertility rate	PWT
SR	Survival rate	PWT
INV/GDP	Investment-GDP ratio	WDI

IV. An Overview of Saarc Countries' Demography, Economy, and Health

The South Asian Association for Regional Cooperation (SAARC) is an economic and political organization of eight countries in Southern Asia consisting of almost 1.7 billion people in an area of 5.1 million km^2 (Giri et. al, 2015). During a summit held in 1983 in New Delhi, India, the leaders of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka– adopted the Declaration on South Asian Regional Cooperation, agreeing on the following five areas of cooperation (Iqbal, 2006):

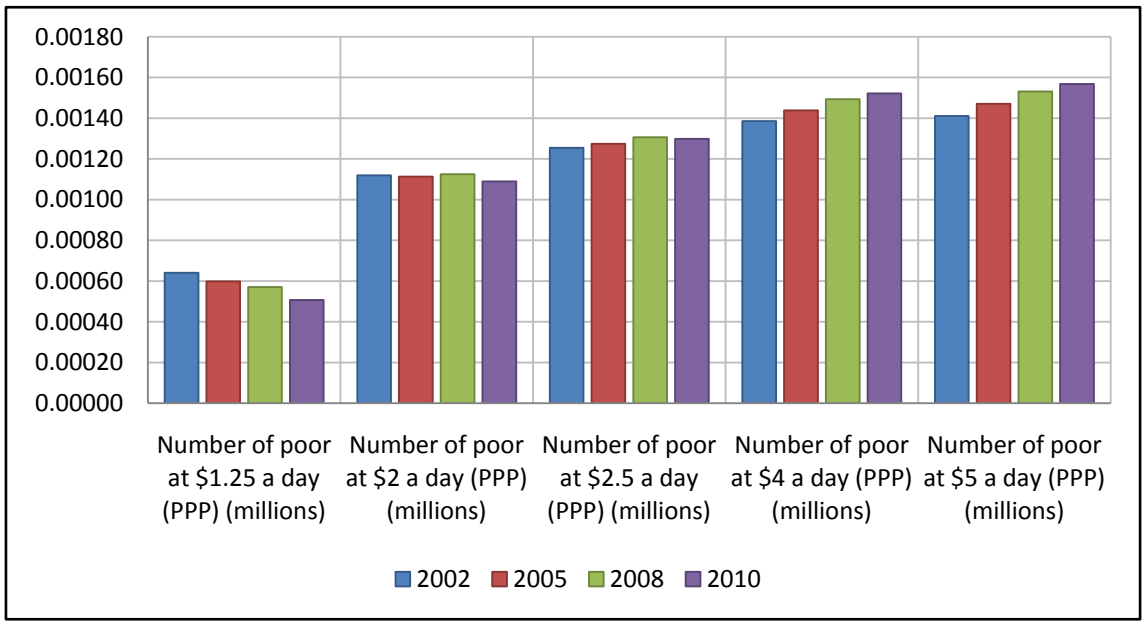
- Agricultural and rural development;
- Telecommunications, science, technology, and meteorology;
- Health and population activities;
- Transport; and
- Human resource development.

Afghanistan is the most recent addition to SAARC, becoming a member in November 2005. Afghanistan joined the SAARC on November, 2005 (Asian Forum for Human Rights and Development (FORUM-ASIA), 2012). The People's Republic of China, the European Union, the United States of America, South Korea, Iran, Myanmar, Australia, and Mauritius are all observers at SAARC summits (Shaheen, 2013).

Despite robust economic growth in recent years, SAARC region accounts for only 3% of world's gross domestic product, and nearly 40% of its inhabitants live on less than $1.25 per day (Rahman, et. al., 2012). Regional cooperation and integration has huge potential for accelerating economic growth and reducing poverty within and across the nations; yet South Asia remains the world's least connected region several decades after the establishment of SAARC due to the multitude of visa, travel, and trade barriers existing among the organization's members. Political instability, fragile democratic institutions, terrorism, religious intolerance, and ethnic conflicts all threaten regional peace and prosperity (Development Study Group, South Asian University, 2014).

a) Overall Regional Profile

South Asia is the world's densely populated region (336.1 people per km^2), containing more than 24% of the world's total population within an area consisting of only 4% of the world's surface. Although the countries in this region are beginning to experience progress in alleviating household poverty, the proportion of the population living below the poverty line is higher in Southern Asia than anywhere else excepting sub-Saharan Africa (WDI, 2014).



Source: World Bank (2014)

Figure 1: Poverty in South Asia

Figure 1 reports the absolute number of residents of South Asian countries living below the poverty line in 2002, 2005, 2008 and 2010. There have been gradual declines in the number of people in South

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Asia living on less than $1.25 and $2.00 over the period of analysis. The values in Figure 1 suggest these individuals are gradually moving into higher income categories.

Some health indicators, including life expectancy, IMR, rates of malnutrition, and the prevalence and incidence of some infectious diseases (e.g., tuberculosis and human immunodeficiency virus [HIV]) appear to be improving, but the regioncontinues to lag far behind other nations on these measures (WDI, 2014). Furthermore, the region is also struggling with a range of issues that make further improvements in population health challenging, including poor sanitation, inadequate access to healthcare services, and high prevalence of malaria,mental health issues, and a range of chronic diseases (e.g. diabetes, cardiovascular disease, etc.).

i *Demography*

South Asia, a region of strategic importance and home to a large and fast-growing population, faces acute public health challenges on a demographic and geographic scale unmatched in the world (Center for Strategic and International Studies, 2010). With just under one quarter of the world's population, its annual population growth is 1.38%—significantly higher than the world average of 1.22% in 2013 (Table 2), although less than that of sub-Saharan Africa (2.76%) or the Middle East and North Africa (1.92%).

Around 68% of the population of South Asia occupies rural areas as of 2015 (WDI, 2017). Demographically, the region is dominated by India, which has a population of 1.252 billion, but the region also contains two other densely populated countries, Pakistan and Bangladesh, with populations of 182.1 and 156.6 million, respectively, in 2013. There are sharp contrasts between South Asian countries with respect to such characteristics as population structure, stage of demographic transition, population density, mortality and fertility rates, urbanization and literacy levels. India, the largest country in this region, itself has major internal contrasts between its 28 states.

In terms of population structure, South Asia is relatively young (Engelgau, 2011), reflecting a combination of high fertility and mortality rates. In particular, the fertility rate was 2.60 children per woman in 2013, compared with a global average of 2.46, while average life expectancy at birth was 68.4 in 2014, which is approximately 3.1 years less than the world average.Between 1960 and 2014, life expectancy at birth in South Asia increased from under 42.4 to 68.4 years (World Bank and UNDP, 2015), suggesting substantial improvements in population health over that period.[+] Yet, the region is lagging behind other region in the World, except for Sub_Saharan Africa.

Table 2: Socio-demographic characteristics of South Asia compared to other regions

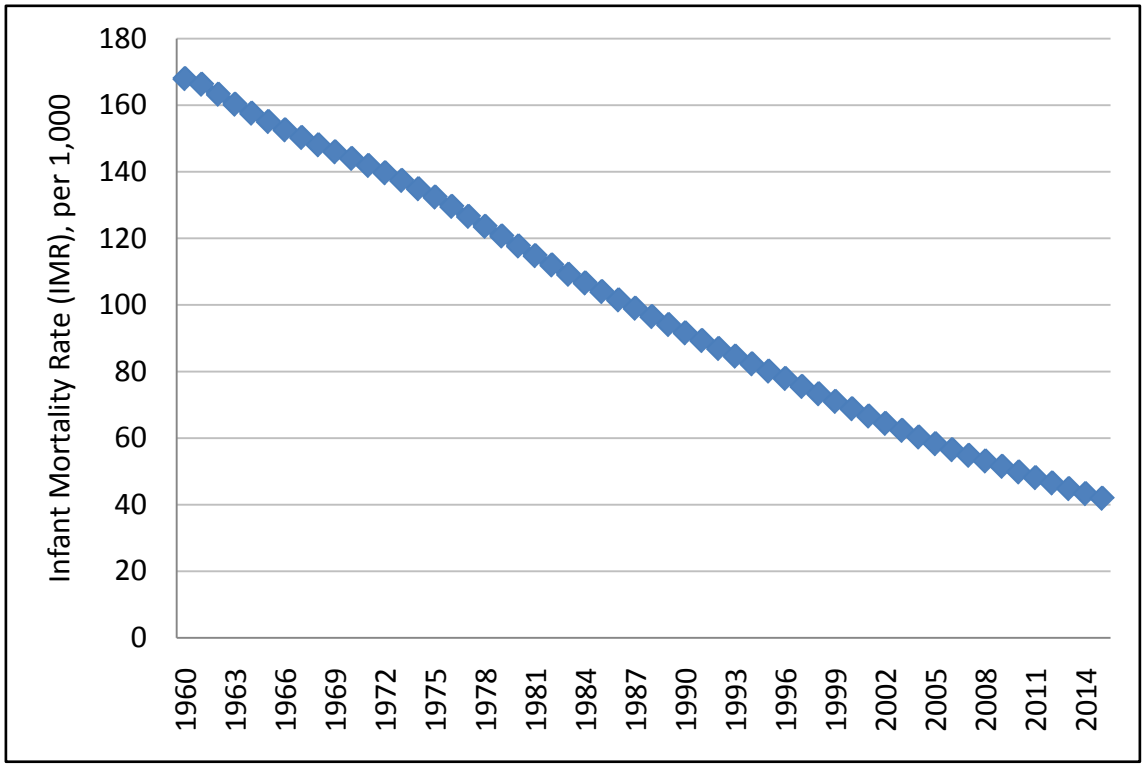
	Population in 2013 (Million)	TFR in 2013	Life expectancy at birth in 2014 (yrs.)	Annual population growth in 2013 (%)	HDI in (2014)	GNI per capita, 2011 PPP $ in 2014	Adult literacy rate in 2010
South Asia	1,698.09	2.60	68.4	1.38	0.607	5,605	66.54
Sub-Saharan Africa	948.32	5.04	58.5	2.76	0.518	3,363	60.60
Middle East and North Africa	408.73	2.87	70.6	1.92	0.686	15,722	79.99
Latin America and the Caribbean	619.51	2.13	75.0	1.12	0.748	14,242	92.36
East Asia and the Pacific	2,248.92	1.78	74.0	0.67	0.710	11,449	94.93
Europe and Central Asia	900.86	1.71	72.3	0.65	0.748	12,791	99.00
OECD	1,265.80	1.74	80.2	0.78	0.880	37,658	--
World total	7,176.09	2.46	71.5	1.22	0.711	14,301	85.23

Note: TFR ≡ total fertility rate (births per woman); HDI ≡ Human Development Index; GNI ≡ gross national income (current international $); PPP ≡ purchasing power parity.
Source: World Bank (2015) and UNDP (2015)

[+] With a life expectancy at birth of 60.4 years, Afghanistan lagssignificantly behind the other countries in the region.

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Significant declines in the infant mortality rate (IMR) provide further evidence of regional improvement in the health of the South Asian population over time. As shown in Figure 2, between 1960 and 2014 IMR fell by just under three-quarters (approximately 74%). This is expected to significantly grow the size of the regional labor force as the baby boomers reach working age, thereby might be creating potential for faster economic growth.



Source: World Bank (2015)

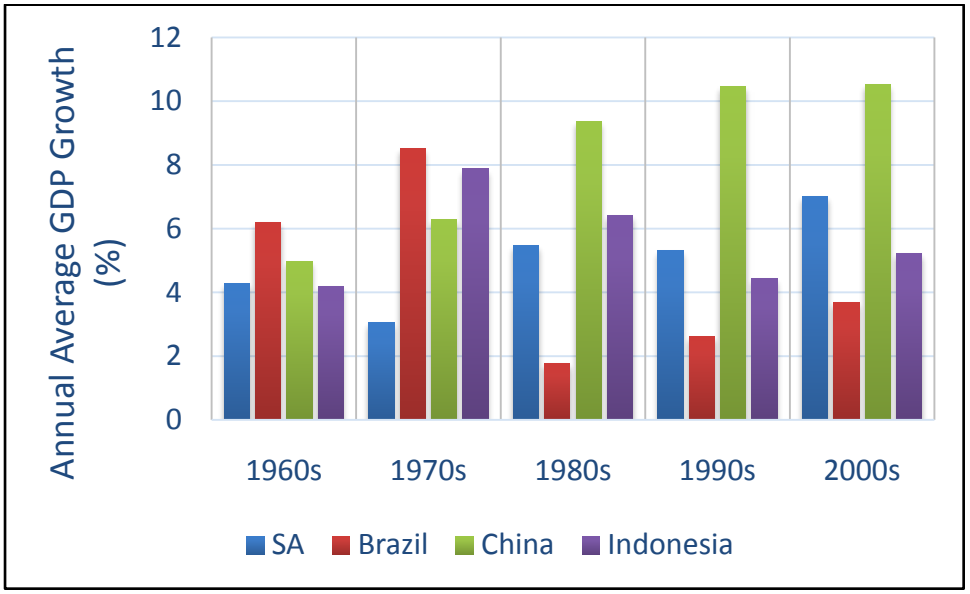
Figure 2: Infant Mortality Rate (IMR)

In several respects, South Asia is among the least developed regions in the world. For example, its 2014 Human Development Index (HDI) score of 0.607 was substantially lower than the world average of 0.711. Similarly, its per capita GNI of $5,605 (2011 PPP $ in 2014) was far below the world average of $14,301. Finally, the rate of adult literacy in South Asia was 66.5% in 2010, as compared with 85.2% world-wide.

ii *Economic Growth*

In 2012, 18.8% of the South Asian population lived at or below $1.90 a day, indicating significant improvement over the 1990 figure of 50.6%. However, substantial progress must be still be made to reach the 2012 Global Poverty Headcount Ratio of 12.7%. Despite a long period of robust economic growth, averaging 6.5% a year over the last 20 years, the number of people living in extreme poverty (i.e. under $1.25 a day) in South Asia remains unacceptably high, accounting for just over 77.8% of the extremely poor world-wide. Economic development in South Asia is evidently not sufficiently inclusive or occurring fast enough to satisfactorily address poverty in the region as 2030 approaches.

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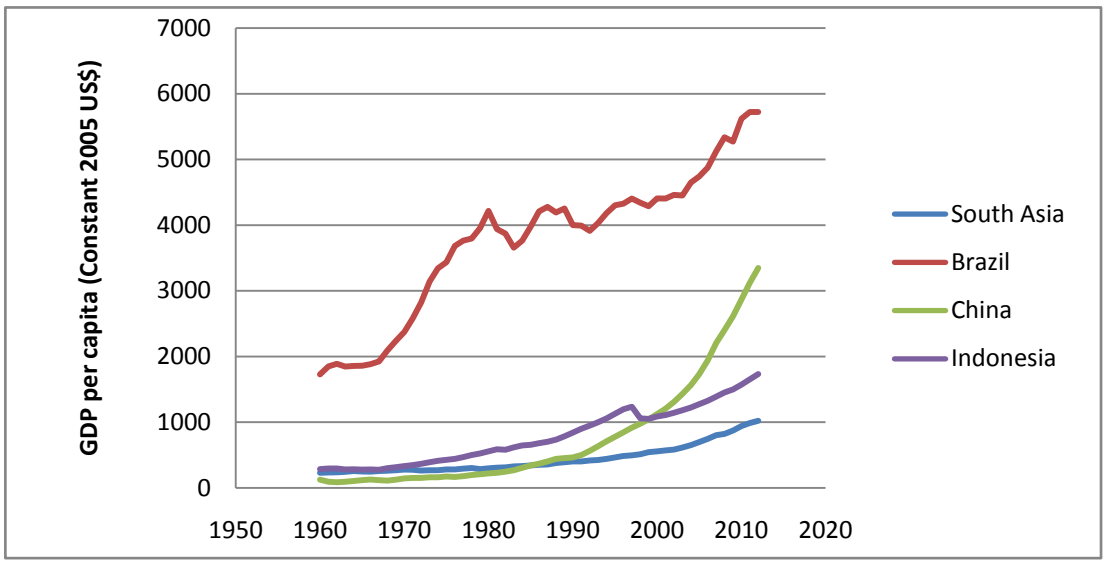


Data Source: World Bank (2015)

Figure 3: South Asia's Rising Economic Growth Rate Lagging behind China's

The region has experienced varying, but generally increasing, annual average GDP growth rates, beginning at 4.3% in the 1960s, declining to 3.1% over the next decade, rising to 5.5% and 5.3% during and the 1980s and 1990s, respectively, and finally climbing to around 7.0% in 2000s. Moreover, South Asian economic growth is expected to accelerate in the near future due to driven by expansion in the Indian economy and favorable oil prices.

However, as shown in Figure 3, these rates have consistently been lower than the corresponding figures for China. Similarly, Figure 4 shows that the rate of economic growth in South Asia is such that GDP per capita has not only fallen well behind China, but has also failed to close the gap with other developing nations, such as Brazil and Indonesia[+]



Data Source: World Bank (2015)

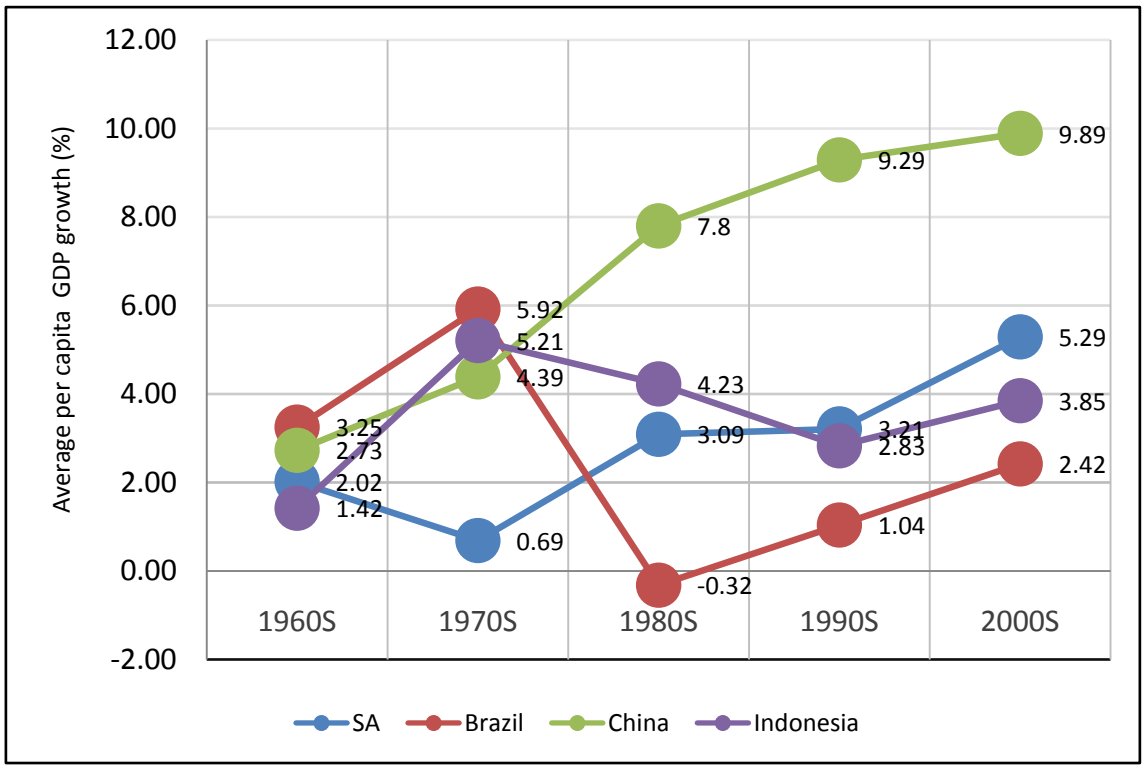
Figure 4: GDP per Capita in South Asia and comparator countries, 1960-2010

[+]This is attributable in part to the strong growth performance of both countries during the 1970s, as well as to the fact that Brazil's GDP per Capita began from a much higher base

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Figure 5 shows that South Asia has experienced variable—though generally increasing—annual average growth in per capita GDP, beginning at 2.02% in the 1960s, but falling to 0.69% in the 1970s before surging to 3.09% in the 1980s. Beginning in the 1990s, South Asia has on average outperformed Brazil and Indonesia, posting annual growth rates of 3.21% over the decade (versus 1.04% and 2.83%, respectively); this trend carried over into the 2000s, during which time the region achieved average annual growth in per capita GDP of 5.29% (versus 3.85% and 2.42%, respectively). However, as with total GDP, these rates have consistently been lower than those observed in China over the same period.

