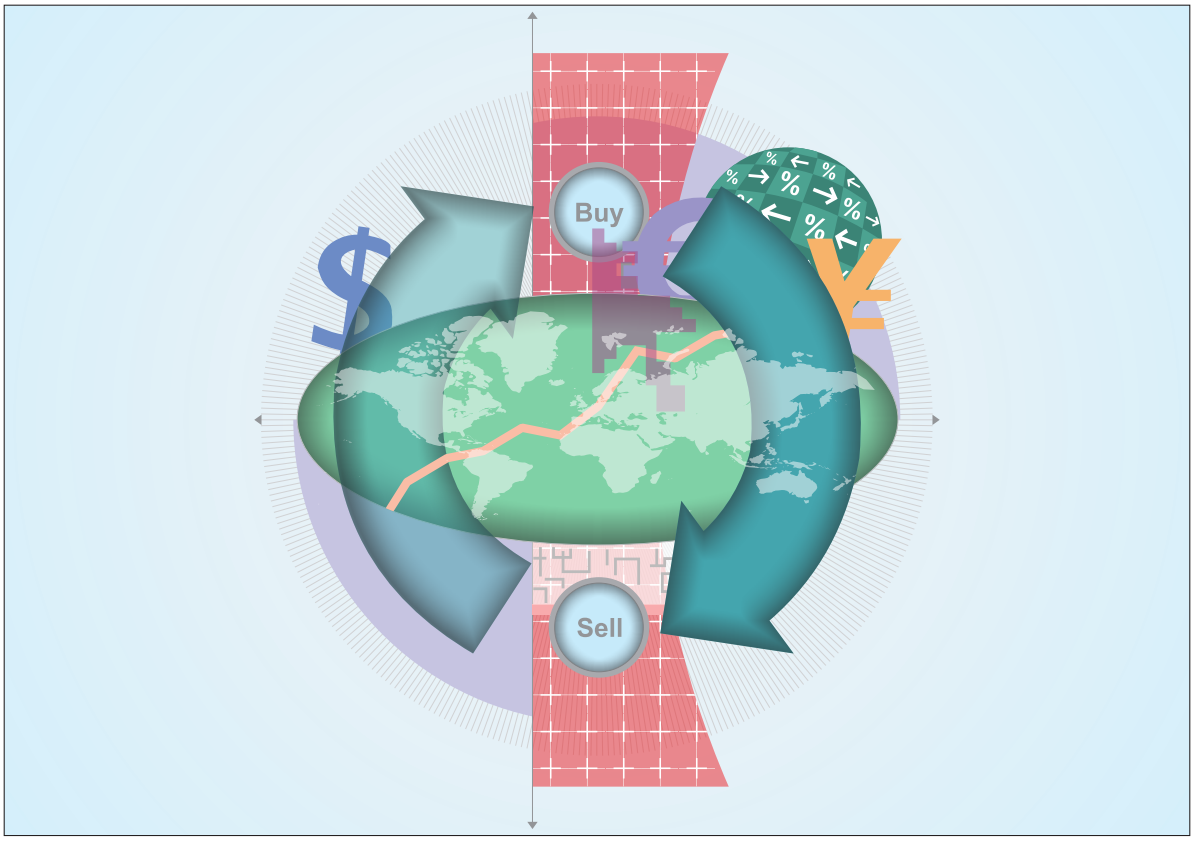

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Financial Openness Induced Growth and Poverty Reduction

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ABSTRACT

The study empirically investigates the impact of Ghana's financial openness induced growth on poverty between 1970 and 2007 using econometric analysis. We find positive long run relationship between growth and financial liberalisation. We further investigate whether the financial liberalisation benefit poor. Again, we find positive relationship between growth and standard of living but disproportionate. We identify credit channel to be effective way to reduce poverty if policy intervention could be implemented. We argue that financial liberalization should be embarked with the poor in mind.