In the early 1970s, the region experienced a brief period of negative growth in GDP per capita (an event commonly referred to as the "South Asian dip"). Sri Lanka rebounded quickly from the downturn and since that time has generally performed better than the other nations in the region, exhibiting averages rates of growth exceeding 6.00% since 2009. While increasing rapidly prior to 1985, Pakistan's per capita GDP has since grown sluggishly, averaging 2.00% since 2000. The economy of Nepal, one of the poorest countries in the region, has been languishing throughout the entire period. Economic data for Afghanistan, Bhutan, and the Maldives is incomplete, but these economies appear to have performed reasonably well since 2005, although the Afghan economy has experienced negative growth since 2013.



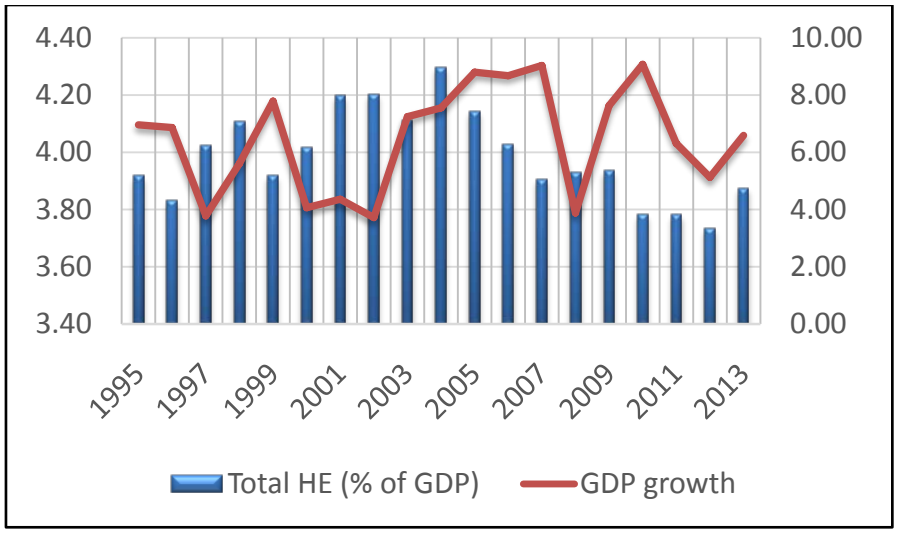
Data Source: World Bank (2015)

Figure 5: Relatively Slow Growth GDP per Capita (PPP) in South Asia

iii *Total Health Expenditure (public as well as private) and GDP*

As a proportion of GDP, total health expenditure in South Asia in 1995 was approximately 3.9%. As shown in Figure 6, over much of the next decade the health share of GDP generally exceeded 4%, peaking at 4.3% in 2004. Since that time, this share has gradually declined, which may reflect the strong economic performance observed over this period.

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Data Source: World Bank (2015)

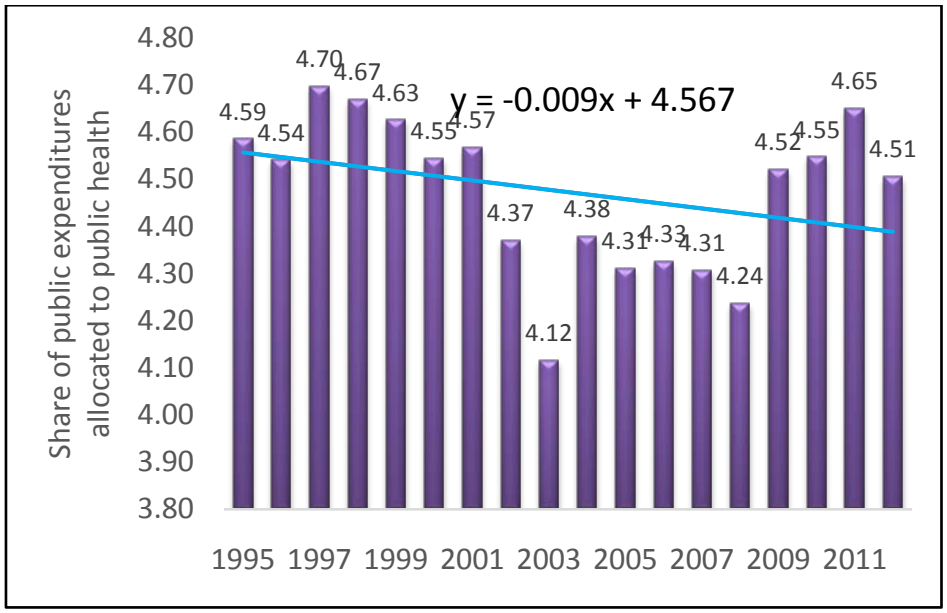
Figure 6: Total health expenditure (% of GDP) and GDP growth (annual %)

Generally, richer countries allocate a larger share of GDP to health expenditures relative to poorer countries. Among OECD countries, for example, the average percentage of GDP dedicated to health spending (12.62%) is more than three times that observed among South Asian countries (4.0%) in 2012. As in OECD countries, growth in health expenditures in many Asian/Pacific countries has over the past decade exceeded economic growth, resulting in increasing shares of each economy being dedicated to health. With the exception of Afghanistan and the Maldives, this has not, however, been true of members of the SAARC.

iv *Public Health Expenditure*

Public health spending typically refers to expenditures for such activities as food and drug safety, health inspections, health promotion, public health nursing, vaccination, occupational health, and initiatives and programs to prevent the spread of communicable diseases.

In 1995, public health spending accounted for about 4.6% of government expenditures among South Asian countries. As shown in Figure 7, the share of government expenditures allocated to public health generally declined over the period of analysis, although a significant reversal of this trend has since taken place.



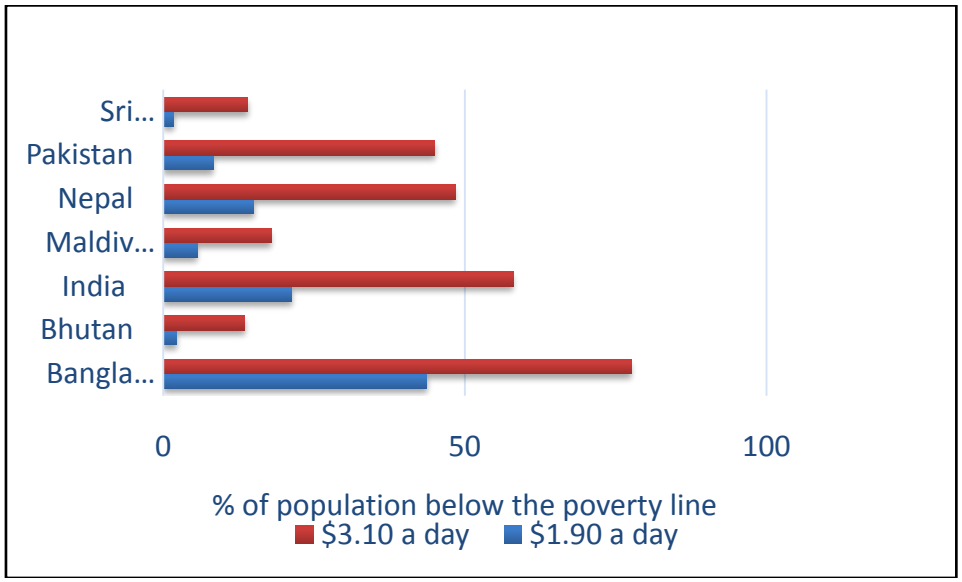
Data Source: World Bank (2015)

Figure 7: Health expenditure, public (% of government expenditure)

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b) Cross-country Profiles

Despite being the member of SAARC, South Asian countries are quite heterogeneous in terms of their level of socioeconomic development. Although South Asia's economy as a whole is growing faster, most of the countries in this region have been left behind the overall economic upturn in Asia. Most of the countries in this region are still struggling with extreme impoverishment; especially, Bangladesh is in most vulnerable condition in terms of percent of population both below $1.90 and below $3.10 a day, followed by India, Nepal, and Pakistan (Figure 8). This extreme poverty translates into bad health outcomes, which in turn may affect growth prospects if the matter is not addressed with special attention.



Data Source: World Bank (2015)

Figure 8: Poverty Headcount Ratio of SAARC Countries, 2012

In fact, it is difficult for poorer countries to provide adequate preventive and curative health services, and poor individuals and households cannot get rid of unhealthy surroundings, buy enough food or use the health services that exist. Most of the countries in this region are categorized as least developed economies and their health status is low in terms of life expectancy and other indicators. Yet some countries, like Sri Lanka, Maldives, and Bangladesh have had progress in some health indicators because they have focused resources on improving the social determinants of health — education, adult literacy, water, sanitation, health promotion, and food security.

Table 3 depicts the latest (mainly 2012) scenario of South Asian country-level profiles for population, economy, and health. Although the factors affecting population growth and size (e.g. birth and mortality rates) are largely outside the control of health system decision-makers, the implications of a growing population in terms of potential demand for healthcare services in the future need to be considered. There is enormous variation in size of population from Maldives to India. Yet, all countries have almost similar high proportions of people living in rural areas indicating that most of the people of SAARC countries are lacking sufficient numbers of healthcare professionals, hospitals, and medical clinics. Moreover, the typical small hospitals in rural areas generally lack high-quality care and equipment. Another problem is the long distance to healthcare center the rural population and ambulance must travel to receive healthcare services and rural residents, as a result, receive medical attention more slowly than their urban counterparts do. In addition, rural areas have an 'aging population' (aged 65 and older) compared to urban areas. This fact of rural age profile adds to the healthcare problems that also must get attention. In sum, the majority of the people in those countries are at a greater risk from different health hazards including mortality compared to urban residents.

Table 3: Demographic, economic, and health profiles for South Asian countries

Category	Indicators	AFG	BGD	BTN	IND	MDV	NPL	PAK	LKA
Population	Total (million) in 2015	32.01	159.86	0.78	1276.20	0.38	28.40	190.40	21.70
	Rural (% of total) in 2012	74.532	68.01	63.63	68.37	57.70	82.48	62.57	81.70
	DR in 2012	95.31	55.93	50.43	54.73	48.71	69.13	67.15	49.76
Economy (2015)	GDP , PPP (billion US$)	63.5	572.6	6.3	7996.6	5.2	70.7	928.0	233.7
	GDP per capita	1,976	3,581	8,158	6,266	14,980	2,488	4,886	11,068

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	GDP Growth Rate (%) in 2014	3.20	6.20	6.40	7.30	4.50	5.50	4.20	7
	Population below poverty line	15.80	31.50	23.70	21.90	16	25.20	22.60	8.90
Health Indicators (2012)	IMR (per 1,000 live births)	71.7	35.3	30.8	42.6	9.2	33.1	70.6	8.9
	MMR	496	214	177	197	76	308	197	32
	CDR (per 1,000 population)	8.10	5.74	6.55	7.94	3.41	6.74	6.98	7.04
	LE at birth, total (years)	60.51	70.29	67.89	66.21	77.57	67.98	66.43	82.38
Health Services	HB (per 1,000 people)	0.5 (2012)	0.6 (2011)	1.8 (2012)	0.7 (2011)	4.3 (2009)	5 (2006)	0.6 (2012)	3.6 (2012)
	Physicians (per 1,000 people) in 2010	0.194	0.295	0.023	0.649	1.415	0.374	0.827	0.68
Health Financing (2012)	HE (total) as % of GDP	8.48	3.54	3.61	3.81	11.37	5.49	2.77	3.11
	PHE (% of total HE)	20.80	31.94	73.38	30.46	57.05	39.50	36.90	39.05
	PCHE	159.10	85.16	263.78	195.57	1283.38	118.42	122.44	269.87

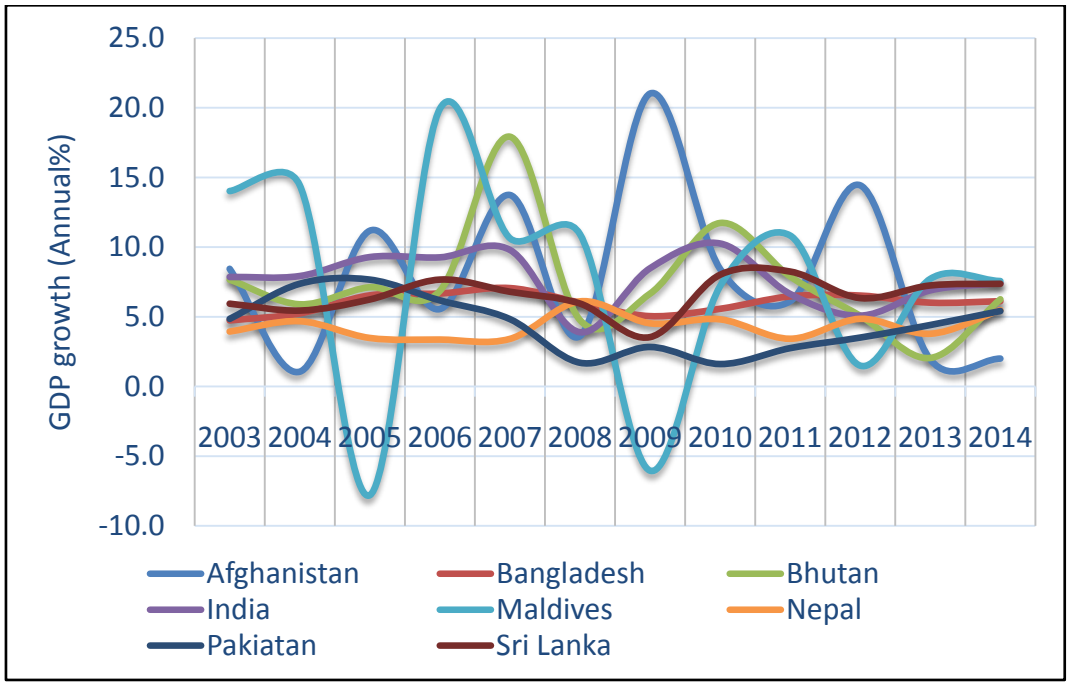
Data Source: Population and Economic data are sourced from the IMF, current as of April 2015 and other data are from WDI, 2012 data series.

Note: AFG = Afghanistan, BGD = Bangladesh, BTN = Bhutan, IND = India, MDV = Maldives, NPL = Nepal, PAK = Pakistan, LKA = Sri Lanka DR = dependency ratio (% of working age population), MMR = maternal mortality ratio (modeled estimate, per 100,000 live births), CDR = crude death rate, HB = hospital beds, HE = expenditure on health, PHE = public health expenditure, PCHE = per capita health expenditure (constant 2011 international PPP$), GDP per capita is in constant 2011 international PPP$.

Life expectancy ranges largely from 66.51 years in Afghanistan to 82.38 years in Sri Lanka in 2012, where approximately 8% of the population is 65 years or older, much higher than the proportion for other countries. This is an important point especially when age related diseases are to be considered. The density of both Physician and hospital bed tend to be low across the SAARC communities, with exceptions in Maldives and Sri Lanka. In 2012, total health expenditures as a percent of GDP is expected to range from 2.77% in Pakistan to 11.37% in Maldives. The public sector is forecast to be responsible only for 31.17% of South Asian health expenditure in 2012. The public sector's share is expected to be the highest in Bhutan (73.35%) and the lowest in Afghanistan (20.80%). Health expenditure per capita varies among countries in part because of different age distributions, population density, and geography. Other factors that affect health expenditure include population health needs, the manner in which health care is delivered, and the ways in which health care is financed (degree of public coverage and private insurance). In 2012, the highest per capita spending among SAARC countries is projected to be in Maldives, followed by Sri Lanka. The lowest per person expenditure is forecasted to be in Bangladesh, followed by Nepal.

Figure 9 shows how South Asian countries managed the financial crisis reasonably well. However, the real GDP growth has moderated and stayed far below pre-crisis levels. Regional growth slowed from 6.31% in 2011 to 5.13% in 2012, driven mainly by the slowdown in India, which accounts for about 80.00% of the region's GDP. India's real GDP growth for 2012 was 5.08%t, down from 6.64% in 2011. Of course, its growth rate started to rise from 2013 and reached a regional high, 7.42%, in 2014. Bangladesh economy, characterized by slower export and investment growth, maintained a GDP growth rate above 6.00% with little fluctuation from 2011 to 2013. Sri Lanka, following prudent macroeconomic policies but facing curbed demand in its main export markets, recorded 6.34% growth in 2012, down from 8.25% in 2011. However, the economy continued to grow above 7.00% from 2013 and reached at 7.37% in 2014. In Afghanistan, real GDP growth for 2012 is estimated at 14.43%, the regional outlier, well above 6.11% in 2011, with a sharp decline to below 2.00%, again, in 2013. In Bhutan, GDP growth was 5.07% in 2012, down from 7.89% in 2011 with further down to 2.04% in 2013 and hence regaining the rising rate at 6.26% in 2014. Nepal and Pakistan recorded higher growth rates in 2014 than in 2011, 2012, and 2013. Maldives experienced a sharp fall in GDP growth from 10.83 in 2011 to 1.49% in 2012, but from 2013, it has been growing nearly at 8.00% (World Bank 2013b).

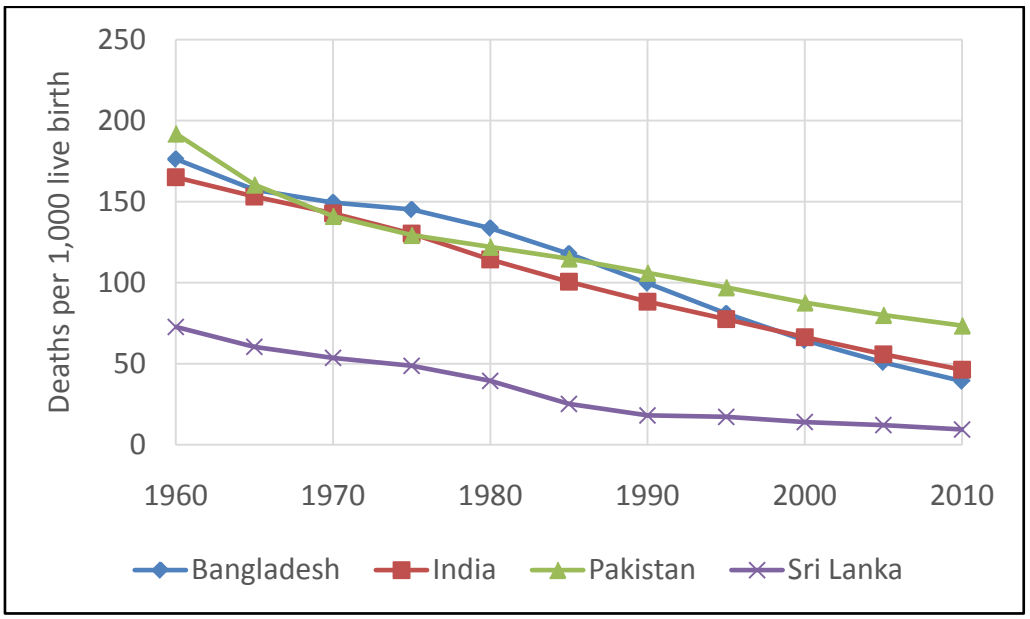
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Data Source: World development indicators (WDI, 2014); World Bank (2015)

Figure 9: South Asian Growth has slowed but is stabilizing

A detailed examination of health indicators of South Asia's four largest countries (Bangladesh, India, Pakistan, and Sri Lanka) conveys a sense of health status of this region. Figure 10 shows these countries' trends in IMR. Sri Lanka has been showing low IMR in this region since 1960. Other three have seen substantial declines since 1960, but Bangladesh, which was worst placed until 1985, experienced the most rapid decline and its IMR is now below that of India and Pakistan.