Key words: Financial liberalization, poverty reduction, principal component method, cointegration

INTRODUCTION

Financial openness/liberalization have been dubbed as one of the growth ingredients in developing countries. The World Bank-IMF led Economic Recovery Programme (ERP) which includes macroeconomic stabilization and institutional reforms aimed at the liberalization of prices in distress and melt-down economies in 1983 were embraced by a number of developing economies. The reforms, though are blamed for economic hardships of 1990s, it still remains an important step towards financial liberalisation and integration of most financial market. In Ghana, the benefit of the liberalization is evidenced by improvement of macroeconomic indicators. Inflation dropped from 123% in 1983 to 18.0% in 1991 while real GDP growth rate increase from -0.7 to 5.4 over the same period. Although, initial success of the ERP could no be sustained in 1990s. Monetary and fiscal pressure caused inflation to increase up to 70% in 1995 and growth rate dropped to 4.02%; Ghana macroeconomic indicators have seen tremendous improvement since 2000. Inflation rate decreased from 40.5% in 2000 to 10.9% by the end of 2006. Over the same period real GDP growth increased from 3.7 to 6.2% (International Monetary Fund, 2008).

The improvement in financial and monetary indicator resulted from the financial liberalisation has also occurred during a period when poverty declined in Ghana. The number of people considered to be poor dropped from 50.59 to 29% between 1987 and 2005, although the direction of causation has not been established (GSS, 2008).

In spite of these developments, though, there has been little effort to establish the relationship between financial liberalization and poverty. Most of the concerned literature has been based on neoclassical analysis that financial liberalization raises savings mobilization and efficient allocation of resources to productive investment, both of which enhance productivity. Financial liberalization promotes economic growth through this; then increases incomes and therefore reduces poverty. On the contrary, Arestis and Caner (2004) observed that the economic and institutional changes brought about by a financial liberalization package have a more intricate consequence on the living conditions of the poor than merely through the presumed growth channel and simple as express

by implementers. This because financial liberalisations in some countries were premature due to a failure to recognize their imperfect characteristics; indeed, in many cases all those attempts led to financial crises (Arestis and Glickman, 2002). Arestis and Caner (2009) argue that If financial liberalisation is to be introduced, it must be designed with poverty reduction as its thrust in order to benefit the poor. Otherwise, the market by its nature will benefit those who already have access to economic resources or to information and those who are strategically positioned to take advantage of the opportunities offered by the market, as already experienced by many.

In the case of Ghana, Adam (2009) finds positive responds of growth to financial liberalisation. However, its impact on the poverty and human development is examined.

In this study, we examine the impact of financial liberalisation induced economic growth and poverty reduction in Ghana. To econometrically investigate impact of financial liberalisation induced growth on poverty reduction, a Standard of Living index (SLI) is computed from twelve poverty indicators using Principal Component Analysis (PCA).

Employing Johansen cointegration approach, we find the existence of long run positive relationship between financial liberalisation, economic growth; growth and poverty reduction in Ghana. We further identify the credit channel as the main channel through which financial liberation can influence growth and poverty reduction but needs policy intervention to realise its full potential. In financial liberalization theory, Shaw (1973) and McKinnon (1973) claim that the implied financial liberalization policies would increase savings and this is going to spur investments and economic growth. They argue that distortions of financial prices such as interest rates, reduces the real size of the financial system relative to the non-financial, which leads to slow real rate of economic growth. The theory suggest that the lower interest rate upper limit implications might be diminish the interest rates into negative position and this would also have a depressing influence on savings throughout the effect of inflation Bekaert *et al.* (2000) studied emerging equity markets before and after allowing foreigner's participation in equity markets and report that many of them exhibit higher average growth rates after the official liberalization. Edwards (2001) funds positive relationship between capital account liberalization and productivity performance in developed countries. On the other hand, Edison *et al.* (2002) fund mixed evidence that capital account liberalization advances long-run economic growth and that the positive effects are most pronounced among countries in East Asia.