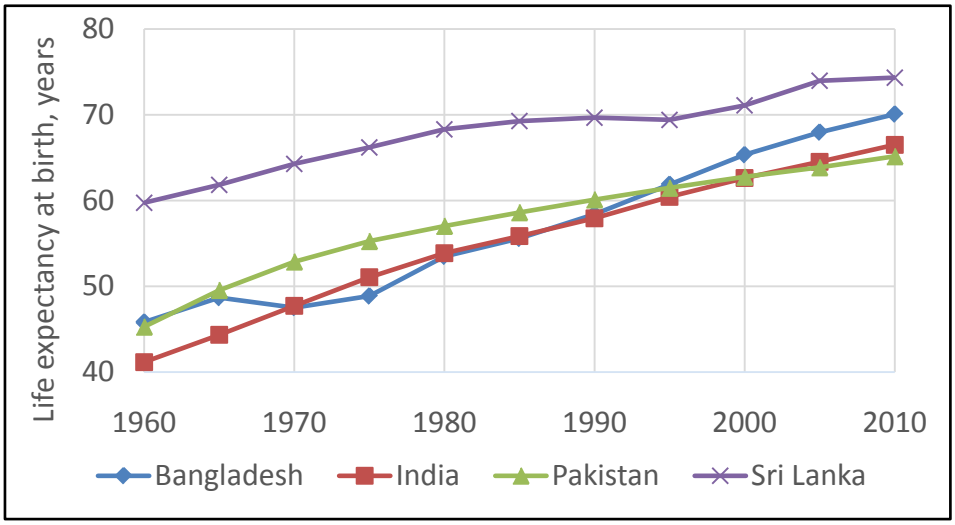


Data Source:UN Inter-Agency Group for Child Mortality Estimation (UNICEF, WHO, World Bank, UN DESA Population Division) at www.childmortality.org.

Figure 10: Declining IMRs in Bangladesh, India, Pakistan, and India

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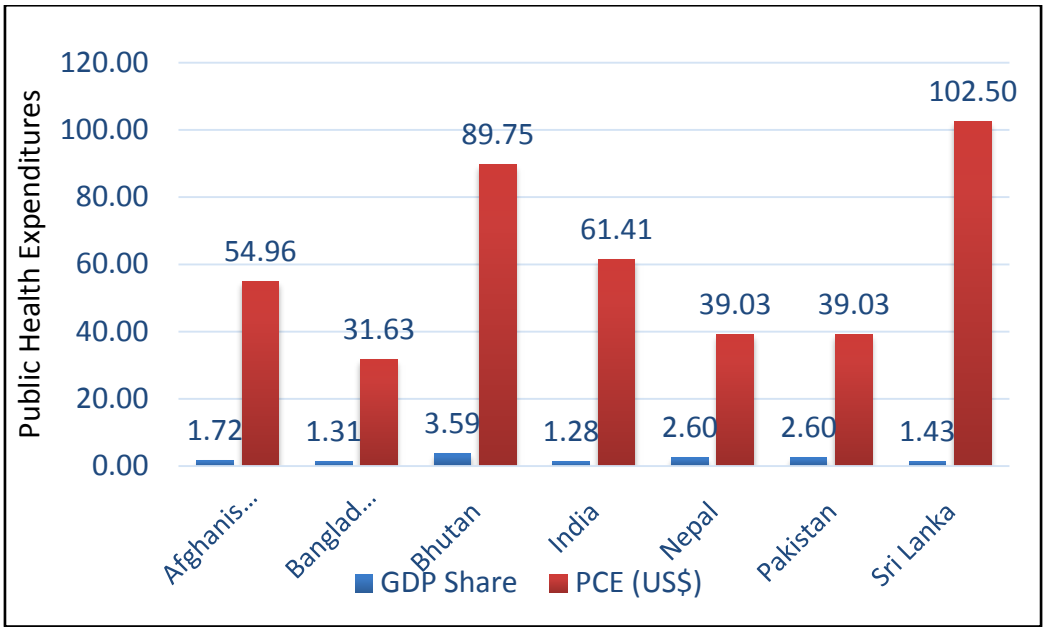
A related indicator of declining mortality is rising trend in life expectancy (see Figure 11). The rise in life expectancy seen in all four countries reflects increases in survival likelihood at all stages of the life cycle. Consistent to the IMR, Sri Lanka has highest life expectancy in this region throughout the period. The most appreciable rise, however, has been in Bangladesh, with an increase of more than thirty years since the middle of the last century. Even in Pakistan, which has seen the slowest increase of other three largest countries, life expectancy grew rapidly, gaining slightly above twenty years during the same period.



Data Source: World Bank (2015). (http://data.worldbank.org/indicator/SP.DYN.LE00.IN)

Figure 11: Steady Rise in Life Expectancy, 1960-2010

Figure 12 shows the country level picture of public health expenditure as a share of GDP and per capita expenditure in South Asian countries for the year 2013. The values are extremely low (except in Maldives where GDP share in public health expenditure is 6.22% and per capita expenditure is $720.46, omitted here to avoid outlier problem in Figure 12). In 2013, the public health expenditure as a percentage of GDP was reported to range from 1.28% in India to 3.59% in Bhutan, considering Maldives as an outlier. Total health expenditure per capita varies among the countries. In 2013, Sri Lanka and Bhutan spent more per person on health care than the other countries, at $102.50 and $89.75, respectively. The lowest health expenditure per capita has been seen in Bangladesh in 2013, only at $31.63.

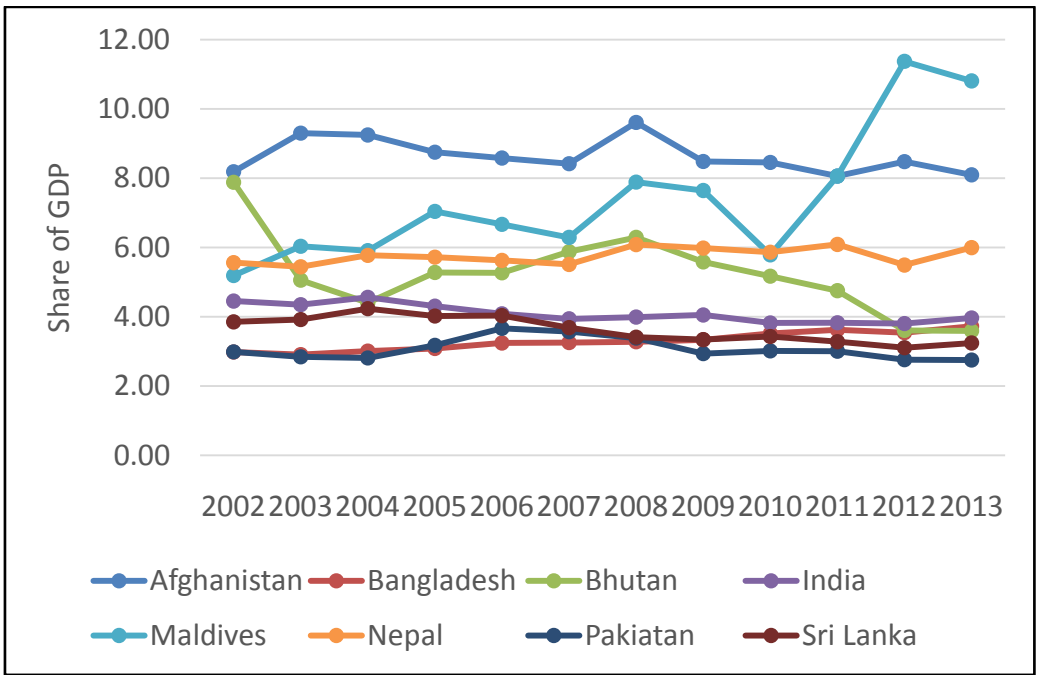


Data Source: World Bank (2015). (http://data.worldbank.org/indicator/SP.DYN.LE00.IN)

Figure 12: Public Health Expenditure in South Asia, 2013

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The country level profiles of the total health expenditure as percent of GDP are different, but within the country, variation is very small except a sharp rise between 2010 and 2012 for Maldives and a mild decline starting from 2008 in case of Bhutan.



Data Source: World Bank (2015). (http://data.worldbank.org/indicator/SP.DYN.LE00.IN)

Figure 13: Total health expenditure by country (% of GDP)

This indicator varied from 3.08% in Pakistan to 8.64% in Afghanistan on an average. Note that between 2002 and 2013 the share of GDP allocated to health remained stable in Afghanistan, Bangladesh, Pakistan, and Sri Lanka, while it showed a slight decline in Bhutan and India, and a slight increase in Nepal and the Maldives (Figure 13).

V. Empirical Results for Models for GDP Growth Rates

Table 3 presents the empirical results for GDP growth rates for seven South Asian countries over the period 1972-2011 using the SR as the key indicator. Table 5 examines the similar, but replacing SR by life expectancy (LE). Since GDP series are assumed to be of stochastic nature, it is preferable to model GDP growth rates instead of GDP levels (Bhargava, 2001).

Empirical evidence presented in Table 4 reveals that the ADR has a significant negative effect GDP growth in all specifications indicating that if there are more idle persons in the economy due to age or other factors, then economic growth will definitely be affected adversely.

School enrollment, an important component of human capital variable, has positive and significant impact on GDP growth emphasizing the importance of spreading the light of education to all citizens in this territory. Of course, De La Fuente and Domenech (2001) found the education variable to exert an insignificant impact on GDP growth due, as they suggested, to measurement error in the schooling data. Bloom et al. (2005) instrumented years of schooling by literacy rate to avoid possible measurement error problem; but as the data on literacy rate in SAARC region are very less frequent and also the periods on which data are available are different across countries, we had to rely on year of schooling as a proxy of education.

Table 4: Estimated slope coefficient from the regression of real GDP growth rates using SR as the key indicator of health status, 1972-2011

Variables	Model-1: Pooled OLS		Model 2: WLS		Model 3: Random Effect	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
ADR	-0.145539	0.062	-0.115814	0.009	-.1456333	0.019
O	-0.00530451	0.507	0.00524811	0.517	-.0053153	0.506
S	1.18438e-07	0.011	8.56023e-08	0.059	1.18e-07	0.010
$\ln(FR)$ lagged 1 year	8.98307	0.002	6.75539	0.001	8.98323	0.002
$\ln(SR)$ lagged 1 year	11.1072	0.000	7.05314	0.009	11.11086	0.000

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$\ln(inv/GDP)$ lagged 1 year	0.912765	0.213	1.07307	0.124	.9113396	0.213
$\ln(GDP)$ lagged 1 year	-1.06502	0.001	-0.661464	0.019	-1.066254	0.001
$\ln(SR \times GDP)$lagged 1 year	-2.22253e-08	0.267	-1.45971e-08	0.498	-2.16e-08	0.265
Constant	-29.2269	0.006	-16.4853	0.077	-29.22463	0.005

Source: Authors Calculation Using STATA software.

Unlike Bhargava (2001), the log of FR is positively associated with GDP growth rates and is statistically significant in all model specifications of this study. High fertility rates are common in developing countries and may have negative impact on economic growth if work force and employment opportunity do not increase proportionately with the population possibly due to decrease in the ratio of skilled to unskilled labor and also due to increase in demand on resources for health care and education. However, the sample economies considered in this study are predominantly labor intensive. Moreover, there are employment opportunities overseas, especially in the labor market of Middle-eastern countries for the work force of these countries; fertility rate is thus likely to be positively associated with GDP growth rates.

Survival rate, the key indicator of health status, is found to be a significant predictor of economic growth. Contradictory to the above result, Heshmati (2001) found health indicator to be insignificant in affecting the economic growth for OECD countries. However, many researchers such as Barro (1996), Peykarjou et al. (2011), and Weil (2005) found LE to exert positive effect on real per capita GDP and economic growth. The empirical results are similar when SR is replaced by LE, but the results with LE are not robust to change in regression techniques. This is perhaps not surprising since LE is strongly influenced by child mortality. Because child mortality itself is affected by unwanted FR in developing countries, the FR and SR could be better indicators of health status (Bhargava, 2001).

Table 5: Estimated slope coefficient from the regression of real GDP growth rates using LE as the key indicator of health status, 1972-2011

Variables	Model-1: Pooled OLS		Model 2: WLS		Model 4: Random Effect	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
ADR	-0.048311	0.35970	-0.0759747	0.05254	-.1296323	0.028
S	7.72358e-08	0.10435	6.14167e-08	0.20439	1.24e-07	0.012
O	0.00642157	0.35729	0.012425	0.10359	-.0050468	0.523
$\ln(inv/GDP)$ lagged 1 year	1.41222	0.05296	1.34339	0.05823	.2991911	0.712
$\ln(FR)$ lagged 1 year	4.87177	0.06825	5.16965	0.01179	10.15934	0.001
$\ln(LE)$ lagged 1 year	9.79321	0.03078	6.69038	0.11999	20.46794	0.000
$\ln(GDP)$ lagged 1 year	-0.533317	0.04730	-0.349482	0.16277	-1.075228	0.001
$\ln(LE \times GDP)$lagged 1 year	-1.31617e-08	0.53836	-9.67755e-09	0.67784	-2.30e-08	0.281
Constant	-31.1253	0.08182	-19.2278	0.25958	-71.54191	0.001

Source: Authors Calculation Using STATA software.

The parameter estimate of investment-GDP ratio is positive but, its impact on GDP growth is found to be statistically insignificant. When the investment-GDP ratio is replaced by gross fixed capital formation (GFCF) as percent of GDP, however, the impact is positive as well as statistically significant and robust to change in regression techniques (see Table 5); it implies that the increase in investment for physical capital formation affects economic growth positively.

The coefficient of lagged GDP is estimated with negative sign that is statistically significant implying a tendency of regression towards the mean.

Table 6: Random effect and WLS regressions of real GDP growth rates considering gross fixed capital formation (GFCF) as a replacement for investment-GDP ratio, 1972-2011

Variables	Model 1: Random Effect		Model 2: WLS	
	Coefficient	P-value	Coefficient	P-value
ADR	-.1725739	0.004	-0.107475	0.00526
S	1.06e-07	0.018	6.37556e-08	0.17984
O	-.0112397	0.129	0.00437981	0.55303
$\ln(GFCF)$ lagged 1 year	2.285841	0.008	2.31724	0.00319
$\ln(FR)$ lagged 1 year	10.56417	0.000	7.50525	0.00017
$\ln(SR)$ lagged 1 year	12.11478	0.000	9.99078	0.01048

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$\ln(GDP)$ lagged 1 year	-.9804084	0.001	-0.379297	0.08846
$\ln(SR \times GDP)$lagged 1 year	-2.15e-08	0.262	-1.35361e-08	0.55938
Constant	-42.37661	0.000	-41.9605	0.00805

Source: Authors Calculation Using STATA software.

VI. Conclusioln

Health is considered as the cornerstone of development process forasmuch it plays a role as an instrument for enhancing economic growth, quite apart from being the direct source of human welfare. Appropriate econometric techniques were applied in the analysis to draw inferences about the impact of good health on economic growth. The main finding of the study is that good health has a positive and sizeable impact on economic growth in low-income countries, like SAARC economies. It suggests that an increase in the population's survival prospects of 1.00%, on average, leads to about 0.11% increase in GDP growth rates of the sample countries. This is a relatively large impact, which indicates a policy implication that increased investment in promoting health status results in a number of positive outcomes ranging from a demographic dividend to a more productive workforce. Thus, investment in health with a view to improving survival prospects or life expectancy and other health indexes, even in the low-income countries of South Asia should get priority.

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Trade Liberalization and Inflation: Econometric Analysis to Ethiopian Economy

By Amsalu Dachito & Minyahil Alemu
Ambo University

Abstract- Of the most commonly celebrated propositions in international trade is the hypothesis that trade liberalization is associated with declining prices, so that protectionism is inflationary. The New Growth Theory is strongly in favor of this view. However, the "Cost-push advocators" claim for the existence of positive correlations between trade openness and inflation variables. Moreover, empirical studies have been confirming inconclusive results regarding the nature of relationships between the two variables. These theoretical and empirical departures are the principal motivations to the current study. This study is aimed to test the relationship between inflation and trade openness variables in Ethiopia, using the time series data set for the period serially ranging from 1976/77 to 2016/77. Augmented Dickey Fuller and Phillips Perron approaches will be employed for testing the stationarity properties of individual variables in the model and the Johnson's maximum likely-hood approach will be employed for cointegration tests. Finally, Vector Error Correction will be estimated in order to determine the relationships among variables entered the inflation model adopted, both in the short and the long run periods.

Keywords: *cointegration, ethiopia, inflation, openness, vector error correction model.*[1]

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Trade Liberalization and Inflation: Econometric Analysis to Ethiopian Economy

Amsalu Dachito [α] & Minyahil Alemu [σ]

Abstract- Of the most commonly celebrated propositions in international trade is the hypothesis that trade liberalization is associated with declining prices, so that protectionism is inflationary. The New Growth Theory is strongly in favor of this view. However, the "Cost-push advocators" claim for the existence of positive correlations between trade openness and inflation variables. Moreover, empirical studies have been confirming inconclusive results regarding the nature of relationships between the two variables. These theoretical and empirical departures are the principal motivations to the current study. This study is aimed to test the relationship between inflation and trade openness variables in Ethiopia, using the time series data set for the period serially ranging from 1976/77 to 2016/77. Augmented Dickey Fuller and Phillips Perron approaches will be employed for testing the stationarity properties of individual variables in the model and the Johnson's maximum likely-hood approach will be employed for cointegration tests. Finally, Vector Error Correction will be estimated in order to determine the relationships among variables entered the inflation model adopted, both in the short and the long run periods.

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I. Introduction

For the significantly celebrated benefit of international economic integration, no country can afford to isolate itself from the global economy. The highly significant role of this economic integration goes to developing economies as well. The possible economic gains from outward-looking development strategies have been extensively discussed in theoretical and empirical literatures in the world of economics. The benefits of outward-looking policies have been believed to be realized from international trade and capital flows. Following these hypothetical integration-growth ties, a great deal of world economies has resorted to opening up their gates and, a considerable shift has been observed from a closed to open and more flexible economic structure at around 1990s.

The celebrated benefit of openness is that it boosts the level of real output. The associated hypothesis has been also been that, through its positive effect on output higher openness has a reducing effect on the rate of inflation. But, the issue follows that, "has globalization really changed inflation in the way expected?"The issue remained a subject of debate for long in economic literatures. In most countries, even though the relationship between openness and output operates as expected, but takes different forms with inflation due to various structural and country specific factors. However, there is no unique agreement on the interaction between higher trade openness and inflation. Rogoff argues that "globalization has played strong supporting role in the past decade's process of disinflation" (Rogoff, 2003).He evidenced the realized inverse correlation between openness and inflation. However, contrary to Rogoff, Ball (2006) claimed for the existence of only little, probably insignificant impact of openness on inflation. While continuing his argued for the probable existence of only the modest and little relationship between the two macroeconomic variables. Despite the existence of varying views on these links, the pronounced phenomenon in economic theories has been to regard inflation and openness the negatively varying variables. Surprisingly, but not impressive, this theoretical link between the openness and inflation remained a bench mark in national policy setting in for a considerable number of economies even today. Ethiopia is not an exception to this.

Though regarded to serve positive role in rare case, inflation creates obvious costs to economic, social, political and other aspects of the country. The higher rate of inflation has commonly recognized negative effects in any typical economy. It could lead to poor resource utilization by forcing inefficient transactions and speculations, dampens the scope for rational economic decisions, and moreover creating a horrible situation by which the government policies loss credibility. When monetary economy to the largest extent losses power in dealing with macro wise economic aspects, good conditions are created to welcome hyper inflationary situations (see Krugman, 1991). Moreover, with higher inflation rates the economic growth process is also distorted via its reducing effect on domestic propensity to save. That means since inflation is meant to evaporate the purchasing power of money income, people's tendency to save part of their income for future consumption, of course it forms part of domestic investments, diminishes; and hence, economic activities as well.

Author α: Lecturer, Ambo University, Economics Department.
e-mail: dachnamo@gmail.com
Author σ: Lecturer, Jimma University, Economics Department.
e-mail: mineecon2008@gmail.com

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Whatever the relationship between openness and inflation is, stability in macroeconomic variables is a key for a sustainable and real economic growth to take place. Inflation, hence, is among the main concern. Fischer (1993) supports the view that a stable macroeconomic environment is conducive element to sustained economic growth. From his empirical observations we see that countries with low inflation have grown faster and vice versa. An important issue for the present analysis could be that stable and moderate growth rate of inflation is inevitable.

The present study is aimed to test the empirical correlation between inflation and openness in Ethiopia. Once the significant role of stable inflation is recognized, there is a need to determine its link with other macroeconomic variables; one is the trade openness variable. Hence, it is intended to test whether the two variables are operating in line with the theoretical claims. From the past experience in the literatures of inflation, inflation has been thought to be influenced by various monetary, fiscal and structural phenomenons; with an economies exposure to international economic and political integration other factors with a potential of affecting home inflation could be introduced. Hence, efforts will be made to incorporate the effects of both the internal and external influences on the domestic price level.

II. Statement of the Problem

The hypothetical claim with the New Growth Theory on the link between inflation and openness has been an important point of macroeconomic debates. The claim with the theory is that higher openness reduces the rate of inflation. In line with this theory (Romer, 1993) investigated a negative relationship between trade openness and inflation, using a large cross-section of 114 countries over the period 1973 to 1988. However, other views and empirical findings exist in contrast to the above cases. For instance, the "Cost-push myth" holds for inflation to vary positively with the degree of openness (Mayer, 2003). The argument is that, an opened up economy is highly subject to imported inflation and weekend domestic macroeconomic policies (particularly of monetary and fiscal policies) with the introduction of external shocks (like exchange rate conditions and other unfavorable happenings in trading partners), see Aron and Muellbaur (2007). Heavy reliance on import of manufactured and industrial goods and intermediate inputs by emerging economies will have higher possibility of importing foreign inflation simultaneously, which can be reflected directly on domestic prices. Hence, given all these possibilities, the 'Cost-Push' advocators claimed that, it is the net effect that determines the level of output and, hence price level; but not only the justified benefits of trade openness. Apart from this theoretical departure, there are also empirical contradictions on the nature of correlations among the two variables. For instance, a study by Sanginabadi et al (2011) and Zakaria (2010) have confirmed a positive and significant effect of trade openness on inflation in the respective economies of Iran and Pakistan. Induced primarily by these theoretical and empirical contradictions regarding the link between inflation and trade openness variables, the present study will be directed to determine the empirical relationship between the two variables; given that no previous empirical study has been undertaken in the country in the sprit at hand. Hence, the motivation could be to which of the hypothetical claim explains the case in Ethiopia; that is; "the New Growth Theory or the Cost Push Myth".

The notion that there are no or little previous studies in the country somewhere in this paper suggests for the desirability of the present study. Therefore, the present study is expected to contribute significantly by adding value to the countries inflation literatures, with the specific reference to openness to trade. In fact, one could find similar previous works in Ethiopia, though are limited too in concerning availability as well as statistical requirements. The only considerable study in the country in exactly similar issue could be a work of Meseret (2014), which is unpublished graduate study. Her control variables include the money supply, gross fixed capital formation as a share of GDP, per capita income and the government's consumption expenditure together with the openness variable (the principal element in the model). The study, even though, related is found to be limited on a number of grounds. In the first place, the government expenditure takes many forms, not only consumption. Government expenditure can be made for consumption of public goods and services, public investment activities and transfer payments. In all the cases, currency is being injected in to the economy thereby creating respective effects on the economy. Hence, the current study will try to incorporate the full effect of government expenditure on inflation model, which is to be discussed latter in this paper. Moreover, her analysis was limited to home side factors except the openness variable, which is the principal variable in the model. Yet, with higher exposure to international trade there could be a possibility that other external factors could have significant role in the domestic economy. For instance, in an opened up economies variables like imported inflation, exchange rates, balance of payments and possibly foreign interest rates affect domestic economy but ignored due consideration in the study by Meseret. Therefore, it will be tried to investigate the monetary, fiscal, structural and external variables in a relation to inflation in the present study.

Moreover, previous studies in Ethiopia have been focusing on the general cause-effect aspects of

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inflation with no particular attention to money supply and inflation; as opposed to their share in inflation theories and literatures. Even though, a little work has been done, they all commonly share serious limitations: variables employed as well as the number of observations were of limited size. Besides, not a little of them were concerned with food inflation alone. For example, a study by Josef et al (2008) has considered only the short run issues. Demirew (1998) for example used only agricultural and money supply variables in a relation to inflation as cited by Kibrom (2008); and Josef et al (2008) controlled only money supply, exchange rate, agricultural production shocks and foreign price. This study is limited basically on three grounds; by employing small number of variables, observations and considering the short run issue only. Other recent studies are also not out of this limitation: study by (Tsegay, 2014; Meseret, 2014) might exemplify it. Moreover, majority of them used only small size of observations. For instance; Kibrom (2008), Jema and Fekadu (2012); Josef et al (2008); Habtamu (2013) and Temesgen (2013) are mentioned among others. Carrying out analysis in such a way leads to defective conclusions. The present study differs from the previous once on a number of grounds. First, both the size of observations and variables are extended as appropriate as the econometric models employed.

III. Objectives of the Study

The present study is principally intended to empirically investigate the relationship between trade openness and inflation variables in Ethiopia using the time series data set for the period ranging from 1976 to 2016.

Towards attaining the set broad objective, the following specific objectives to be addressed in this study include;

- → Empirically investigating the direction of causality between inflation and openness variables;
- → Examining both the short and long run effects of trade openness on inflation and;
- → Determining the relative magnitude of each exogenous variable employed in explaining the process of inflation in Ethiopia.

IV. Review of Literatures

a) *Theoretical Literature*

i. *New Growth Theory versus Cost-push Myth*

The relationship between inflation and openness has been a subject of research, theoretical as well as empirical. However, the literature on the subject is relatively scant. According to 'new growth theory', openness is likely to affect inflation through its likely effect on output (Jin, 2000). This link could be operating through: a) increased efficiency which is likely to reduce cost through changes in composition of inputs procured domestically and internationally, b) better allocation of resources, c) increased capacity utilization, d) rise in foreign investment which can stimulate output growth and ease pressures on prices (Ashra, 2002). Okun (1981) postulates that the shocks to the domestic price level due to domestic output fluctuation are likely to ease as the economy opens up. However, the "Cost-push advocators" put the case differently. The "Cost-push myth" holds for inflation to vary positively with the degree of openness (Mayer, 2003). The argument is that, an opened up economy is highly subject to imported inflation and weekend domestic macroeconomic policies (particularly of monetary and fiscal policies) with the introduction of external shocks (like exchange rate conditions and other unfavorable happenings in trading partners), see Aron and Muellbaur (2007). Heavy reliance on import of manufactured and industrial goods and intermediate inputs by emerging economies will have higher possibility of importing foreign inflation simultaneously, which can be reflected directly on domestic prices. Hence, given all these possibilities, the 'Cost-Push' advocators claimed that, it is the net effect that determines the level of output and, hence price level; but not only the justified benefits of trade openness.

ii. *The Classical Quantity Theory*

The theory bases its analysis on the Fishers (1911) quantity equation given by *(MV = PY)*: where, M (money supply); V (Velocity of money); P (general price) and Y (real GDP). Assuming V and Y to be constants in the model, the theory claims that *(%M = %P)*, implying the existence of equi-proportional relationships between monetary growth and the rate of inflation. Therefore, inflation is always and everywhere a monetary phenomenon and in that no other factor could have a role as money plays in the determination of inflation process; see (Johnson et al, 2000; Hetzel, 2007; Milton, 1971; Nelson, 2007 and Ray and Anderson, 2011).

iii. *Keynesian Theories of Inflation*

In contrast to the case with classical economists, money creates real impact where idle capacities are present for Keynes. He claimed in such an economy that, any additional money balance reduces the rate of interest, increases investment and, hence, output. As a result the initial rise in price could be completely offset by the latter reduced price, hence, no way for it to directly transmit to the general price level (Keynes, 1936). Keynes identified three basic reasons why an economic agents demand money balance; the transaction demand (in line with the traditional economists), the precautionary demand (for emergency cases) and the speculative demand (money even as store of value); with the latter being the key tool in his attack against the *QTM*(Keynes, 1936). He contained these three motives together in his money demand

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function given by ($\frac{M^d}{P}$ == f (-i, +Y)), and related money demand positively to income and negatively to the level of interest rates: thereby recognizing the role of interest rate in affecting the demand for money. Price being determined by the demand and supply for money, Keynes formulated his own quantity equation given by P = $\frac{M}{D}$, or, $\frac{M}{P}$ = D. Where; M is the nominal stock of exogenously determined money supply; D, the demand for money and P is the general price level (Keynes, 1936).With the nominal interest rate included in his money demand function, Keynes stressed that, changes in the quantity of money affect price level only after impacting the level of interest rate, and hence investment, output and employment (Humphrey, 1974). So that, the transmission mechanism between money and the price level is indirect. The immediate impact of change in the quantity of money rests on the interest rate but not on price. It implies that when interest rate decreases (following positive shock in the quantity of money), the level of investment responds by increasing. Hence, the levels of output, income and employment increase also as well. The additional level of employment, in fact, imposes additional pressure on aggregate demand, and that the rising wage and other costs together induce the price level to rise. Here, the transmission of monetary impact on price is not only indirect, but the effect is not complete, since part of the money balance is held by the speculators (see Krusell P., 2004; Nelson, 2007)

Both versions of the quantity are, however, similar for an economy operating at its full capacity. For Keynes money could impose even a higher than full inflationary effect in the long run being aggravated by inflationary expectations. The Keynes's version reveals that the elasticity of price with respect to any monetary shock be equal to zero (e_p = 0) in an economy with idle resources to utilize. According to him, in such an economy, monetary injections would enable utilize idle resources and employment which increases output in a proportion to changing aggregate demand, hence there would be no impact on prices in the short run(see Kenneth and Anthony, 2015). The elasticity becomes one, given the level of output and employment fixed at full capacity and is *'True inflation'* for Keynes. Any monetary growth while the economy is operating at full capacity induces proportional change on price.

Secondly, the constant assumption of velocity was no more guaranteed in Keynes's version of *QTM*. In his Tract, he claimed that velocity of money is rather pro-cyclical (subjected to shocks)by considering the impact of interest rate on demand for money. Capturing velocity by *(V=*$\frac{PY}{f(i,Y)}$), Keynes argued that velocity is a positive function of interest rate. It works like this; when interest rate increases, money demand decreases and, as a result velocity of money increases. The implication is that, increased interest rate induces cash holders to save more to gain extra benefit from rising rates. So that, they put more of their balance at bank and remain with few and since the amount of balance available in the economy is now less, it frequently changes hands to serve the remaining unsatisfied motives for money. With unstable velocity, no way for money to directly transmit to price and vice versa; i.e. any change in price or income would also be absorbed by the same process as a result no increasing response from money supply (Snowdon and Vane, 2005).

iv. *Demand-Pull Theory of Inflation*

As the name implies this type of inflation is the result of excess demand in the economy. From the Keynesians traditional national income identity (Y = C + I + G), aggregate demand is a function of aggregate consumption (C), investment (I) and government expenditure (G). The demand pull inflation occurs when this sum exceeds the total level of supplies in the economy. Any factor causing aggregate demand to increase above its potential level would result in inflation. According to Oludele et al (2002), Keynesians' had a simple and direct tool to deal with this type of inflation. Their advice is to absorb money back from the public sufficient enough in reducing the extra effective demand imposing adverse shock on the price level.

v. *The Cost-Push Fallacy*

These types of inflation emerge from any negative shocks in the supply side of the economy. Following Lahari (2011), the supply side of the general economy explains output, inflation and the economy's adjustment to equilibrium at the potential level of output. The argument here is that, any factors contributing negatively to the production side of the economy are all inflationary. For example, increasing raw material costs, rising labor costs and indirect taxes could direct reflect in the form of increased prices or induce price to increase thereby reducing outputs. It is frequently stated in theoretical literatures like, Batten (1981) and Humphrey (1976), for this type of inflation to take place in the following manner: to cope up with the rising living costs in a condition of rising aggregate prices, employees may bargain and form a union demanding additional wage income; rising wages in turn can help drive inflation. This type of price surge also is regarded to spread in other sectors of the economy. It implies that, if a given production sector involves the input use of goods and services produced in another sector for which the production costs are increasing; then the prices of the goods produced in the first sector also increases.

vi. *The Structuralist's Explanation*

This theory briefs the causes of inflation particularly in less developed economies by identifying structural rigidities commonly underlying these

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economies. For instance, Ray and Anderson (2011) have identified three structural factors commonly explaining inflation in under developed economies. These are inelastic supply of agricultural products, insufficient national resource (government budget constraint) and foreign exchange bottlenecks. The implication with the first case is that, the unbalanced growth trends in agricultural sector and urbanization could result in higher rate of inflation in most *LDCs*. That means agricultural productivity is insufficient to meet its growing demand as urbanization is going ahead. Besides, due to weak domestic capacity complemented with loss of trust by external lenders, most LDCs resort to monetization of their deficits which is inflationary in practice in line with the traditional *QTM*. The structuralis' maintain that factors forcing monetization of deficits in LDCs are accounted for this type of inflation but not money supply as it is induced by those structural rigidities. Moreover, Donath and Dima (2000) and Jema and Fekadu (2012) also highly stress the case in line with Olson (2010). Foreign exchange limitations and huge price differentials in the international trade are also among the main headaches of underdeveloped economies. Finally, structuralists' have a message to *LDCs* at least to minimize the effect of inflation resulting from structural rigidities. That is to develop any optimum measure as well as capable institutions enough to avoid structural rigidness and imbalances in various sectors of the developing economies and bring these changes in the economy.

vii. *Theoretical Link between Deficits and Inflation*

Budget deficit is the second important variable in this study *(next to money supply variable)* because of its theoretical link to monetary growth. Via the *QTM* approach, the monetarists argue that monetization of budget deficit is inflationary. There are three ways to finance the public expenditures; borrowing from the public, borrowing from the central bank (Seigniorages) and external borrowing (Sargent and Wallace, 1976; Rebecca, 2014). Relative to the other two methods, the central bank financed deficits impose higher inflationary pressures. That is when money is created to fill deficits, the quantity of money in the economy increases and could result in inflation. Budget deficit affects price only after affecting the level of nominal money growth in an economy. It means, as long as the deficit is not monetized, no link exists between deficits and the price level. Sargent and Wallace (1981) postulate that, following exogenous government spending and taxes, monetization of the deficits would lead to monetary variable induced inflation in the long run. According to them, deficit cause money growth and which in turn causes inflation. Besides, they argue in such a condition, for the existence of feedback effect from inflation to budget deficits in the manner that inflation reduces the value of real revenue to the government, leading to fiscal deficit in the long run. Sargent and Wallace maintain that if monetization of deficits could result in growth of money supply and hence inflation, the situation would be termed as 'fiscal dominance,' due to the fact that the whole process is forced by the initial shocks in the fiscal policy. Lags in the collection of government's tax revenue adversely affect the government's fiscal position thereby reducing the real value of the public's tax revenue; this might further induce monetary creation.

viii. *Empirical Evidences*

From early empirical discoveries, Triffin and Grudel (1962) tested the hypothesis that openness boosts productivity and hence leads to cheaper availability of goods that are costly in the country otherwise and confirmed an inverse relationship between openness and inflation variables in sample of 5 countries in European Economic Community. It, hence, is in line with the claim of New Growth Theory and the Romer's hypothesis. Romer (1993) finds that closed economies tend to have higher inflation. He argues that central banks in economies more open to trade find currency fluctuations caused by money surprises more painful and therefore exercise more restraint than their closed economy counterparts. Empirical findings by Lane (1997), Ashra (2002), Sachsida et al.(2003), Yanikkaya (2003), Gruben and Mcleod (2004), Kim and Beladi (2004), Daniels et al. (2005), Razin and Loungani (2005), Aronand Muellbaur (2007), Badinger (2007), Bowdler and Nunziataz (2007) all validate Romer's argument. However, Terra (1998) only marginally supports Romer's argument by claiming that the negative correlation is only evident in severely indebted countries during the 1980s crisis period. Similarly, Batra (2001) argues that tariffs do not necessarily cause inflation, at least in the US. Gruben and Mcleod (2004) show that there does not exist any significant openness–inflation relationship among OECD economies. Kim and Beladi (2004) have estimated a positive relationship between price level and trade openness for some advanced economies, such as the US, Belgium, and Ireland, while for other countries, both developed and developing, their finding is in line with Romer's (1993) argument. Finally, it is interesting to note that Romer (1993) himself finds no significant openness–inflation relationship among OECD economies.

The country specific case is concerned; a study by Meseret (2014) could be primarily mentioned. She estimated the negative but insignificant impact of trade openness on inflation in contrast to the theoretical claims. Minyahil (2016) has also estimated the dynamics of inflation in a relation with other macroeconomic variables by controlling the openness variable. His finding indicates that the relationship between the two variables is positive and highly significant both in the short and long run. He justified the case to the country

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specific conditions like rigid economic policies, the prolonged internal and external conflicts with a potential of blocking the suspected benefits of large openness.

V. Methodologies

The quality of any macroeconomic analysis can be determined by the accuracy, consistency and availability of any macroeconomic variables in question. The problem in Ethiopian case is the inconsistency of macroeconomic data from different sources: to cope up with this problem, money sources will be referred as possible. The study uses secondary time series data set for the period serially ranging from 1976/77 to 2016/17, which is for about 41 years. The data are to be sourced from both the domestic and external organizations. The potential domestic sources include; Ministry of Finance and Economic Cooperation (MoFEC), National Bank of Ethiopia (NBE), Central Statistics Agency (CSA) and the Ethiopian Economic Association (EEA). External sources include; World Bank (WB) data base, International Monetary Fund (IMF) and the African Development Bank (AfDB).

a) Econometric Model Specification

The inflation variable can be measured in either of the following ways;

- → GDP-Deflator: - computed as the ratio of nominal to real GDP. This ratio at any time (t) indicates the level of inflation.
- → Producer Price Index (PPI):- It measures the positive change in the average price of inputs or raw materials used by producers. Its delinquency is that it considers only raw materials, not finished goods and services.
- → Consumer Price Index (CPI):- It is the change in the average price of consumable goods and services. It measures the positive net change in the average price of consumer goods and services.

No doubt, higher proportion of income in Ethiopia is spent on consumption of final goods and services. According to the Ethiopian 2014/15 third quarter economic report of UNDP, more than 56% of households' expenditure was made on food, beverages and other final consumable goods and services. Therefore, to use CPI is more appropriate and contextual in case of Ethiopian economy. GDP-Deflator is inappropriate since it excludes the impact of imported inflation on domestic prices owing to the definition of Gross Domestic Product. On the other hand, Producer Price Index (PPI) is not effective in representing inflation in Ethiopia compared to CPI, since the proportion of income spent on consumption of final goods and services exceeds spending on the purchase of raw materials and other inputs. Hence, CPI is reasonably a good candidate to measure inflation in Ethiopia, so that, it is a proxy to inflation variable (a response variable) in this study. Hereafter, while using CPI anywhere in this paper, we are referring to the inflation variable in other way round.

Modeling inflation is among the complex phenomenon in Economies as it is subject to various influences. However, it can be possible to determine the key variables the process of inflation in the countries like Ethiopia. The most empirically popular way in examining the relationship between trade openness and inflation variables has been to employ the single equation model, treating openness as the exogenous variable and; obviously, inflation (CPI) is the endogenous variable the model setting.

Hence, based on Solomon (2004), Mukhtar (2010) and Aron and Muellbaur (2007), the dependent and independent variables employed in modeling inflation in the current study are functionally related as follows;

$$CPI_t = f\,(BD_t, GDP_t, RER_t, OT_t, M2_t, GCF_t) \ldots\ldots (1)$$

Where; CPI = Consumer Price Index which is a proxy to inflation variable; BD = Budget Deficit; It is the difference between government expenditure and receipts for a given fiscal time period; GDP is Gross Domestic Product and RER is Real Exchange Rate. OT is the openness to trade variable. It is equal to the sum of import and export values divided by nominal GDP; thereby all the exports, imports and the GDP are measured in current price and current exchange rates.

$$\text{Openness} = \frac{Export\ value + import\ value}{Nominal\ GDP}$$

M2 = Stands for the broad money supply in Ethiopia. It forms the definition of money supply in the operational setting of National Bank of Ethiopia (the central banker of Ethiopia); and, GCF is Gross Capital Formation as a share of GDP; and t, captures any time trend in each case.