Growth has been quite modest and not sufficient to sustain an increase in per capita income. Does economic growth guarantee poverty reduction? The answer to this is far from conclusion. IMF-IFS indicate that all developing countries that have experienced Sustained high growth have reduced their absolute poverty levels. Serieux (2008) found growth to has been quite modest and not sufficient to sustain an increase in per capita income. Klasen (2001) suggest that economic growth will reduce poverty if the growth is pro-poor one (i.e., It favours the sectors and regions where the poor exist and the factors of production that the poor own). It also hinges on how distribution of income changes with growth and on initial inequalities in income, assets and access to opportunities that allow poor people to share in growth. The available empirical studies show that growth is good for poverty reduction. Using cross-country regressions based on a sample of 62 developing countries, Ravallion and Chen (1996) find that on average, a 1% increase in per capita income led to a 3.1% reduction in the proportion of people living below the conventional $1 a day threshold. Jahilian and Kirkpatrick (2002) empirically test whether financial liberalisation influence poverty reduction through economic growth and found that growth is beneficial for the poor. Deininger and Squire (1996) and Roemer and Gugerty (1997) works support the former though different techniques were used.

The objective of the study is to empirically examine the impact of financial liberalisation or openness on poverty reduction in Ghana. The study contributes the literature in two different ways. First, it is the first study to construct poverty index for Ghana. In addition, the study fills the gap in the literature concerning the interlink between financial liberalization and poverty reduction.

MATERIALS AND METHODS

The methodology of this study is designed to evaluate the impact of the financial liberalisation on the macro-economy and poverty reduction in Ghana. Annually Standard of Living Index (SLI) from 1970 to 2007 was derived in the process using different policy measure and components. Using SLI as proxies for poverty, empirical analysis is conducted using Johansen cointegration approach and Granger-causality.

The data and variables description: With the aim of evaluating the impact of the financial liberalisation on the macro-economy and poverty reduction in Ghana, several variables were used to achieve this aim. The composition of the variables (where applicable), logic behind the inclusion of the variables and their sources is discussed below:

Financial Liberalisation Index (FLI) and its components: The Ghana's financial liberalization index is constructed using Principal Component Analysis (PCA). The components of FLI are shown in Table 1.

In constructing the financial liberalisation index, some arbitrary value between 0 and 1 is assigned to each of the financial liberalisation policy Variables depending on the implementation status. A liberalised sector takes a value of 1 and sector that remains regulated takes a value of 0. In order to capture the circumstances of partial and phase-wise gradual liberalisation of a particular sector, we assigned partial values equivalent to α/n where, n is number of phases taken for the process to complete; $\alpha = 1, 2,..., n$ represent the phase completed. For example in a three-phased deregulation process, 1/3 = 0.33 will indicate the first phase, 2/3 = 0.66 will indicate second phase and 3/3 = 1 for third phase.

Standard of living index and its components: Following similar process, thirteen standard of living dimensions are identified and presented in Table 2. Each indicator gets a score between 0 and 1 depending on the severity of deprivation of the household, 0 if there is 100% deprivation, 1 if there is no deprivation. To capture partial deprivation values 0.1, 0.5, 0.71 and so forth were used depending of level of deprivation. For example values 0.33 and 0.51 indicate 66% deprivation and 49% deprivation respectively. The percentage of all the variable except poverty headcount and income inequalities were calculated from World Bank WDI (April 2008). Poverty headcount and income inequality level of deprivation were calculated from Ghana statistical service Standard of Living Survey.