Just, the intention here is to determine the elasticity of each of the predictor variables with respect to inflation; and, due to the fact that, not everything is controlled in the model, we need to adopt the econometric model incorporating the identified variables and also considering the effect of other variables not included in the model. The model is set as follows;

$$Ln\ CPI_t = \beta_0 + ln\ BD_t + lnGDP_t + lnRER_t + lnOT_t + ln\ M2_t + lnGCF_t + u_t \quad \ldots (2)$$

Where; *ln* stands for the logarithmic form of each variable, and u is the stochastic white noise error term, distributed with zero mean and constant variance in different observations. The error term (u_t) is assumed to have a normal distribution.

b) The Unit Root Test

Since most macroeconomic time series are variables are usually non-stationary (Harry, 2012; Lahari, 2011) and thus leads to spurious regression, the

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stationarity test will be undertaken at the outset of cointegration analysis, which will be briefed latter on. Testing for unit roots is among the common statistical procedures, several testing procedures have been developed over the year. Many of the latter tests are designed to overcome the difficulties encountered in practice. In this regard, the present study will use the Augmented Dickey Fuller (ADF) and Phillips Perron (1988) methods for stationarity purposes. The ADF procedure is based on the t-ratio of the parameter and, is conducted by extending all the equations under consideration by adding the lagged terms of the dependent variables, and requires estimation of the following regression.

$$\Delta y_t = \alpha_0 + \eta_1 t + \delta y_{t-1} + \sum_{j=1}^{s} \Pi j \Delta y_{t-1} + \sum_{j=1}^{s} \varpi i \Delta y_{t-p+1} + \varepsilon_t \ldots \quad (3)$$

Where, ε_t; is the usual pure white noise error term, $\delta = \Pi - 1$ and $\Delta Y_{t-1} = (Y_{t-1} - Y_{t-2})$, $\Delta Y_{t-2} = (Y_{t-2} - Y_{t-3})$, & the like. α_0 is the intercept term, $\eta_1$is the trend coefficient, t – the time/trend variable and where; s, are the lag terms. For this test, the hypothesis would be;

H_0: $\delta = 0$; there is unit root→(implying the time series is non-stationary).

H_1:$\delta < 0$; No unit root → the time series is stationary

Decision: reject the null hypothesis of ($\delta = 0$), hence the time series is stationary; if the computed t-statistic (in absolute terms) exceed the ADF critical values; the variable under consideration is stationary.

On the other hand, the test regression for the Phillips-Perron (PP) unit root approach looks;

$$\Delta y_t = \beta L_t + \delta y_{t-i} + u_t \quad (4.4)$$

But, the error term (u_t) is stationary at level, and may be heterosckedastic and serially correlated. However, the problems will be corrected in PP test by modifying the test statistics of $t_{\delta = 0}$ and$T\hat{\delta}$in the first regression. Based on Harry (2012); Sjo (2008), the new test statistics would be represented by Z_t and $Z_\delta$as;

$$Z_t = [(\frac{\widehat{\sigma 2}}{\hat{\rho} 2})^{1/2} * t_{\delta = 0} - \frac{1}{2}(\frac{\hat{\rho} 2 - \hat{\sigma} 2}{\hat{\rho} 2}) * (\frac{T * SE(\hat{\delta})}{\hat{\sigma} 2})] \text{ and; } Z_\delta = [T\hat{\delta} - \frac{1}{2}\frac{T2 * SE(\hat{\delta})}{}(\hat{\rho}^2 - \hat{\sigma}^2)]$$

Where, $\hat{\sigma}^2$ and $\hat{\rho}^2$ are the consistent variance estimates of the following respectively;

$$\sigma^2 = \lim_{T \to \infty} T^{-1}\left(1 + \frac{1}{n}\right) \sum_{t=1}^{T} E[u_t]^2; \text{ and } \rho^2 = \lim_{T \to \infty} \sum_{t=1}^{T} E\,(T^{-1} \sum_{t=1}^{T} u_t).$$

Under the null of $\delta = 0$ (i.e. unit root exists), the Z_t and Z_δ statistics in the Phillips-Perron (PP) procedure above, assume similar asymptotic distribution as with the conventional DF t-statistic. The PP procedure is advantageous over the ADF mechanism on at least two grounds; 1st, the PP is robust to general forms of heteroskedasticity in the error term; and, 2nd, and it does not need specification of lag length for regression as it is adjusted at length three by default in econometric and statistical software.

a) Lag Length Determination

It is also essential at the onset of cointegration analysis that the problem of determining optimal lag length should be considered as multi-variate cointegration analysis is very sensitive to the lag length selection. The two most common way used to determine the optimum lag length are the one where Akaike information criterion (AIC) is minimum and one which is suggested by majority of the criteria.

b) The Cointegration Test

The econometric framework to be used for analysis in this study is the Johansson (1998) maximum likelihood cointegration technique, which investigates both the existence and the number of cointegrating vectors. This multivariate cointegration test can be modeled as:

$$Z_t = K_1 Z_{t-1} + K_2 Z_{t-2} + \ldots\ldots + K_{k-1} Z_{t-k} + \mu + v_t \ldots \quad (4)$$

Where;

Z_t= (BD, GDP, RER, OT, M2, GCF) i.e. a 5 x 1 vector of variables that are integrated of order one [i.e. I(1)]. $\mu$is a vector of constant and, $v_t$is a vector of normally and independently distributed error term.

Equation (4) can be reformulated in a Vector Error Correction Model (VECM) as follows;

$$\Delta Z_t = \Gamma_1 \Delta Z_{t-1} + \Gamma_2 \Delta Z_{t-2} + \ldots\ldots + \Gamma_{k-1} \Delta Z_{t-k} + \pi Z_{t-1} + \mu + v_t \quad (5)$$

$$\text{Where; } \Gamma_i = (I - A_1 - A_2 \ldots\ldots\ldots\ldots - A_i),\ i = 1, 2, 3$$

K-1 and $\pi = -(I - A_1 - A_2 \ldots - A_i)$. The coefficient matrix$\pi$, provides information about the long-run relationships among the variables in the model. Π can be factored into $\alpha\beta'$, where α will include the speed of adjustment to the equilibrium coefficients while the β' will be the long run matrix of coefficients. The presence of r cointegrating vectors between the elements of Z implies that Π is of the rank r, ($0 < r < 5$). To determine the number of cointegrating vectors, Johnson (1998) developed two likelihood ratio tests: the trace test (λ_{trace}) and the maximum Eigen value test (λ_{max}). If there is any divergence of results between these two tests, it is advisable to rely on the evidence from λ_{max} because it is more reliable in small samples (see Dutta and Ahmed, 1977, and Odhiambo, 2005; Mukhtar, 2010)

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Comprendre La Place Du Genre Dans Les Politiques Publiques Des Médias En Afrique : La Leçon Marocaine

By Brahim Elmorchid
Cadi Ayyad University Marrakech

Abstract- The objective of this paper is to conduct an analytical exercise on dysfunctions observed in the formulation and implementation of public policies of the media in relation to the gender issue. Despite the efforts made by Morocco to include the gender dimension in public media policies, the situation of women in the media landscape remains precarious. Whether at the level of the exercise of media-related businesses, the engagement in the media programs or access to positions of responsibility, Moroccan women are very poorly represented. Even more surprising, the media contribute to widen the gap between the actual value of Moroccan women and the image that one has of herself. Morocco is a long way to go before all the legitimate aspirations of women are reached.

Keywords: *public policies, gender, media, equality, morocco.*

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Brahim Elmorchid

Abstract- The objective of this paper is to conduct an analytical exercise on dysfunctions observed in the formulation and implementation of public policies of the media in relation to the gender issue. Despite the efforts made by Morocco to include the gender dimension in public media policies, the situation of women in the media landscape remains precarious. Whether at the level of the exercise of media-related businesses, the engagement in the media programs or access to positions of responsibility, Moroccan women are very poorly represented. Even more surprising, the media contribute to widen the gap between the actual value of Moroccan women and the image that one has of herself. Morocco is a long way to go before all the legitimate aspirations of women are reached.

Keywords: public policies, gender, media, equality, morocco.

Résumé- L'objectif de ce papier consiste à mener un exercice analytique sur les dysfonctionnements constatés lors de l'élaboration et surtout l'exécution des politiques publiques des médias en liaison avec la question du genre. En dépit des efforts déployés par le Maroc en vue d'inclure la dimension genre dans les politiques publiques des médias, la situation des femmes dans le paysage médiatique demeure préoccupante. Que ce soit au niveau de l'exercice des métiers liés aux médias, de la présence dans les programmes médiatiques constructifs ou de l'accès aux postes de responsabilités, la femme marocaine est très mal représentée. Plus étonnant encore, les médias contribuent à creuser davantage le fossé entre la valeur réelle de la femme marocaine et l'image que l'on se fait d'elle. Le Maroc a donc un long chemin à parcourir avant que toutes les aspirations légitimes des femmes ne soient atteintes.

Mots clés: politiques publiques, genre, médias, egalité, maroc.

I. Introduction

En Afrique, les points de vue des femmes, leur voix, leur image positive et leur rôle en tant qu'actrices sociales et politiques à part entière sont marginalisées dans les médias. De même, leur représentation et leur accès aux instances dirigeantes dans les différentes structures médiatiques sont sensiblement inférieurs à ceux des hommes. Plusieurs facteurs se sont conjugués, à des degrés divers selon les pays, pour expliquer cette réalité. À titre d'exemples, citons le conservatisme de la société africaine, la force des préjugés culturels, le taux élevé de la pauvreté féminine et les erreurs de politiques publiques. Dans ces conditions, on comprend la volonté des décideurs politiques dans la majorité des pays africains de mettre en place des actions visant l'intégration de la dimension « genre » dans les politiques publiques des médias.

D'introduction relativement récente dans la conception et l'analyse de l'action publique afférentes aux médias, l'approche « genre » consiste à prendre en compte, lors de la formulation de ces politiques, des préoccupations spécifiques et des intérêts différenciés des femmes, des hommes, des filles et des garçons, dans un esprit d'équité, d'efficacité et de cohérence. Une telle approche s'est progressivement affirmée comme préoccupation des chercheurs et décideurs africains, puisqu'elle représente un enjeu lié à la bonne gouvernance, à la croissance et à la construction d'une société démocratique. Cette affirmation amène à prendre conscience de l'importance du croisement des politiques publiques et du genre dans un contexte en pleine mutation. En même temps, au-delà des études de cas, une théorisation croissante du genre dans l'analyse des politiques publiques commence à fleurir dans la littérature internationale (Muller et Senac-Slawinski 2009, Bereni 2009, Revillard 2009, Boussaguet et Jacquot 2009, Mazur 2009, Engeli 2009, Jenson et Lépinard 2009).

Depuis le début des années quatre-vingt-dix, les autorités publiques dans la majorité des pays africains se sont engagées dans un processus de réformes visant à réduire l'inégalité de genre dans le domaine des médias, et d'accroitre l'implication des femmes dans les programmes médiatiques à tous les niveaux de la conception au contrôle, en passant par l'exécution et surtout l'animation. De telles réformes ont touché essentiellement le volet institutionnel, le volet juridique et le volet pédagogique. Le premier bilan de ces réformes fait apparaître certains acquis importants ; en témoignent l'élargissement du champ des libertés d'expression pour les femmes, l'augmentation du nombre de femmes journalistes, l'augmentation du nombre de programmes élaborés par et pour les femmes, l'amélioration progressive de la culture médiatique, etc. Toutefois, malgré cette dynamique du paysage médiatique africain, peu de réflexions se sont intéressées à la place du genre dans les politiques

Author: Enseignant-chercheur, Faculté de Droit, Université Cadi Ayyad, Marrakech. e-mail : morchid_brahim@yahoo.fr

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publiques des médias en Afrique. Et c'est pour contribuer à la relance du débat sur cette question que nous avons jugé utile d'étudier le cas marocain. L'objectif est double : dresser un bilan des politiques publiques des médias en liaison avec la question du genre, et mener un exercice analytique sur les dysfonctionnements constatés lors de l'élaboration et surtout l'implémentation desdites politiques.

Le reste de ce papier est organisé comme suit. La première section décrit de façon succincte la question du genre dans les différentes politiques publiques des médias au Maroc. La deuxième section dresse un bilan de l'application desdites politiques. La troisième section analyse les facteurs qui ont été à l'origine des résultats décevants des politiques médiatiques genrées. Nous soutenons que la gendérisation des politiques publiques des médias au Maroc est une gendérisation de façade, conçue et développée dans un espace médiatique en crise. La conclusion générale présente une synthèse et quelques recommandations en vue de renforcer la place des femmes dans les politiques publiques des médias au Maroc.

II. La Question Du Genre Dans Les Politiques Publiques Des Médias Au Maroc

Par souci de réussir le pari de la bonne gouvernance et du développement durable, le Maroc a pris toutes les mesures nécessaires pour appuyer, renforcer et développer l'intégration de la dimension genre dans les politiques publiques. Ainsi, au niveau médiatique, une panoplie de mesures a été mise au point. Elles visent à promouvoir les conditions de la femme dans ce domaine. Ces mesures peuvent être regroupées en trois catégories : les mesures institutionnelles, les mesures juridiques et les mesures d'accompagnement

a) L'institutionnalisation de l'égalité du genre dans les médias

Depuis la fin des années quatre-vingt-dix, le Maroc a initié plusieurs réformes institutionnelles visant à éliminer toutes les formes de discrimination entre les deux sexes, y compris dans les médias. Certaines d'entre elles ont un caractère général, alors que d'autres sont spécifiques aux médias.

Au niveau général, la première véritable initiative consacrant l'égalité entre les deux sexes fut le Plan d'Action Nationale pour l'Intégration des Femmes au Développement (PANIFD). Élaboré par le gouvernement d'alternance en 1999, ce plan avait comme principal objectif la promotion des droits des femmes dans les domaines qui enregistrent les plus grands retards. Mais, en dépit de son caractère stratégique et ambitieux, ce plan n'a jamais vu le jour. La très forte mobilisation des mouvements d'inspiration islamique a poussé le gouvernement de l'époque à faire marche arrière. Pour beaucoup de spécialistes, s'il avait été adopté, le PANIFD aurait pu réaliser une rupture avec les approches sociales et culturelles préconisées pour traiter la condition et la situation des femmes au Maroc.

Au lendemain de l'adoption consensuelle du nouveau code de la famille, et suite à une large concertation avec toutes les parties prenantes, le gouvernement marocain a mis en place une nouvelle stratégie : la Stratégie nationale pour l'équité et l'égalité des sexes. Lancée en 2006, celle-ci vise la participation des femmes et des hommes d'une manière égale dans l'élaboration et l'orientation des programmes de développement, et le bénéfice des deux sexes des fruits de cette participation. Pour atteindre ces objectifs, tout en évitant les erreurs qui ont contribué à l'échec du PAMIFD, la nouvelle stratégie préconise deux approches. La première prend en considération les besoins spécifiques des femmes et des filles en vue d'améliorer leurs conditions de vie et de rectifier les différentes formes de discrimination dont elles souffrent au quotidien. La deuxième approche prend en compte les relations du genre social d'une manière spontanée dans les différentes phases (élaboration, suivi et évaluation) pour la consécration des valeurs de l'égalité au niveau des institutions et dans les tous domaines.

Au niveau des mesures spécifiques aux médias, le Maroc a lancé son chantier d'institutionnalisation de l'égalité entre les sexes dans le secteur de la communication et des médias en 2002. Cette action consiste à évaluer les implications des femmes et des hommes dans toute action planifiée comprenant les politiques, la législation, les procédures ou les programmes dans tous les domaines et à tous les niveaux. Elle permet d'intégrer les conditions, les préoccupations et les besoins des femmes et des hommes au niveau de la conception, de la mise en œuvre et de l'évaluation dans toutes les sphères politiques, économiques et sociétales pour qu'ils en bénéficient de manière égale et que l'inégalité actuelle ne soit pas perpétuée (définition du conseil Économique et Social des Nations Unies, ECOSOC, juillet 2007).

Un nouvel organe régulateur du secteur fut crée :la HACA (la Haute Autorité de la Communication Audiovisuelle). En vertu de ses statuts, cet organisme est chargé, entre autres, de garantir l'accès équitable des hommes et des femmes aux médias audiovisuels publics et privés. Il veille à l'amélioration de l'image de la femme et la lutte contre toutes les formes de discrimination et de stéréotypes dans les médias audiovisuels. Il établit également les directives professionnelles et les méthodes d'autorégulation concernant la façon de présenter l'image des femmes.

Après deux ans de concertations avec les différents partenaires, en particulier le Fonds d'appui à l'égalité entre les sexes (FAES II) de l'Agence

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Développement International (ACDI), le Ministère a mis en place en 2006 un programme à moyen terme pour l'institutionnalisation de l'égalité des sexes dans le secteur de la Communication et des médias. Ce programme s'est fixé comme principal objectif l'intégration de l'approche IES (institutionnalisation de l'égalité entre les sexes) dans les pratiques, les systèmes et les politiques du secteur de la communication. Il se décline en trois axes et six projets. Le premier axe est d'ordre institutionnel. Il s'agit de renforcer la capacité institutionnelle du Ministère de la Communication et de ses partenaires afin de tenir compte de l'égalité des sexes dans leurs structures et pratiques. Le deuxième axe concerne le renforcement des capacités des acteurs partenaires du secteur de la communication dans la perspective d'améliorer l'image de la femme dans les médias. Cela permettra d'insuffler des réflexes professionnels favorisant une représentation plus équilibrée de la femme en cohérence avec sa réalité. Enfin, le troisième axe est relatif à la promotion de l'égalité entre les sexes dans les institutions médiatiques et l'accès des femmes aux sphères de décision. L'objectif est double : promouvoir des mécanismes de soutien et d'encouragement pour favoriser la participation des femmes aux sphères de décision et approfondir le diagnostic participatif par des études et des recherches permettant une meilleure compréhension des enjeux de l'égalité entre les sexes dans les médias.

Par ailleurs, et par souci d'intégrer une culture médiatique garantissant l'égalité entre les femmes et les hommes, le Maroc a mis en application une Charte dédiée exclusivement à la protection et la valorisation de l'image de la femme : la Charte Nationale pour l'Amélioration de l'Image de la Femme dans les Médias. Mise en œuvre en 2005, cette Charte a été élaborée conjointement par le Secrétariat d'État chargé de la famille, de l'enfance et des personnes handicapées, le Ministère de la Communication et les associations professionnelles du secteur médiatique. Elle s'est fixée comme objectifs :

- l'instauration de la culture de l'égalité des sexes et le respect de la dignité de la femme ;
- la préservation des Droits de la femme en matière d'expression et la lutte contre toute forme de discrimination ou d'exclusion ;
- le renforcement de la prise de conscience sur l'importance d'une image positive de la femme dans la diffusion de la culture égalitaire.

Le dernier dispositif institutionnel porte sur la « genderisation » du budget annuel du Ministère de tutelle (Ministère de la Communication). En effet, ce département s'est rallié depuis 2009 aux orientations du Ministère de l'Économie et des Finances en procédant annuellement à l'intégration de la dimension genre dans ses politiques de développement et ses programmes de budgétisation.

Conçue dans le cadre de la réalisation des objectifs du millénaire pour le développement (Omd), cette approche novatrice vise non seulement la mise en place des politiques tenant compte des disparités de genre dans le monde médiatique, mais aussi une affectation plus équitable des budgets et la réduction des inégalités socioéconomiques existantes entre ces couches sociales. Il s'agit d'aider à une redéfinition des priorités et d'allouer des ressources pertinentes qui répondent aux besoins des populations concernées, en prenant en compte de façon explicite, la position désavantagée des femmes en termes d'accès aux différents services des médias.

L'intégration de l'approche genre dans l'élaboration et l'analyse des budgets du Ministère ayant la tutelle des questions médiatiques est considérée au Maroc comme une composante incontournable des réformes du processus budgétaire en cours. Aussi, la gendérisation du budget est-elle perçue comme un moyen efficace de bonne gestion publique à travers trois dimensions fondamentales : le ciblage, la proximité et le management novateur. Il s'agit d'une approche structurante qui vise à assurer l'équité et l'accès égal aux services publics à travers des politiques de proximité (Nalini et *al.* 2005).

b) Le renforcement du dispositif juridique visant d'égalité des sexes dans les médias

Au Maroc, le cadre juridique régissant les questions de genre a beaucoup évolué. Cette évolution concerne les trois volets des lois : le volet supra-constitutionnel (conventions internationales), le volet constitutionnel et le volet infra-constitutionnel. Par rapport au premier niveau, le Maroc a ratifié progressivement la plupart des conventions visant la protection des femmes et l'élimination de toutes formes de discriminations fondées sur le genre. Il s'agit du Pacte international relatif aux droits civils et politiques, le Pacte international relatif aux droits économiques, sociaux et culturels, la Convention sur l'élimination de toutes les formes de discrimination à l'égard des femmes et la convention sur les droits politiques des femmes.