From the values assigned to the indicators presented in Table 3 and 4, the Financial Liberalisation Index (FLI) and Standard of Living Index (SLI) for Ghana are derived Using PCA. The composition of FLI and SLI are respectively expressed in the following terms:

$$FLI_t = w_1 RLR_t + w_2 INSTRL_t + w_3 CAL_t + w_4 ERL_t + w_5 CMF_t + w_6 DMT_t + w_7 IMC_t + w_8 UVB_t + W_9 SRR_t + w_{10} IRL \quad (1)$$

Table 1: Components of financial liberalization index

Variables	Indicator	Changes happened	Year
ERL	Exchange rate	Multiple system of exchange rate determination	1983
		A two-window system of exchange rate determination was introduced	1986
		Unified system adopted	1987
		Small scale interbank market developed	1990
		Fully liberalised	1992
RLR	Regulatory and legal reforms	The Banking Law (PNDCL 225) was revised.	1989
		Enactment of revised Bank of Ghana Law (PNDCL 291)	1992
		Bank of Ghana Financial Institutions (Non-Banking) Law (PNDCL 328) enacted	1993
INSTRL	Institutional restructuring	Consolidated Discount House (CDH) created	1987
		Money market formalized and creation of Security Discount Company (SDC)	1991
		Mergers and liquidation of banks and divestiture of public sector shareholding in some of the banks	1995
CAL	Capital account liberalisation	Partial liberalisation of capital account	2006
DM	Demonetisation	Ghana demonetised	1982
IMC	Monetary control	Central bank independence	1992
IRL	Interest rate	Abolition, of the maximum and minimum deposits, except the minimum saving deposit rate	1987
		Minimum lending rates for commercial banks were abolished	1988
		Commercial banks were free to determine their own lending rate	1989
		Abolition of 20% mandatory lending to agriculture	1990
		Fully liberalised	1991
CML	Capital market establishment	Ghana's capital market was established	1989
		Ghana Stock exchange started operation	1990
		Foreign investors participation with restriction	1993
		Foreign investors restriction removed	2006
SRR	Secondary reserve requirement	The secondary reserve requirement for banks were slashed	2006
UB	Universal banking	Banks were permitted to expand to other sectors not specified in their licence to undertake all banking service without new licence	2006

Source: Adam(2009)

Table 2: Components of standard of living index

Variables	Standard of living dimension	Indicator
BASHS	Birth/skilled health staff	Percentage of birth attended by skilled health worker/staff
HB	Hospital beds	No. of hospital beds per 1000
HTV	Honsehold TV	Percentage of household using TV
ISF	Improved facility	Percentage of the people with improved facilities
IWS	Improved water source	Percentage of people with improved water source
PTRP	Primary school teacher ratio	PUPIL- teacher ration in primary schools
PTRS	Secondary school teacher ratio	Student –teacher ratio in secondary schools
SEP	Primary school eurolment	Percentage of primary school eurolment
SET	Tertiary edncation eurolment	Percent of secondary school leaver entering tertiary institutions
TTP	Trained teachers in primary school	Percentage of primary school teachers who are trained
MR	Mortality rate	Mortality rate below five years
GC	Income inequality gap	Income inequality
UPL	Poverty line	Percentage of people above poverty line

And

$$SLI_t = w_1BASHS_t + w_2HB_t + w_3HTV_t + w_4ISF_t + w_5IWS_t + w_6PTRP_t + w_7PTRS_t + w_8SEP_t + W_9SET_t + w_{10}TTP_t + w_{11}UPL_t + w_{12}GC_t + w_{13}MR_t \quad (2)$$

Table 3: Eigenvalues and eigenvectors of the correlation matrix of financial liberalisation policy variables

	Eigenvectors (λ_k)		
Variables	λ_1	λ_2	λ_3
RLR	0.366446	-0.076854	-0.319575
INSTRL	0.373501	-0.079314	-0.247580
CAL	0.172842	0.595938	0.174183
ERL	0.377349	-0.149642	-0.033721
CMF	0.377126	0.000666	-0.254290
DMT	0.311993	-0.209297	0.573134
IMC	0.311993	-0.209297	0.573134
UVB	0.220993	0.388970	-0.109514
SRR	0.172842	0.595938	0.174183
IRL	0.371931	-0.127349	-0.202822
Eigenvalues	6.522645	2.094635	0.817574

Table 4: Eigenvalues and eigenvectors of the correlation matrix of standard of living policy variables

	Eigenvectors (λ_k)		
Variables	λ_1	λ_2	λ_3
BASHS	0.306584	0.092580	-0.053392
HB	-0.138284	0.661766	-0.185926
HTV	0.307443	0.125776	-0.011477
ISF	0.311523	0.094112	-0.071476
IWS	0.317116	0.083578	-0.034639
PTRP	0.295696	-0.028991	0.198888
PTRS	0.017786	0.198563	0.939086
SEP	0.303431	-0.194792	-0.006556
SET	0.310368	-0.174741	-0.042030
TTP	-0.299274	0.240204	0.103501
MR	0.198525	0.556187	-0.127100
UPL	0.311939	-0.048222	0.077553
GINI	-0.303841	-0.209090	0.003374
Eigenvalues	9.448330	1.498736	1.057305

where, w_i is the weight of the component given by the respective eigenvector of the selected principal component. The eigenvalues and eigenvectors of the correlation matrix of financial liberalisation policy and standard of living variables are presented in Table 3 and 4.

Taking the first principal component λ_1 of financial liberalisation policy variables accounting for 69% of its total variance and Standard of living Policy Variables representing 73% of its total variance for $w_{i's}$ in FLI (Eq. 1) and SLI (Eq. 2) respectively; FLI and SLI are computed. Figure 1 and 2 show graphical representations of computed FLI and SLI, respectively.

Credit to Private Sector (CPS) by financial intermediaries as a percent of GDP: Ratio of private credit by deposit money banks to GDP measures the level of activity and efficiency of financial intermediaries (banks and other financial intermediaries). It also indicates easy at which individual can obtain credit through banks and non-financial institutions. An increase in credit to private sector will increase private sector production and consequently enhance growth and

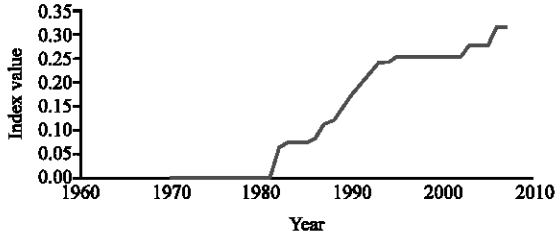

Fig. 1: Financial liberalisation index

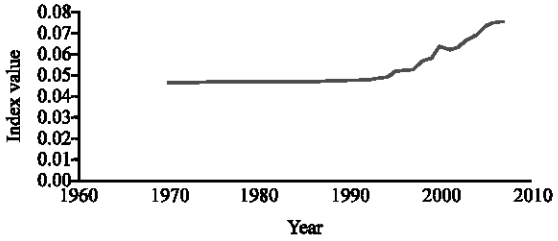

Fig. 2: Standard of living index

reduction of poverty. Annual data was extracted from IMF (International Monetary Fund, 2008) database.

Gross Domestic Product (GDP): GDP measures the economic size and growth of the Ghana's economy. Annual data was extracted from World Bank World Development Indicators, April 2008 database.

Financial deepening (M2/GDP): Financial deepening measured by the ratio of liquid money to GDP indicates an increase in provision of financial service which is geared towards all level of the society. Financial deepening increase plays important role in reducing risk and vulnerability for the poor and enhance the chances of individuals and households to access basic service, thus having direct impact on poverty reduction.

Models formulation: To investigate the relationship between financial liberalization on economic growth and further investigate channels through which financial liberalization influence poverty reduction, the following four models were estimated. With the exception of SLI and FLI, the entire variable is in logarithms.

$$GDP_t = \alpha_{11} + \alpha_{12}M2GDP_t + \alpha_{13}FLI_t + \varepsilon_{it} \quad (3)$$

$$M2GDP_t = \alpha_{21} + \alpha_{22}GDP_t + \alpha_{23}FLI_t + \varepsilon_{2t} \quad (4)$$

$$CPS_t = \alpha_{31} + \alpha_{32}M2GDP_t + \alpha_{33}FLI_t + \varepsilon_{3t} \quad (5)$$

$$SLI_t = \alpha_{41} + \alpha_{42}CPS_t + \alpha_{43}FLI_t + \alpha_{44}GDP_t + \varepsilon_{4t} \quad (6)$$

where, α_{i1}, is constant, $\forall$ i $\in$ [1, 4]. The expected coefficients of GDP, M2/GDP, FLI, CPS are positive in the entire model.