Le Pacte international relatif aux droits civils et politiques et le Pacte international relatif aux droits économiques, sociaux et culturels ont été ratifiés par le Maroc en 1979. Ces deux conventions se situent dans le prolongement des principes fondamentaux proclamés par la Déclaration universelle des droits de l'homme, et qui stipulent que « Tous les êtres humains naissent libres et égaux en dignité et en droits » (ONU, 1948 : art. 1), et que :

> Chacun peut se prévaloir de tous les droits et de toutes les libertés proclamées dans la présente Déclaration, sans distinction aucune, notamment de race, de couleur, de sexe, de langue, de religion,

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> d'opinion politique ou de toute autre opinion, d'origine nationale ou sociale, de fortune, de naissance ou de toute autre situation (ONU, 1948 : art. 2).

Ratifiée par le Maroc avec réserve en 1993, la Convention sur l'élimination de toutes les formes de discrimination à l'égard des femmes est l'instrument juridique le plus important à l'échelle internationale. Elle met en relief le principe de l'égalité de traitement des hommes et des femmes, ainsi que la reconnaissance, la jouissance et l'exercice par les femmes des droits de l'homme et des libertés fondamentales dans les domaines politique, économique, social, culturel et civil ou dans tout autre domaine (article premier). En manifestant son intention de lever certaines réserves sur cette convention en 2006, le Maroc s'engage à la considérer comme la base juridique de ses législations nationales. Outre la promotion de l'égalité dans l'ensemble des droits humains, cette convention prévoit des engagements concrets de la part des gouvernements nationaux pour en garantir l'exercice.

La convention sur les Droits politiques des femmes que le Maroc ratifié en 1977 dispose que « les femmes auront, dans des conditions d'égalité avec les hommes, le droit de vote dans toutes les élections, sans aucune discrimination » (art. 1), qu'elles « seront, dans des conditions d'égalité avec les hommes, éligibles à tous les organismes publiquement élus, constitués en vertu de la législation nationale, sans aucune discrimination » (art. 2) et qu'elles « auront, dans des conditions d'égalité, le même droit que les hommes d'occuper tous les postes publics et d'exercer toutes les fonctions publiques établies en vertu de la législation nationale, sans aucune discrimination » (art.3).

Concernant particulièrement le domaine du travail, y compris dans les médias, le Maroc a ratifié les conventions de l'organisation internationale du travail (OIT) visant spécifiquement la promotion de l'égalité basée sur le genre. Il s'agit de la Convention n° 111 concernant la discrimination (emploi et profession), ratifiée en 1962 et la Convention n° 100 sur l'égalité de rémunération entre la main d'œuvre masculine et la main d'œuvre féminine, ratifiée en 1979.

Par rapport au deuxième niveau, la constitution marocaine a toujours consacré le principe de l'égalité entre l'homme et la femme (droits civils et politiques). Ainsi, l'article 19 de la dernière constitution dispose que :

> L'homme et la femme jouissent, à égalité, des droits et libertés à caractère civil, politique, économique, social, culturel et environnemental, énoncés dans le présent titre et dans les autres dispositions de la Constitution, ainsi que dans les conventions et pactes internationaux dûment ratifiés par le Royaume et ce, dans le respect des dispositions de la Constitution, des constantes et des lois du Royaume. L'État marocain œuvre à la réalisation de la parité entre les hommes et les femmes. Il est créé, à cet effet, une Autorité pour la parité et la lutte contre toutes formes de discrimination (art.19 de la constitution de 2011).

Enfin, par rapport au troisième niveau, et afin de se conformer aux normes des conventions internationales en vigueur qu'il a ratifiées, le Maroc a procédé à la refonte de ses principaux textes réglementaires, en particulier le Code du commerce, le Code de la famille et le Code du travail.

Avant 1995, la femme n'avait pas le droit d'exercer une activité professionnelle sans le consentement de son mari. Mais avec la réforme du Code commerce en 1995, cette obligation a été levée (article 17 du Code de commerce). Aussi, avant 2004, les rapports conjugaux étaient régis par un modèle d'obéissance de la femme à son mari « *Wilaya* ». Entrée en vigueur en 2007, le nouveau Code de la famille a abrogé cette règle en la remplaçant par celle de la concertation entre la femme et l'homme,

En application depuis 2004, le dernier Code du travail a introduit un certain nombre de clauses garantissant à la femme plus de sécurité au travail. Il est fondé sur le principe de la non-discrimination en matière d'emploi et de salaires, y compris dans le domaine médiatique. De même, pour la première fois, il y est fait mention du harcèlement sexuel au travail.

c) L'implication des Associations dans la promotion de l'égalité de genre dans les médias

Afin de compléter les mesures institutionnelles et juridiques, les autorités publiques marocaines se sont engagées dans une troisième voie ; celle de l'implication de la société civile dans le processus d'intégration de l'approche genre dans les politiques médiatiques. Ainsi, à travers des transferts importants, le tissu associatif a été appelé à soutenir l'État dans ses efforts de rayonnement d'une culture égalitaire. Le Syndicat national de la presse marocaine par exemple considère la question de l'égalité comme une priorité, et ce, à travers la mise en place d'un conseil « Genre et média ». Cette structure a pour mission l'amélioration de l'image des femmes marocaines dans le secteur, en incitant les médias à contribuer à changer les images et les stéréotypes sur les femmes et leur rôle, et à favoriser la présence des femmes dans les différents aspects du journalisme. Elle a également pour mission d'aider à accroitre la représentativité des femmes journalistes dans les processus de décision sur la base de l'efficacité professionnelle et de l'égalité des chances.

Le Syndicat national de la presse marocaine a également adopté en 2005 la déclaration consacrant l'égalité entre hommes et femmes journalistes au Maghreb. Adoptée également par les associations de journalistes d'Algérie et Tunisie, cette déclaration

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consacre l'égalité entre hommes et femmes journalistes au Maghreb. En vertu de cette déclaration, les membres des trois associations signataires se sont engagés à prendre les mesures suivantes :

- Considérer l'égalité des chances entre hommes et femmes dans le journalisme comme question transversale et prioritaire ;
- Refléter, au sein des entreprises de presse et dans les médias, la diversité de la société et de promouvoir les questions d'égalité entre journalistes hommes et femmes ;
- Veiller à une représentation adéquate des femmes au sein de leurs structures de consultation et de décision et à la mise en place de mécanismes efficaces permettant la prise en compte des questions d'égalité ;
- Orienter les actions vers la réalisation effective de l'égalité des chances entre journalistes hommes et femmes dans les entreprises de médias ;
- Améliorer l'image des femmes véhiculée par les médias.

Aussi, chaque année, des ateliers sont organisés pour former les journalistes à la manière dont les médias doivent concevoir et mettre au point des programmes impliquant davantage les femmes, en valorisant leur image aux yeux du public. De même, à travers des primes, le Ministère de tutelle encourage les associations qui œuvrent dans le domaine des médias à élaborer des programmes qui permettent de véhiculer la culture de l'égalité et de combattre la violence basée sur le genre. Parallèlement, des campagnes de sensibilisation sont lancées chaque année afin de souligner l'importance de la présence des femmes, non seulement en tant que journalistes, mais également comme responsables ayant le droit d'occuper des hauts-postes dans leurs institutions médiatiques.

Signalons au passage que dans le cadre de la dynamique sociétale que connaît le Maroc, il a été procédé au lancement d'un débat sur la nécessité d'intégrer la dimension genre dans le budget au niveau local. Initié par l'Association Démocratique des Femmes Marocaines (ADFM) et encouragé par l'Union européenne, ce débat vise à sensibiliser les acteurs publics locaux sur l'importance de l'intégration de la gendérisation des budgets des Collectivités locales comme outil de lutte contre l'exclusion, la marginalisation et les inégalités sociales.

III. L'approche Genre Dans Les Médias Au Maroc : Un Bilan Peu Convaincant

Les mesures décrites dans la section précédente sont tellement riche qu'elles ont permis au Maroc de se hisser au niveau des pays développés en matière de gendérisation des politiques publiques des médias. On peut dès lors s'attendre à un effet positif de ce dispositif sur la place et le rôle des femmes marocaines dans le champ médiatique. Néanmoins, tel n'est pas encore le cas. Quatre réalités permettent de confirmer ce constat : la faible représentation des femmes dans les émissions audiovisuelles, la persistance d'une image négative des femmes dans les médias, la faible représentation des femmes dans les métiers liés aux médias et le faible accès des femmes journalistes aux postes de responsabilités.

a) Une faible représentation des femmes dans les émissions audiovisuelles

Malgré les acquis juridiques, politiques et institutionnels en matière de parité et d'égalité des sexes dans les médias, la part des femmes parmi les intervenants dans les différents supports médiatiques marocains demeure très faible. Les femmes ne sont que rarement interviewées et leur point de vue fait moins l'objet de traitement spécifique.

Le tableau 1 présente la part des femmes parmi les intervenants dans les magazines et journaux d'informations diffusés à la radio et sur les chaînes de télévision. La lecture de ce tableau fait ressortir avec puissance le contraste de genre qui caractérise le paysage audiovisuel marocain. Que ce soit au niveau de la radio ou de la télévision, le point de vue féminin est marginalisé. La femme est rarement interviewée aussi bien au niveau des journaux que des magazines. Et même les médias audiovisuels publics, sensés fonctionnés selon une logique d'égalité et d'éthique, ne donnent que rarement l'occasion aux femmes marocaines pour s'exprimer. Les thèmes portant sur des questions sensibles aux femmes sont souvent confinés aux segments particuliers qui ne reçoivent qu'une faible audience. Ils sont qualifiés de "questions féminines " ne représentant pas un intérêt général. En outre, les médias marocains ne se penchent qu'occasionnellement sur les réalisations des femmes (Journée mondiale de la femme, exploit sportif ou culturel, etc.).

Tableau 1: La part des femmes parmi les intervenants dans les magazines et journaux d'informations radiotélévisées[1]

		Magazines	Journaux
Médias audiovisuels publics	TV Al Oula :	07,36%	09,93%
	TV 2M	14,92%	09,53%
	TV Tamazight	10,14%	05,61%

[1] Les données sont trimestrielles pour les journaux et semestrielles pour les magazines

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	Radio Nationale	09,58%	07,31%
	Radio Amazighe	04,24%	07,11%
	Radio Chaîne Inter	08,23%	12,75%
	TV Laâyoune	04,24%	11,18%
Médias audiovisuels privés à programmation nationale	Radio Aswat	19,01%	04,70%
	Radio Atlantic	06,93%	07,62%
	Radio Chada FM	00,00%	04,71%
	Radio Med	08,61%	07,27%
	Radio Luxe	15,35%	Non concernée
Médias audiovisuels privés à programmation régionale	Radio Casa FM	17,29%	05,01%
	Radio MFM Atlas	26,64%	06,08%
	Radio MFM Saïss	00,33%	05,34%
	Radi MFM Souss	00,00%	04,90%
	Cap Radio	01,07%	Non concernée
Médias audiovisuels privés à programmation locale	Radio Plus Agadir	00,82%	02,55%
	Radio Plus Marrakech	04,33%	07,83%

Source : Haute Autorité de la Communication Audiovisuelle (HACA):2012

Les chaînes de télévision et les stations radio ne jouent pas pleinement le rôle d'accompagnateur et d'initiateur des changements et d'évolution de la société marocaine. En fait, on a l'impression que ces médias symbolisent deux situations extrêmes dans les réalités vécues par la femme marocaine. D'un côté, la femme est fortement représentée dans la publicité ; de l'autre côté, elle est marginalisée dans les émissions politiques, économiques et culturelles. Alors que les hommes disposent de suffisamment de temps pour s'exprimer et surtout vendre leurs projets de société, les femmes sont appelées à rester dans l'ombre et à garder le secret de leurs progrès. Dans ces conditions, elles ne peuvent pas faire valoir leurs droits. Durant la période de consultation référendaire de 2011 par exemple, le temps de parole des associations de défenses des droits des femmes n'a représenté que 5,7 pour cent du volume horaire total consacré à tous les intervenants.

Certaines catégories de femmes reçoivent toujours moins d'attention dans les médias. C'est le cas des femmes âgées, des femmes paysannes, des femmes ouvrières et des femmes sportives. Ces dernières par exemple représentent moins de 5 pour cent de la couverture totale des activités sportives, soit un pourcentage inférieur à la moyenne observée (ElMorchid, 2010). Les noms des sportives n'étant le plus souvent mentionnés que pour annoncer des mauvaises performances ou pour attirer l'attention de l'opinion publique sur les difficultés relatives au financement et au fonctionnement des équipes sportives féminines.

b) La persistance d'une image négative des femmes dans les médias

Comme nous l'avons montré auparavant, les femmes marocaines sont sous-représentées dans les médias. Et même lorsqu'elles y sont représentées, elles ne reçoivent pas toujours un traitement honorable et digne de leur place dans la société. Malgré les efforts fournis, les chaînes de télévision, les satiations radio, le cinéma, la presse écrite et électronique continuent de représenter la femme marocaine dans des images stéréotypées, dévalorisantes, confinées dans des sujets classiques (procréation, santé, mode, travaux domestiques, etc.).

Par rapport à la presse écrite, une étude réalisée par le Ministère du développement social, de la famille et de la Solidarité, en collaboration avec le FNUAP (2008), révèle que 85 pour cent des articles de presse ont une charge négative vis-à-vis de la femme. L'étude précise que les thèmes portant sur la violence contre les femmes et le harcèlement sexuel ne sont pas assez médiatisés par la presse écrite. Les sujets développés dans les journaux marocains ont généralement trait au sexe, à la maternité, à l'amour, à la mode ou encore aux scandales. Les efforts consentis et la lutte menée par les femmes pour parvenir à des performances sur le plan économique, politique et social sont relégués au second rang. De même, une simple consultation des journaux et des revues dans les kiosques permet de relever le caractère dégradant de la photo des femmes, surtout celle figurant dans la page de couvertures. Cette photo est souvent celle d'une femme soumise, faible, voilée, prostituée, bref une photo qui permet d'attirer les lecteurs et donc d'accroitre les ventes.

Au niveau de l'audiovisuel, l'image de la femme marocaine est encore plus critique, et ce, malgré la mise en application de la Charte nationale pour l'amélioration de l'image de la femme dans les médias. Apparemment, cette Charte n'a pas abouti à des résultats concrets. Ainsi, les émissions télévisées continuent à véhiculer des images contradictoires de la femme marocaine. D'une part, dans de majorité des programmes, l'image est celle d'une femme soumise,

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râleuse, marginalisée, manipulatrice, peu instruite, incompétente, victime, etc. D'autre part, dans un nombre limité de programmes, la femme parait plutôt instruite, intelligente, autonome et responsable.

Dans les spots publicitaires, la femme incarne tantôt l'image de la servitude, tantôt l'image d'un objet. Dans le premier cas, la femme est généralement appelée à vanter les mérites des détergents, des huiles, d'appareils ménagers, etc. Elle est alors présentée en train de laver le linge, faire le ménage ou encore préparer à manger. Dans le second cas, le corps de la femme est souvent réduit à un simple instrument de séduction ou à un objet de désir. L'objectif est d'attirer le regard masculin vers le produit et non d'identifier le personnage féminin au produit. Leur rôle se résume à un simple exercice visant l'accroissement de la consommation et donc la promotion des ventes. L'homme, en revanche, est présenté dans une position confortable et dominante (homme d'affaires, homme politique, directeur, ingénieur, médecin, sportif, etc.).

Contrairement à ce que l'on pourrait penser, le cinéma marocain ne contribue pas à construire une image positive des femmes. Au contraire, il s'inspire et se vend grâce à la dévalorisation de cette image. Celle-ci y est généralement présentée selon une logique manichéenne. Lorsqu'elle est encore enfant, elle ne rêve que de se marier ; lorsqu'elle est adolescente, on la considère comme une prostituée potentielle, condamnable par la société ; lorsqu'elle est mariée, elle est obéissante et s'occupe des tâches ménagères ; lorsqu'elle est vieille, elle est discrète et joue le rôle d'une grand-mère souvent oubliée. En fait, rares sont les films qui osent aborder la question de la femme de manière intelligente et sans préjugés moraux.

c) Une faible représentation des femmes dans les métiers des médias

Au Maroc, le nombre de femmes journalistes a connu une forte augmentation, passant de 53 en 1987 à 632 en 2012, soit un coefficient multiplicateur de 11,92. Mais en dépit de cette progression, la «féminisation » du journalisme n'est pas encore d'actualité. La part des femmes journalistes reste très faible contenu des ambitions du gouvernement et en comparaison avec des pays à économie similaire. Alors qu'au Maroc les femmes journalistes représentent 26 pour cent de l'effectif total, ce pourcentage atteint 35 pour cent en Égypte et 46 pour cent en Tunisie. Le tableau 2 présente l'évolution de la part des femmes marocaines dans le corps des journalistes professionnels.

Tableau 2: Évolution de la part des femmes marocaines dans le corps des journalistes professionnels

	Effectif total	Nombre de femmes	Part des femmes
1987	534	53	09,92%
2000	1327	324	24,41%
2003	1947	459	23,57%
2005	2062	490	23,76%
2010	2387	632	26,48%

Source: Rapports du Ministère de la Communication, Rabat, 2012

La présence des femmes journalistes est particulièrement faible dans certains aspects des médias, notamment le reportage (image et photos), la presse électronique et les opérations techniques. En effet, les femmes ne représentent que 5 pour cent des reporters, 17 pour cent des techniciens et 23 pour cent des journalistes de la presse électronique. Quant à la caricature, elle reste un domaine exclusivement masculin.

Le cinéma n'est pas en reste. En effet, parmi les 100 cinéastes enregistrés auprès du centre cinématographique marocain, seul 12 sont de sexe féminin, soit un taux de 12 pour cent. Ce déséquilibre de genre reflète celui observé dans les filières de formation cinématographique où les filles, déjà victimes d'une faible scolarisation, s'orientent plutôt vers les options classiques (langues, management, etc.).A cela s'ajoute le fait que les femmes s'investissent dans la production de téléfilms et feuilletons ou bien dans la réalisation de films documentaires plutôt que dans le long métrage.

D'après les données publiées par le Ministère de la Communication, le nombre des titres de presse féminine marocaine s'est élevé à cinq (deux en arabe et trois en français) sur un total de 399. Si on rajoute cinq autres titres spécialisés dans les questions familiales, on obtient un taux de 2,5 pour cent. Ces 10 titres sont tirés selon une périodicité mensuelle ou bi-trimestrielle. Et ce sont les arabophones qui battent les records de vente (Organisme de la Justification de la Diffusion, 2008).

Par ailleurs, il convient de signaler que les femmes journalistes au Maroc exercent leur métier dans des conditions très difficiles. D'un côté, plusieurs femmes journalistes subissent le harcèlement sexuel dans leur travail aussi bien à l'intérieur qu'à l'extérieur de la structure médiatique d'accueil. « Outre leurs souffrances dues aux styles d'harcèlement direct, il en existe d'autres, basés sur les sous-entendus, les allusions et les insinuations de manière à porter atteinte à la dignité de la femme en général » (Belafia, 2005). D'un autre coté, les horaires de travail des femmes journalistes sont très variés et même imprévisibles. À

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cela s'ajoute la nature peu adaptée des tâches effectuées. Les femmes sont trop souvent reléguées à certaines missions du journalisme de fait social et de magazine. Quant au journalisme d'investigation, il est généralement du ressort des hommes. De même, les grands sujets politiques et économiques sont couverts par les hommes.

d) Une faible représentation des femmes journalistes dans les organes de décisions

Les données publiées par le Ministère de la Communication montrent qu'en dépit de l'intérêt croissant qu'accordent les femmes aux métiers des médias, leur présence au sein des instances dirigeantes demeure faible, voire insignifiante. Cette faiblesse constitue une entrave à l'institution d'une culture d'égalité et de parité entre les femmes et les hommes dans le domaine des médias. Certes, le gouvernement marocain s'est engagé à œuvrer pour une meilleure représentativité des femmes journalistes dans les instances dirigeantes, mais, la réalité est tout autre. On a l'impression que les hommes ne sont pas encore prêts à céder une partie de leur pouvoir décisionnel aux femmes dans les établissements et les institutions dédiés aux questions médiatiques.

Quel que soit le type de médias, les femmes journalistes accèdent rarement aux postes de responsabilité qui restent en majorité de l'apanage de leurs confrères masculins. Ainsi, par rapport à l'audiovisuel, sur les 34 stations radio que possède le Maroc, seul 5 sont dirigées par des femmes. Et sur les 10 chaines de télévisions opérationnelles, une seule se trouve sous la direction d'une femme. Les hommes ont également la mainmise sur les institutions suivantes œuvrant dans le domaine médiatique : la Haute Autorité de la Communication Audiovisuelle (HACA), le Conseil Supérieur de la Communication Audiovisuelle (CSCA), l'Agence Marghreb Arab Press (MAP), l'Institut Supérieur de l'Information et de la Communication (ISIC), la Société Nationale de Radiodiffusion et de Télévision (SNRT) et la Soread-2M.

Aussi, sur les neuf membres qui composent le Conseil Supérieur de la Communication Audiovisuelle, seuls deux sont des femmes, soit un taux de 22 pour cent. Or ce conseil joue un rôle crucial dans l'établissement des règles de jeux dans le domaine audiovisuel au Maroc. Il est investi d'une mission d'expertise et de conseil au service de Sa Majesté le Roi, du Gouvernement, du Parlement et des autorités judiciaires ou administratives du Royaume, d'une mission de régulation et de réglementation, ainsi que d'une mission de contrôle et de sanction.

Si nous considérons toutes les responsabilités médiatiques (directions, services, divisions, membres du conseil d'administration, etc.), la part des femmes demeure également en deçà des espérances. D'après les statistiques publiées par le Ministère de tutelle, cette part n'a jamais dépassé 20 pour cent. A titre d'exemple, le Syndicat National de la Presse Marocaine ne compte que 17 journalistes femmes au sein de son conseil administratif sur un total de 101, alors que le bureau national ne compte que cinq femmes sur un total de 19 membres.

Concernant le domaine du cinéma, la plus haute autorité, en l'occurrence, le Centre Cinématographique Marocain, a toujours été dirigé par un homme. De même, les associations professionnelles sont placées quasi exclusivement sous la responsabilité des hommes. Le tableau 3 récapitule la part des femmes dans les bureaux des associations professionnelles exerçant dans le secteur cinématographique marocain.

Tableau 3: Part des femmes dans les bureaux des associations professionnelles affiliées au centre cinématographique marocain

Instances	Effectif total	Nombre de femmes
Chambre Marocaine des Exploitants de Salle de Cinéma	4	0
Chambre Marocaine des Distributeurs de Films	7	1
Chambre Marocaine des Producteurs de Films	7	0
Groupement des Auteurs Réalisateurs Producteurs	19	1
Chambre Marocaine des techniciens de Films	7	1
Syndicat National des techniciens du Cinéma et de l'Audiovisuel	13	1

Source: Site du Centre cinématographique marocain, 2012

La lecture de ce tableau fait apparaitre une nette domination masculine. Sur un total de 57 membres, seuls 4 sont des femmes, soit un taux de 7 pour cent. À l'évidence, cette faible représentation s'explique par la faible présence féminine dans le domaine cinématographique en général (12 pour cent). Elle témoigne de la forte résistance culturelle au changement, mais surtout de la rareté des instituts spécialisés dans la formation des jeunes marocaines aux métiers du cinéma.

En somme, la faible représentation des femmes dans les postes de responsabilité dans les médias n'est pas étonnante. En effet, d'après les statistiques officielles (Ministère de la modernisation des secteurs

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publics, 2010), le taux de féminisation des postes de responsabilités dans la fonction publique au Maroc est de 14 pour cent pour les emplois supérieurs, 10 pour cent pour les postes de chefs de division et assimilés, et 16 pour cent pour les postes de chefs de service et assimilés. Ces chiffres reflètent la réalité de la société marocaine en général. Les postes de responsabilité y sont attribués selon une logique d'intérêt personnel et de domination masculine, et non selon des critères clairs et objectifs basés sur le mérite.

IV. Comprendre L'échec Des Politiques Publiques Genrées Dans Le Domaine Des Médias

Comme tout changement, réussir l'intégration de l'approche genre dans les politiques publiques des médias est un exercice difficile. Cette difficulté s'explique essentiellement par des considérations politiques, techniques et tactiques. Ainsi, au niveau politique, les décideurs politiques sont appelés à faire des concessions, à faciliter l'adhésion des opposants aux projets de loi, à accepter de nouvelles règles de partage et à supporter un risque de sanction très élevé (Elmorchid, 2010a). Au niveau technique, ces mêmes décideurs doivent être en mesure de concevoir et mettre en place de nouvelles structures, de nouvelles procédures et éventuellement une nouvelle organisation ; autant d'occasions impliquant un risque de commettre des erreurs. Enfin, au niveau tactique, les décideurs ne doivent pas ignorer les facteurs susceptibles de façonner l'élaboration des lois et la construction de nouvelles institutions, en l'occurrence le poids des groupes d'intérêts et des parties prenantes (*stakeholders*) et le calendrier d'élaboration des réformes.

Au Maroc, les décideurs publics n'ont pas réussi le pari, celui de la pérennisation de leur politique d'égalité du genre dans le domaine médiatique. En dépit des efforts consentis depuis 2002, le dispositif mis en place demeure ineffectif, inutile et inefficace.

a) L'ineffectivité des politiques médiatiques genrées

Par rapport à l'ineffectivité, on note un grand décalage entre les bonnes intentions politiques et les conséquences pratiques. De nombreuses lois votées attendent toujours les décrets d'application. De plus, malgré la volonté exprimée en 2006, le gouvernement marocain n'a pas encore levé ses réserves sur la Convention sur l'élimination de toutes les formes de discrimination à l'égard des femmes. Aussi, en dépit de la prise de conscience des acteurs éducatifs, les nouveaux manuels scolaires continuent toujours à véhiculer des clichés réducteurs de la femme marocaine.

Au Maroc, comme dans la majorité des pays africains, les politiques publiques visant l'intégration de l'approche genre ont été importées. En même temps, elles ont été décidées et implémentées rapidement sans tenir compte des contraintes et surtout des spécificités locales. Or si l'on regarde l'évolution des politiques publiques portant sur les questions sociales en général dans les pays développés et même dans certains pays émergents (Chine, Corée du Sud, etc.), on se rend compte qu'elles sont le résultat d'un long processus qui tient compte des caractéristiques nationales, des mentalités, des habitudes comportementales, des normes non écrites, des croyances culturelles et des habitudes ; bref ce que North appelle les institutions informelles.

Les décideurs publics marocains ont souvent ignoré ces institutions informelles lors de la conduite des changements dans le domaine médiatique. Ils sont incapables de concilier les règles formelles et les règles informelles. En effet, les règles formelles n'ont aucune valeur si les individus ne sont pas préparés et surtout incités à les respecter. Puisque les règles formelles rentrent souvent en contradiction avec des normes informelles, il est peu probable que les premières soient effectives, car elles ne pourront pas se transformer en institution, c'est-à-dire engendrer des comportements récurrents sur la base d'anticipations partagées. A titre d'exemple, la liberté d'expression en tant que règle formelle est un droit acquis pour la femme marocaine. Mais, malheureusement, cette règle n'induit pas les mêmes comportements que ceux enregistrés dans les pays occidentaux. Pour des raisons liées au poids de la tradition, la femme marocaine n'est pas encore prête à jouir de tous ses droits.

Les règles formelles et les règles informelles vivent dans le même espace. Il est alors important que le processus d'élaboration et d'exécution des politiques médiatiques genrées soit cohérent avec les structures sociales existantes. Aussi, certaines règles formelles doivent être une validation ex-post des règles informelles issues de la tradition ou de la coutume. Ceci permettra de limiter le risque du développement en parallèle de systèmes formels et informels, généralement inefficace et coûteux. Les médias communautaires, par exemple, sont le résultat de l'interaction entre la loi formelle et les normes coutumières, lesquelles sont souvent ancrées dans la culture locale.

Par ailleurs, l'adaptation des politiques médiatiques genrées aux normes des institutions informelles ne doit pas avoir un caractère rigide. Certes, les traditions, les cultures et les normes sociales recèlent une richesse inestimable, et sont le fruit d'un processus à évolution très lente, mais, elles ne doivent pas rester figées. Et surtout, les membres de la société marocaine ne doivent pas se cacher derrière ces institutions pour contester, voire refuser la modernité et l'ouverture sur les autres dans un contexte de mondialisation. D'après un sondage mené par le Ministère de la modernisation des secteurs publics, 80

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pour cent des femmes fonctionnaires interrogées déclarent que leurs maris sont favorables à ce qu'elles occupent des postes de responsabilité, mais à condition que leur travail n'empiète pas sur leurs devoirs familiaux (Ministère de la modernisation des secteurs publics, 2010).

En somme, la réussite d'une politique médiatique genrée n'est pas indépendante du contexte dans lequel cette politique est appliquée. C'est pourquoi il est nécessaire d'adapter les règles importées à la réalité marocaine caractérisée par la cohabitation entre conservatisme et modernité. Un tel changement ne peut se faire que de façon incrémentale.

b) L'inefficacité des politiques médiatiques genrées

L'efficacité d'une politique publique donnée peut être appréhendée à travers la méthode coûts-bénéfices. Cette méthode consiste à comparer les coûts supportés et les résultats obtenus après un certain nombre d'années d'implémentation de la politique publique en question. Si les résultats positifs sont supérieurs aux coûts, la politique publique est efficace ; dans le cas inverse, elle se solde par un gaspillage et devient alors inefficace.

Dans le cas des politiques médiatiques genrées au Maroc, il semble qu'un grand fossé sépare les coûts supportés et les résultats obtenus. En effet, chaque programme lancé implique des coûts et génère des gains ou des pertes. Dans la majorité des cas, le Gouvernement affecte un budget colossal aux actions visant l'amélioration des conditions de la femme, y compris dans le paysage médiatique. Mais, une bonne partie des fonds engagés est dépensée dans la phase préparatoire (réunions, études, déplacements, etc.). Le processus d'opérationnalisation est souvent handicapé par le manque de moyens, ce qui se traduit par des résultats peu convaincants. En outre, rare les programmes achevés qui donnent lieu à une vraie évaluation ou étude d'impact. Au Maroc, comme dans la majorité des pays africains, certaines politiques publiques liées au genre sont élaborées juste parce qu'elles sont financées en partie par des organismes internationaux. Elles constituent également un outil permettant de véhiculer une image positive du gouvernement sur la scène internationale.

Outre les coûts et les résultats à caractère monétaire, l'initiation et surtout l'implémentation des politiques médiatiques genrées génèrent des coûts sociaux et donnent lieux à des résultats sociaux (pertes ou bénéfices). La répartition de ces coûts et de ces résultats n'est jamais fondée sur un critère de justice procédurale (respect de droits justes), mais sur la décision politique qui ne respecte pas toujours les normes démocratiques. Les politiciens se donnent alors pour mission de répartir les coûts et les résultats des politiques publiques selon des critères liés aux rapports de forces des individus ou groupes d'individus concernés. Ils constituent un centre d'affectation des coûts et de redistribution des résultats produits par les changements.

Principal acteur des politiques médiatiques genrées, le Gouvernement se trouve au centre de cette logique redistributive. Il peut manipuler les politiques médiatiques pour servir ses propres intérêts ou les intérêts des parties qu'il représente. Pour avoir plus de légitimité et de soutien, il n'hésite pas à développer des politiques clientélistes en distribuant des privilèges et des avantages. Plus les groupes d'intérêts sont puissants, plus ils menacent le sort des projets et programmes gouvernementaux. Le processus de marchandage qui nait entre ces groupes et les décideurs politiques se solde par une sorte gaspillage social. Les deux groupes d'intérêt les plus actifs au Maroc sont les associations féministes et les conservateurs. Même s'ils partagent l'idée que les choses doivent changer en faveur de la femme, ils n'utilisent pas les mêmes stratégies. Alors que les associations féministes défendent le principe de la liberté absolue de la femme, y compris parfois l'utilisation de son corps, les conservateurs (partis politiques de mouvance islamistes, confréries, familles traditionnelles, etc.) sont pour un changement positif qui prend en compte les normes de la religion et les normes morales. Dans ces conditions, on comprend que la tâche du Gouvernement en matière de gestion de la question féminine dans les politiques publiques des médias n'est pas chose aisée.

c) L'inutilité des politiques médiatiques genrées

L'inutilité des politiques médiatiques genrées se manifeste à travers la disproportion manifeste entre les objectifs fixés lors de l'élaboration des ces politiques et les résultats effectivement atteints. Par exemple, malgré le contenu ambitieux et précis de la Charte Nationale pour l'Amélioration de l'Image de la Femme dans les Médias promulguée en 2005, les choses ne se sont guère améliorées. L'image véhiculée dans les médias marocains sur les femmes est inchangée. Celles-ci demeurent cantonnées dans des rôles stéréotypés et des clichés sociaux dégradants. Souvent très ambitieux et peu réalistes, les objectifs fixés par les décideurs politiques sont souvent difficiles à mettre en œuvre. Dans certains cas, les politiciens sont alors obligés de réviser, voire d'abandonner certains de leurs programmes. L'exemple le plus souvent cité est le Plan d'Action Nationale pour l'Intégration des Femmes au Développement (PANIFD), qui avait mobilisé beaucoup de temps et beaucoup de ressources, mais qui n'avait jamais vu le jour en raison de la très forte opposition des islamistes.

Les politiques médiatiques genrées sont généralement bloquées au niveau de l'implémentation. Ce blocage est imputé, entre autres, à l'absence d'une vision claire en matière de mode d'emploi des politiques

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publiques et le faible niveau de compétence et d'expertise des réformateurs.

Le gouvernement marocain n'a aucune vision claire et cohérente quant à la manière de guider les politiques médiatiques genrées. Durant la phase de préparation des lois et des programmes, on relève l'absence d'un véritable débat sur le contenu et la portée des réformes à entreprendre. Et même si ce débat est lancé, il a souvent un caractère technique et élitiste. Puisque chaque groupe invité à prendre part au débat cherche à minimiser ses pertes, associées à l'exécution des réformes, l'effort est souvent concentré sur les sujets les moins litigieux, plutôt que sur les sujets prioritaires et stratégiques. La conséquence en est la baisse de l'ambition dans la conduite du changement.

Enfin, le Maroc s'est lancé dans le processus de réformes du paysage médiatique sans prendre suffisamment de temps pour former et motiver les fonctionnaires chargés de l'implémentation et du contrôle. Or le corps des fonctionnaires marocains est généralement démotivé à accomplir un changement. Ces gens n'ont plus le goût de s'occuper des affaires des citoyens ; leurs méthodes de travail n'assurent pas une transparence sur les actions publiques et leur responsabilité est loin d'être effective pour exécuter les tâches qui leur sont assignées. La défaillance du cadre de travail et du système de rémunération, l'absence d'un mécanisme efficace de gestion des carrières et la défaillance du système éducatif sont autant de facteurs qui expliquent ce type de comportement (Elmorchid, 2010a).

V. Conclusion

Au terme de cette réflexion, nous pouvons annoncer que les femmes marocaines se sont très lentement libérées de l'héritage du passé, de leur complexe d'infériorité par rapport aux hommes, pour s'intégrer progressivement dans le paysage médiatique. Pour accompagner ce processus, le gouvernement a entrepris plusieurs actions courageuses dans le but de considérer l'approche genre lors de l'élaboration des politiques publiques des médias. Mais, malheureusement, ces actions se sont soldées par des résultats assez modestes. En effet, malgré la présence du genre dans les orientations et projets des politiques publiques, la situation des femmes dans le paysage médiatique demeure préoccupante. Que ce soit au niveau de l'exercice des métiers liés aux médias, de la présence dans les programmes médiatiques constructifs (reportages, émissions, films, journaux d'information, etc.) ou de l'accès aux postes de responsabilités, la femme marocaine est très mal représentée. De même, au lieu que les choses s'améliorent, les médias contribuent à creuser davantage le fossé entre la valeur réelle de la femme marocaine et l'image que l'on se fait d'elle. Le Maroc a donc un long chemin à parcourir avant que toutes les aspirations légitimes des femmes ne soient atteintes.

Au Maroc, comme dans la majorité des pays africains, le dispositif institutionnel, juridique, organisationnel et pédagogique mis en place pour garantir les droits des femmes dans le secteur médiatique est semblable à celui de certains pays développés. Mais, à la différence de ces derniers, les efforts du Maroc butent sur des obstacles politiques et sociaux. Le niveau d'opérationnalisation du dispositif en question y est très faible. Or par rapport à sujet aussi complexe que celui de la place des femmes dans les médias, ce ne sont pas les stratégies et les lois qui importent, mais le degré de leur application. Comme nous l'avons montrée, les politiques médiatiques genrées souffrent d'un manque de pérennité et d'un déficit de visibilité sur le long terme. Dans un contexte politique et social en crise, l'effectivité, l'efficacité et l'utilité de ces politiques sont loin d'être vérifiées.

La promotion de l'égalité du genre dans les médias ne se réduit pas à de simples plan et stratégies. C'est un problème de société, qui suppose un vrai changement des pratiques et une évolution des mentalités. C'est un projet de société, qui interpelle toutes les forces vivantes de la société et appelle à des actions pédagogiques accentuées en matière de sensibilisation, de mobilisation et d'accompagnement. C'est enfin un enjeu politique majeur, car une véritable démocratie implique la pleine intégration de la femme dans tous les domaines.

Nous estimons que l'amélioration de la représentation et de l'image de la femme marocaine dans les médias passent par la mise en place d'une feuille de route, avec à la clé une politique volontariste accompagnée d'un véritable plan d'action à moyen et long terme. Une telle stratégie est nécessaire pour mieux orienter les stratégies des décideurs publics vers les vraies priorités, en particulier finir avec les clichés et les stéréotypes portant préjudice aux femmes et laissant une mauvaise impression chez l'opinion publique. Elle doit être préparée dans une logique de débat constructif, impliquant toutes les parties prenantes, et incluant un calendrier précis sur les démarches à suivre et les étapes à franchir pour arriver à des objectifs quantitatifs et qualitatifs.

Des actions parfois simples et peu coûteuses peuvent aider à la revalorisation de la place des femmes dans les médias. Citons à, titre d'exemple, la prise en compte de l'approche genre lors de l'élaboration des manuels scolaires, le renforcement de la publicité et la communication autour des activités féminines et la discrimination positive en matière d'accès aux postes de responsabilité. Aussi, l'encouragement de la recherche scientifique dans les domaines croisant genre et politiques publiques est de nature à faciliter l'évolution des pratiques. La dissémination des résultats des recherches menées pourra être l'occasion de

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proposer un évènement de grande visibilité pour occuper l'espace médiatique et proposer des réflexions novatrices, critiques et porteuses de valeurs égalitaires. Enfin, dans une société où les règles et les normes évoluent très lentement, l'institution des médias communautaires pourrait être une alternative à l'incapacité des médias conventionnels d'assumer pleinement leur rôle. En diffusant une information alternative, pertinente et accessible, ancrée dans la réalité des populations, ce type de médias peut servir à réduire le fossé qui sépare les institutions formelles et les institutions informelles. Elle peut constituer une force de propositions et répondre aux attentes et sollicitations des femmes, surtout dans les zones géographiques difficiles.

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Investment and the Third World: Investors Perspective

By Yohannes Yihdego & Owulaku Ellis kwadwo
Snowy Mountains Engineering Corporation

Abstract- The IMF world economic outlook April 2016 listed the fastest growing economies in the world. Amongst these countries are three African countries namely Senegal, Ivory Coast, and Tanzania. The growing economy of these third world countries holds huge potentials for entrepreneurs and investors alike. There several key sectors where third world countries pressing needs can be met by investor. This article tries to draw investors' attention to the potential in investing areas like electricity, hunger, unemployment, waste management, disease, education, transportation and shelter.