Method of analysis: In order to examine the relationship between financial liberalisation, economic growth and poverty through time, we run the following time-series tests using annual data: cointegration tests to see the co-movement of variables in the long run and to select a vector error correction model (VECM) and causality tests to analyze the direction of causalities. We specifically use multivariate cointegration analysis of Johansen (1988, 1991) for this study (Johansen, 1991).

EMPIRICAL RESULTS AND ANALYSIS

Unit root: As require for econometric time series analysis, we test for unit roots by using the Augmented Dickey-Fuller (ADF) and Philips-Perron (PP) approaches. These tests are performed on the variables in levels and first differences. The results of the unit root tests reported in Table 5 indicate that all our variables are stationary after difference. Thus all the variables are I(1).

Cointegration: Table 6 presents the results of the Johansen cointegration tests whereas Table 7 shows normalised cointegrating equations of the four models estimated. The null hypothesis of no cointegration between the variables cannot be accepted in all the models.

Table 7 indicates long-run equilibrium relationship among the variables in the set.

Model 1 = {GDP, M2/GDP, FLI}, Model 2 = {M2/GDP, GDP, FLI}, Model 3 = {CPS, M2/GDP, FLI} and Model 4= {SLI, CPS, GDP, FLI}. Estimation of models 1, 2 and 3 shows a significant positive relationship between GDP, M2/GDP and CPS respectively. This means that Ghana financial liberahsation has contributed positively toward its economic growth. One percent increase

Table 5: Unit root test (ADF Test and PP Test)

	ADF test				PP test			
	Levels	lag	1st difference	lag	Levels	lag	1st difference	lag
FLI	-1.9870	1	-4.8083**	0	0.2222	2	-4.8189**	2
SLI	1.9691	1	-7.1556**	0	5.1864	3	-4.8280**	4
LCPS	-0.5060	0	-5.0434**	0	-0.6313	2	-5.0602**	2
LGDP	-0.3972	0	-5.2869**	0	-2789	4	-5.2525**	5
LM2GDP	-0.7287	0	-6.1229**	0	-0.9682	4	-6.1487	4

Table 6: Johansen cointegration test

	Lag 2				Lag 1			
	Model 1		Model 2		Model 3		Model 4	
	GDP, M2/GDP, FLI		M2/GDP, GDP, FLI		CPS, M2/GDP, FLI		SLI, CPS, FLI, LDP	
	λ_{trace}	λ_{max}	λ_{trace}	λ_{max}	λ_{trace}	λ_{max}	λ_{trace}	λ_{max}
r = 0	36.71*	26.47*	336.71*	26.46*	33.07*	21.20*	60.34*	34.32*
r≤1	10.24	10.23	10.24	1023	11.87	7.13	26.02*	18.86*
r≤3	0.011	0.011	0.011	0.011	4.73	4.73	7.17	6.53
r≤4	_	_	_	_	_	_	0.64	0.64

Table 7: Estimated cointegrating coefficients normalised on the dependent variables

Regressors	Model 1 GDP	Model 2 M2/GDP	Model 3 CPS	Mode 4 SLI
GDP		-3.054[0.023]**		0.004 [0.00]***
FLI	1.700[0.000]***	5.194[0.000]***	2.017[0.021]**	-0.073 [0.05]**
CPS				0.018[0.00]***
M2/GDP	-0.327[0.012]**		0.432 [0.00]***	
C	-9.870572	30.148	0.604	0.879

***, **, indicate 1 and 5% significance level

in financial liberalisation index leads to 1.7% increase in GDP growth in the long-run. In model 2, we find that in the long-run, 1% increase in FLI leads to more than 5 times increase in M2/GDP.

We find in model 3 that 1% increase in FLI cause CPS to double. We can interpret that credit to private sector by banks and financial intermediaries are 2 times what would have been without liberalisation. The liberalisation of the financial sector has improved the efficiency and size of the financial sector and has also improved credit access by individuals.

To find out whether the economy growth and development in the financial sectors has benefited the poor, model 4 is estimated with SLI as dependent variable. The results in Table 6 show that economic growth as well as credit to private sector has positive impact on standard of living in Ghana. The results also show that 1% growth in Ghana's economy lead to 0.003% improvement in standard of living. This show that income distribution has deteriorated during Ghana's economic growth and that household at the bottom of the income distribution range may no gains. The income distribution between top scale and bottom scale continues to widen. This is obvious from GLSS 1 and GLSS 5 (Gini coefficient increased from 35.35 in 1987 to 42.76 in 2005) that the poor is not benefiting from Ghana's growth.

Furthermore, we find statistically significant and positive relationship between credit to private sector and standard of living index, implying that every 1% increase in credit to the private sector by the financial intermediaries reduce poverty by 0.017%. The less than proportionate relation between the credit to private sector and standard of living is due to inability of the pro-poor to access loan and in cases when they able, the high cost of the loan. The financial sector institutional structure reforms and new instruments do not satisfy the financial needs of small enterprises and the poor. For example liberalizing interest rates and encouraging entry into the formal financial institutions are not enough to improve access to credit and financial services by the poor. Increase in competition may cause financial institutions to consider only borrowers with good business prospects and sufficient collateral. Present result is in support of Bandiera *et al*. (2000) finding that financial liberalization has had little impact on the availability of credit to consumers through the formal financial sector in eight developing countries: Chile, Ghana, Indonesia, Korea, Malaysia, Mexico, Turkey and Zimbabwe. The credit to the private sector is not immediate to Pro-poor sectors of the economy such as agriculture which accounts for some 50% of the employment in Ghana and industries.

Table 8: Pair-wise granger causality tests

Null Hypothesis	Obs.	F-statistic	Prob.
FLI does not granger cause SLI	34	0.15054	0.8609
SLI does not granger cause FLI		0.30750	0.7376
CPS does not Granger cause SLI	34	1.02789	0.3704
SLI does not granger cause CPS		1.03785	0.3670
CPS does not Granger cause SLI	34	3.45678**	0.0450
SLI does not granger cause CPS		1.32377	0.2817
GDP does not granger cause SLI	34	1.77358	0.1876
SLI does not granger cause GDP		1.27332	0.2951
M2GDP does not granger cause SLI	34	0.86118	0.4332
SLI does not granger cause M2GDP		0.57097	0.5712
CPS does not granger cause FLI	34	0.09200	0.9124
FLI does not granger cause CPS		3.12665*	0.0589
GDP does not granger cause FLI	34	0.19046	0.8276
FLI does not granger cause GDP		0.26084	0.7722
M2GDPR does not granger cause FLI	34	0.18295	0.8338
FLI does not granger cause M2GDP		3.57575**	0.0409
GDP does not granger cause CPS	34	1.01397	0.3753
CPS does not granger cause GDP		0.46035	0.6356
M2GDPR does not granger cause CPS	34	0.66883	0.5200
CPS does not granger cause M2GDP		0.56689	0.5734
M2GDP does not granger cause GDP	34	0.22590	0.7992
GDP does not granger cause M2GDP		0.30184	0.7418

* and ** indicate 10 and 5% significant respectively

Granger-causality tests: To examine the direction of the causal link and short run relationship between variables identified, pair-wise Granger-causality tests are performed. In the presence of cointegrating vectors Granger-causality test is conducted base on error correction model as:

$$\Delta Y_t = \sum_{i=1}^{n} \alpha_{1i} \Delta Y_{t-i} + \sum_{i=1}^{n} \beta_{1i} \Delta X_{t-i} + \phi_{1i} \varepsilon_{t-1} + u_t \quad (7)$$

$$\Delta X_t = \sum_{i=1}^{n} \alpha_{2i} \Delta X_{t-i} + \sum_{i=1}^{n} \beta_{2i} \Delta Y_{t-i} + \phi_{2i} \varepsilon_{t-1} + v_t \quad (8)$$