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Investment and the Third World: Investors Perspective

Yohannes Yihdego [α] & Owulaku Ellis kwadwo [σ]

Abstract- The IMF world economic outlook April 2016 listed the fastest growing economies in the world. Amongst these countries are three African countries namely Senegal, Ivory Coast, and Tanzania. The growing economy of these third world countries holds huge potentials for entrepreneurs and investors alike. There several key sectors where third world countries pressing needs can be met by investor. This article tries to draw investors' attention to the potential in investing areas like electricity, hunger, unemployment, waste management, disease, education, transportation and shelter.

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I. Introduction

When Africa as continent is mentioned in any subject of discussion, the first impression that lingers in the minds of many includes but not limited to war, poverty, and lack of opportunities, unemployment, disease, hunger and insecurity – a place where everything is wrong and nothing works. These thoughts are often times justified, given the fact that the leaders who are usually entrusted with resources of the continent are the some people who arrogantly create conditions that leads to the destruction of the very things they are to protect. Nevertheless, these conditions have not entirely weep the good image of Africa. It is important to note that investor perception about the Africa continent is gradually looking more positive. Entrepreneurs see a land of vast opportunities and untapped potential. Optimists like to describe Third world as the "world's last frontier" of lucrative business opportunities. While the ignorant and fearful see a dark and unpromising continent, smart entrepreneurs see the amazing business opportunities that lie beneath all of Third world's problems. Looking for serious problems and thinking of interesting and innovative ways to solve them is one of the most effective methods of finding high-potential investment opportunity.

The World Economic Forum notes that the conversation about Africa is shifting from one of "deficits" and "gaps" to one about opportunities, prospects, ventures and creativity. That's no news to companies that have paid close attention to the continent and invested there. The fast growing youth population, and urbanization is expected to drive over 50% of Africans to cities by 2050, and Africa's formalizing economy are all well known. These trends and other developments have driven a half century or more of growth in Africa, and will continue to do so.

The most lucrative opportunities in Third world are not in its crude oil, precious stones or timber. Third world's biggest jackpot lies in finding solution to many of its serious and pressing problems like a failing food and agriculture sector which use to play a major role in its economy.

Any investor who can take a keen interest in the problems outlined in this article stands the chance of making a great return on its investment in Third world. This article looks at eight serious problems in Third world that hold lucrative business opportunities and will make money for entrepreneurs who can unlock them. The articles will also try to discuss the challenges associated with investing in this areas and how to overcome them.

II. Electricity

Some people say that if you look at the Third world continent from outer space at night, it looks empty and pitch black. Maybe this is why the rest of the world refers to Third world as the 'dark continent'. According to (Sales 2015), more than 700 million (two third of the population) in Africa live without access to electricity. The problem is more prevalent in the rural areas as compared to urban areas of third world countries.

The poor supply of electricity to support everyday needs like lighting up bulbs, pumping water and charging mobile phone batteries is a big challenge in many parts of Third world countries. Electricity is such a serious problem for Third world that the growth and prosperity of its economy and the convenience of our daily lives depends on it.

Did you know that all the 40+ countries of Sub-Saharan Third world (except South Third world), with a combined population of more than 750 million people, generate roughly the same amount of electricity as Spain (a single country of less than 50 million people)? According to the World Bank, Third world arguably has the worst electric power infrastructure in the world with the lowest scores in power generation, consumption and security of supply!

But there will be demand for more power in third world countries in the next few decades, driven by

Author α: Snowy Mountains Engineering Corporation (SMEC), Sydney, New South Wales 2060, Australia;
e-mail: yohannesyihdego@gmail.com
Author σ: Engineering Supplies & Haulage Limited Osu Badu Streets, Dzorwulu, Accra, Ghana.

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economic growth, population growth and urbanization. Each percentage point in GDP growth in developing countries tends to be accompanied by growth in energy demand of 1.2 to 2.3%. Between 2015 and 2040, the population of Sub-Saharan Africa is expected to increase by 755 million, or 81%. Electricity generation will have to almost double by 2040 to maintain per capita provision.

By 2050 around one half of Africans will live in cities, compared with just over one-third today – an increase in the urban population of 800 million people. Today, urban consumers in Africa use an average three times more electricity than their rural counterparts. It is important to not the huge gab in power deficit creates a huge opportunity for institutional investors with hope of achieving great returns on their investment. The hope of achieving returns on investments comes with the difficulty of investor choice of technology and timing of investment. In recent times, the power sector in most African countries have welcomed the need for private equity investors. Smart equity investor have taken advantage of the gap. Between 2010 and 2013, there were around 27 private equity investments in energy and natural resources, with an aggregate value of US$1.2 billion ("20 facts on electricity in Africa").

Entrepreneurs like Tanzania's Patrick Ngowi are seizing the lucrative opportunities in Third world's electricity problems. By focusing on solar energy, which is freely and abundantly available in Third world, Patrick has brought electricity to thousands of homes in his country.

To date, his company (Helvetic Solar Contractors), has installed more than 6,000 small rooftop solar systems in his country and four other East Third world countries – Kenya, Uganda, Rwanda and Burundi.

And there are more ambitious entrepreneurs like him who are using the power of the sun to light up Third world.

III. Hunger

Hunger is one of Third world's biggest and most serious problems. Images of hungry and starving Third world children often make the headlines in mainstream media and have come to represent the face of the continent. Despite having more than 60 percent of the world's uncultivated arable land, a conducive climate for agriculture, and an overwhelmingly young population (more than 60% of the Third world population is under 25 years old), millions of people on the continent still go hungry. According to (Bremner 2012), Nearly 240 million people in sub-Saharan Africa, or one person in every four, lack adequate food for a healthy and active life, and record food prices and drought are pushing more people into poverty and hunger. One of the major causes of hunger in the sub-region is population (Yihdego and Paffard 2016; Yihdego et al. 2016, 2017). With a high fertility level and 40 percent of ladies in the sub-region under the age of 15years, it is expected that population will greatly increase in the coming years, hence the amount of food needed to feed the people in the region will also increase. Population in sub-Sahara Africa alone is projected to more than double from 856 million to 2 billion in 2050 ((FAO) 2015). With all these mouths to feed, agribusiness is more than likely to become a booming industry in Third world's future. Presently, Third world does not produce enough food to feed itself and has remained a net importer of food which causes third world in excess of billions annually.

There are other reasons for the serious hunger problem on our in third world countries. Apart from hunger which is induced by conflicts and natural disasters (like drought and floods), Third world's failing agriculture industry is arguably the root cause of hunger on the continent (Yihdego and, Eslamian 2016; Yihdego 2016a, 2016b). Agriculture, which used to be a booming and attractive industry, has been abandoned for white-collar jobs in the cities due the unattractiveness of the trade or perhaps, the difficulties in securing large litigate free lands for agriculture activities. About 80 percent of lands in Africa are less than 2 hectares, and while the region is becoming more urban, the rural population is still expected to grow by more than 150 million people over the next 40 years (Bremner 2012). From (Bremner 2012) studies on the Democratic Republic of Congo, we expect that farm size per person will continue to decline due to the fact that farming families are trying to distribute farm land to members to cultivate separate. Though the sharing of land among families might not affect production in aggregate if the whole land is cultivated, there could challenge if one owner dies. The unavailability of litigate free large arable lands affects investor confidence in investing their capital into this venture. With decreasing interest from ordinary people and low investments from both the business community and governments, the current state of Third world's agriculture industry makes it unable to produce the amount of food needed to feed a large and fast growing population.

Notwithstanding the challenges, there are several exciting opportunities and high returns for entrepreneurs and investors who start or invest in agribusiness. Some interesting opportunities investors can look at includes vegetable farming, cassava farming, livestock farming (fish, chicken, pigs, ostrich, and snails), palm plantation and beans. There is also a huge potential for businesses like animal feed production that support the livestock industry. The return on investment in agribusiness can rise up to 100%. Barring any unforeseen event like rain and pet destruction, an investor can hardly get it wrong with food production in third world country.

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IV. Unemployment

With one of the world's youngest populations, Third world's large and growing pool of unemployed labour is one of its biggest problems. Young people, many of who are physically and mentally capable, cannot find the jobs they need to earn a decent income for their upkeep and basic survival. Depending on whose figures you're looking at, the unemployment rate in the third world is huge (up to 50 percent or more). Since jobs must exist before people can be employed, does it mean that there are no jobs in Third world? Of course not!

In fact, Third world's economy has been growing steadily for over a decade and six of the ten fastest growing economies in the world are in Third world. A growing economy is often a clear sign that more jobs are being created. However, the main problem with the job market in Third world is that it is largely disorganized. It is quite difficult for businesses and employers to find potential employees with the right skills, education and experience for the positions they want to fill (Le Goffa and Singh 2014; Loots and Kabundi 2012; Were2015)

To a considerable part, Third world's unemployment problem has to do with information sharing rather than total unavailability of jobs. Several smart Third world youth are already rising to the challenge of solving our continent's unemployment problems. In Nigeria, Jobberman.com, which was started by three university undergrads in 2009, has become Nigeria's Number 1 job search and recruitment portal. In a country where more than 40 million able-bodied people are unemployed, Jobberman.com is helping millions of people get a job by connecting vacancies with the right candidates; saving recruitment costs for businesses.

Seeing the huge potentials in this business model, Tiger Global, a New-York based fund with investments in Facebook and LinkedIn became an investor in Jobberman.com in 2011, a little less than three years after it started. The service now has a subsidiary in Ghana and plans to roll out across Africa in the near future.

Apart from providing critical information services that help employers and potential employees to find each other, there is also another angle to the unemployment problem in Third world, unemployability. Many of the people looking for jobs in third world countries do not have the required education, training, skills and experience that make them desirable for employment. Businesses and entrepreneurs who can offer solutions to this problem in the form of skill acquisition programs, education, training and retaining are very likely to enjoy huge benefits. The cost labour in third world can be very cheap. This provide business owners the opportunity to run profitable ventures with very low direct and indirect labour related cost.

V. Waste Management

Third world is losing its natural beauty and environment to different forms of degradation especially solid waste pollution.

As Third world becomes more urbanised and the spending power of the average Third world rises, more goods will be consumed leading to even more waste. The volume of waste generated in third world countries is expected to double in the coming years as the size and population of its cities explode.

In 2009, the United Nations identified these major trends relating to waste management in Africa:

1. Poor waste management practices, in particular, widespread dumping of waste in water bodies and uncontrolled dump sites, aggravates the problems of generally low sanitation levels across the African continent.
2. Urbanization is on the rise in Africa, and this trend is expected to continue in the future. Of concern is the inability of infrastructure and land use planning methods (including for waste management) to cope with urban growth.
3. Waste management infrastructure is largely non-existent in rural areas of Africa. Improvements in infrastructure are urgently needed to combat the high cost of health services and thereby alleviate poverty and reduce rural-urban migration.
4. The gap between waste management policy and legislation and actual waste management practices is widening due to perennial capacity constraints and lack of waste management facilities for various waste streams. Access to major investments and acquiring the technical know-how needed to resolve the capacity constraints remain a tall order.
5. Waste generation is expected to increase significantly as a result of industrialization, urbanization and modernization of agriculture in Africa.
6. Changing lifestyles and consumption patterns of the growing urban middle class, in particular, is increasing the complexity and composition of waste streams in Africa.

The danger posed by this trends listed above cannot be emphasised enough. Most disease contracted by citizens of third world nations are usually as a result of poor waste. The fatality can even lead to loss of lives. The impact of providing effective waste management are largely associated the reduction or elimination of health risks, environmental degradation and impediments to urban productivity (Bartone et al. (1990). There are major investment opportunities in waste management in Africa based on the trends identified by the UN in 2009. Though companies like Zoomlion and Alliance waste management in Ghana are

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taken advantage of the vast opportunity that guarantees a maximum returns, there is still the need for massive infrastructure investment in areas like e-waste management and turning human waste into energy.

Apart from the dirty and unsightly look that heaps of waste are giving to several cities across Third world, poor waste management is closely related to, and largely responsible for, the outbreak of diseases. In addition to its undesirable effects, the way we handle and treat our waste will play a very significant role in managing Third world's natural resources in the future. Recycling waste (like kitchen waste, paper, plastic and metals) helps to reduce the pollution in our environment and provides jobs for thousands of people on our continent.

To tackle the menace of plastic waste in Nairobi (the Kenyan capital), Lorna Rutto, a former banker decided to start a small plastic recycling business. Her business uses plastic waste collected from dumpsites and garbage cans across Nairobi to manufacture fencing posts. These posts, which are used to fence houses and forest reserves, are becoming a preferred alternative to timber. So far, her innovative business has created over 7,000 fencing posts, 500 new jobs, generated more than $150,000 in yearly revenues, saved over 250 acres of forests and removed more than 1,000 tonnes of plastic waste from the environment.

Another interesting business that is solving the problem of waste disposal in Third world is DMT Mobile Toilets in Lagos (Nigeria) – one of Third world's most populated cities. In its bid to reduce the public disposal of human waste, this business provides affordable access to toilet facilities in public spaces (bus parks, events, etc) across Lagos. To date, this company has manufactured over 3,000 mobile private toilets. It produces over 200 units every month for sale and for hire across Nigeria and in the West Third world region.

The achievement of this entrepreneurs gives hope that investing waste management in third world is not only viable, but carries with it unlimited opportunities.

VI. Disease

While third world is home to about 15 percent of the world's population, third world alone accounts for nearly 24 percent of all diseases that occur in the world. Apart from poor access to essential medicines and vaccines, low quality healthcare, malnutrition, and poverty, Africa especially, it's tropical (warm) climate favours the breeding of disease vectors (especially mosquitoes which cause malaria). In addition to these factors, the rise of chronic diseases like heart attacks, cancer, respiratory diseases and diabetes is causing more deaths in third world every year.

According to a recent WHO Report, infectious diseases are the leading causes of sickness and death in developing regions. Of these infectious diseases, malaria, HIV/AIDS, pneumonia, tuberculosis, diarrhoeal diseases, and measles make up more than 90 percent of over 10 million disease-related deaths that occur in Third world every year. Most of these diseases can be treated with the right drugs. Due to the serious disease problem in third world countries, there have been huge and rapidly growing demand for drugs, medicines and other pharmaceutical products.

The size of Third world's pharmaceutical market is expected to reach nearly $45 billion by the year 2020 and entrepreneurs like Uganda's Emmanuel Katongole, and Samuel Amo Tobin are already taking advantage of this huge opportunity.

Malaria, for example is estimated to cost countries such as Nigeria and the Democratic Republic of Congo up to 1.3% of their GDP, according to the Malaria Consortium. That's why Faso Soap, the brainchild of two ingenious third world entrepreneurs brings some relief.

Comprised of shea butter, lemongrass, marigold and other natural resources that are plentiful across Third world, this soap is designed to leave an insect-repelling odour on the user's skin after bathing. It can be used to prevent against a wide range of mosquito-transmitted conditions, perhaps eventually even Zika.

The major constraints facing the development of the local pharmaceutical industry in Ghana alone has been identified by (Hasper & Gyansa-Lutherodt 2007) as follows:

1. A chaotic and unregulated pharmaceutical distribution chain that leads to high prices and which seriously compromises pharmaceutical supply chain security.
2. A focus of local production on OTC product manufacturing in a highly saturated local OTC market against the background of an 'ad hoc' local pharmaceutical market.
3. Inability to produce essential medicines that meet the standards for international tenders (i.e. WHO prequalification with its emphasis on manufacturing and product international regulatory compliance);
4. Relatively high manufacturing costs, for a number of reasons, of locally manufactured pharmaceutical products compared for example to imports from China and India;
5. Absence of a local 'enabling business environment', i.e. effective and coordinated incentives and support for local pharmaceutical production of essential drugs according to international pharmaceutical standards;
6. Difficult access to cost-effective investment;
7. Limited attention and support for pharmaceutical R&D, when clear opportunities exist;

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8. Inadequate and in-coordinated sub-region pharmaceutical regulatory framework;
9. Arguably poor perception of sub-region produced medicinal products;
10. The growing threat of counterfeit and diverted medicines – both for finished dosage forms and for active pharmaceutical ingredients (from India and China in particular).

Though this problems existed, governments have done a lot to give entrepreneurs the opportunity to venture into manufacturing. The story of Entrance pharmaceuticals and Ernest chemist can attest to the huge achievement in this area. With expected projection in population growth, investors who seek high returns on investment must start taking a chance on third world countries in this industry.

VII. Education

Education is extremely relevant in the economic growth of any nation. It is therefore logical to say that any country with higher illiteracy is most likely to face challenges than countries with higher literacy. Though education might not be the end, it is often times the means to the end. Any third world country expecting to achieve a developed status needs to invest heavily in its citizens. Unfortunately, the opposite is true in third world countries. The standard of education in many parts of this region has deteriorated terribly. Poor access to quality education at all levels, from basic primary education to university is another serious and nagging problem across third world countries. The quality is even more regrettable when it is a public institution.

The poor quality of government education and low investment in the education sector has put it in a state of crisis in many third world countries. Nevertheless, citizens of third world countries are embracing themselves with the need to eliminating poverty through good education. However, the good schools and training facilities are not affordable for many people and are not even enough to cater to the needs of third world's large and rapidly growing population. It cost parents huge fortune to educate their wards in good schools like Lincoln community and Ghana International School.

To solve the problem of inadequate opportunities for affordable quality education (especially for children from poor homes), some entrepreneurs in third world countries have come up with interesting solutions. Omega Schools, based in Ghana, is a chain of low-cost private schools that offers basic primary education to children in poor families for an incredibly low and affordable fee (less than $1 a day per student).Bridge International Schools in Kenya uses a similar low-cost model to provide affordable education to thousands of children in East Third world for less than $5 per month per student. Before these amazing businesses started, it was thought impossible to educate poor people at a profit. With this business model working successfully for other entrepreneurs, it equally replicated in other third world countries for better return.

VIII. Transport

With millions of humans and goods that are moved around every day across Third world, transportation has become central to the functioning of Third world's economy and crucial to basic survival of third world countries.

With potholed roads, poor transport networks, absent rail lines and weak water transportation, the options for moving people and goods around on the continent are quite limited. This affect the movement of people and goods seriously.

With a population that is growing faster than anywhere else on earth, transportation remains a problem of the present and future for Third world countries.

The investment opportunities in this sector is limitless with its related returns. However, the cost of raising capital for projects in these areas are often time complex and requires not only high net worth investors but people with the requisite experience to initiate and complete. Nevertheless, the current government in Ghana in its inaugural address has indicate the willingness to partner private investors to develop the transport sector as part of its agenda for growth. With such assurance coming from a third world country government and the commitment with which that assurance was made gives hope to smart investors.

IX. Shelter

After food, shelter is arguably the next most important necessity in our lives. Shelter in this regard refers to housing accommodation, office space and public buildings.

The growing migration of Third world citizens from rural to urban areas is putting a lot of pressure on available and affordable housing in cities and towns across the continent. The housing deficit in Ghana alone is estimate between 1.2million and 1.5million. Two bedrooms flat for the recent affordable housing built by the government of Ghana is being sold for 20,000 dollars. Though this is cheaper than the private estate which usually goes for a minimum 60,000 dollars and above depending on the location, there is still a profit margin.

Seeing the huge opportunities and potentials in our continent's housing problem, it's hardly any surprise that entrepreneurs like Nigeria's Aliko Dangote, who is currently African richest man, has been making very significant investments in cement production, the most vital material in building construction.

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Other building and construction materials like wood, glass, aggregates and steel have become hot-selling products in this region. Individuals, businesses and governments are making huge investments in Third world's real estate and infrastructure market. Smart entrepreneurs are buying up undeveloped land around major cities in a bid to build their own houses and possibly earn rental income from tenants who need shelter too. Other popular real estate investments are in office spaces and retail spaces; shops for traders.

X. Conclusion

In this paper, we discussed opportunities in third world countries with emphasis on electricity, hunger, unemployment, waste management, disease, education, transport and shelter. These are areas third world countries really need help. This is not to say other areas does not exist for equal attention. However, the aforementioned provides opportunities for investor expecting higher returns on their investment. Finally, the paper tried to highlight the attractive of this areas which is balanced against the considerable challenges that comes with investing in third world countries.

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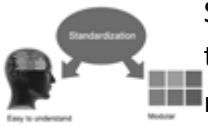


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References	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring

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