In the above Granger-causality regression Eq. 7 and 8, X does not Granger-cause Y, if β_{1i} parameters are jointly zero and Y does not Granger-cause X, if β_{2i} parameters are jointly zero. These two statements form the null hypotheses:

- H_0: $\beta_{1i} = 0$, means X does not granger-cause Y
- H_0: $\beta_{2i} = 0$, means Y does not granger-cause X

The rejection of the first hypothesis means that X Granger-cause Y whereas that of 2 means Y Granger-Cause X. Simultaneous rejection of the two hypotheses indicates bidirectional causality. Table 8 presents Granger causality test performed on the variables used in the study.

We find from the estimation that GDP does not granger-cause SLI indicating short run disconnect between poverty and growth. CPS Granger-cause SLI at 5% significant level. The findings show that credit to private sector increase the wealth of the poor in the short run. There is a unidirectional causality from FLI to M2/GDP; supporting the cointegration analysis that financial liberalisation is important for financial deepening.

DISCUSSION

The finding of this study is not different from the existing financial openness –poverty reduction literature. The usual lead lag relationship between financial openness and growth and financial development is present. Financial openness increases the competition and development in and the financial sector and consequently facilitate firm growth, competition and economic (Schoar, 2009). Todaro (1997) argue that economic growth would either trickle down to the poor through job creation and other economic opportunities or create the necessary conditions for the wider distribution of the economic and social benefits of growth. The same is not true for Ghana, the growth emanate from financial openness do not benefit the poor. This consistent Kuznets's inverted-U hypothesis (Kuznets 1955, 1963) which suggest that economic growth may increase income inequality at the early stage of development but reduce it at the mature stage of industrialization. However, if the development of the financial sector is structured to make financial access to the small and medium enterprise and wider section of the population, financial openness will likely to benefit the poor (Zhuang *et al.*, 2009). This gives support to the vital role of financial sector development in supporting poverty reduction-directly through broadening the access of the poor to financial services (Zhuang *et al.*, 2009) in Ghana.

CONCLUSIONS

The study investigated financial liberalisation on economic growth and poverty reduction in Ghana. A multi-dimensional standard of living indicator, which weighs dimensions of poverty using population preferences were derived. Also, the financial liberalisation index for Ghana has been constructed by including ten different policy measures implemented during the liberalization process to aid the empirical analysis.

First, we find long run positive significant relationship between financial liberalisation and the two variables, economic growth measured by GDP and Credit to private sector. Second, financial liberalisation itself does not improve standard of living but Granger-cause private sector credit and credit to private sector Granger-cause standard of living. Lastly, 1% increase in CPS and GDP increase SLI by 0.017 and 0.003%, respectively.

The finding has several policy implications. Policy direction that seeks to increase credit to the private sector should embarked. If financial liberalisation cannot channel credit to the needed sectors of the economy to reduce poverty then something must be done to avert the consequence it may have on the poor. The need for establishing financial institutions that are specialized in certain industries or certain types of lending such as specialised financial institution to support Medium and small enterprise comes into mind. Revitalise and expand of the existing Agricultural Development Bank to play frontline role in the whole agricultural sector. This can help small and medium size enterprises with their financing needs in cases where commercial banks that dominate the financial sector lend only to large and well established firms. The conventional financial institutional lending should be revised to make it conducive and cheaper to micro-borrower.

Solidarity group lending where group members guarantee for each other should be encourage to allow the poor access credit at low cost without any form of traditional collateral.

The study believes that if financial liberalisation is embarked with the aim of making credit access to the micro-borrower, economic growth will increase and standard of living of the poor will improve.

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