Poverty and Economic Growth in Swaziland: An Empirical Investigation

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This paper examines the causal relationship between poverty reduction and economic growth in Swaziland during the period 1980–2011. Unlike some of the previous studies, the current study uses the newly developed ARDL-bounds testing approach to co-integration, and the ECM-based Granger causality method to examine this linkage. The study also incorporates financial development as a third variable affecting both poverty reduction and economic growth – thereby leading to a trivariate model. The results of this study show that economic growth does not Granger-cause poverty reduction in Swaziland – either in the short run or in the long run. Instead, the study finds a causal flow from poverty reduction to economic growth in the short run. These findings, however, are not surprising, given the high level of income inequality in Swaziland. Studies have shown that when the level of income inequality is too high, economic growth alone may not necessarily lead to poverty reduction.

Key Words: poverty, economic growth, ARDL-bounds testing approach, Swaziland
JEL Classification: C320, I320, O550

Introduction

The eradication of extreme poverty and hunger comprises the first, and possibly the most important, of the Millennium Development Goals (MDGs) of the United Nations. Despite meeting the target of halving global extreme poverty rates (by 2015), five years ahead of schedule, more than 1.2 billion people are still living on less than USD 1.25/day (United Nations 2014). Many countries in Sub-Saharan Africa and Asia are lagging behind in meeting the MDGs. In Sub-Saharan Africa for instance, there has been very little reduction (if any), in the proportion of the poor in the region. Approximately 48% of the population in the developing countries was still living below the USD 1.25/day international standard,

in 2010. In contrast, 58% of the population was living below the poverty line in 1999, and 52% in 2005 (World Bank 2014a). The slow improvement in the living standards of the poor comes in the wake of the region experiencing positive growth rates in recent years, with an average annual GDP growth rate of approximately 4.9% since 2000.

Swaziland, like many other Sub-Saharan African countries, is characterised by very high-income inequalities. With a *per capita* gross national income (GNI) of USD 2,233 in 2011, the country is classified as a lower-middle-income economy. However, the proportion of the poor in the country has remained relatively high over the years. Approximately 40.6% of the population were living on less than USD 1.25/day in 2010, while 60% of the population survived on less than USD 2/day (World Bank 2014a).

The current study adds to the literature on poverty in developing countries by investigating the causal relationship between economic growth and poverty reduction in Swaziland. The study makes use of the recently developed ARDL-bounds testing approach to co-integration, and the ECM-based Granger causality model to examine this linkage. In addition, the study incorporates a measure of financial sector development, as a third variable, affecting economic growth and poverty.

The relationship between financial development and economic growth, on the one hand, and financial development and poverty reduction, on the other hand, is well documented in economic literature. Researchers have found that financial development has a positive effect on economic growth (Caporale et al. 2004; King and Levine 1993; Christopoulos and Tsionas 2004). Likewise, financial development impacts positively on poverty (Beck et al. 2004; DFID 2004; Honohan 2004; Jalilian and Kirkpatrick 2005; Odhiambo 2009b; 2010; Jeanneney and Kpodar 2005).

To our knowledge, this might well be the first study to examine in detail the relationship between poverty reduction and economic growth in Swaziland – using modern time-series techniques. The rest of the paper is organized as follows: the second section provides an overview of the poverty and income trends in Swaziland, while the third section reviews the literature. The fourth section discusses the estimation techniques used in the analysis, as well as the regression results. Lastly, the fifth section concludes the study.

Overview of GDP and Poverty Trends in Swaziland

The population in Swaziland was approximately 1, 249 million in 2013, with nearly 79% of the total population living in rural areas. The poverty

in Swaziland mostly emanates from the high inequalities in income distribution. For instance, while the per capita GNI was over USD 2,000 in 2011, more than 50% of the total income went to the richest 20% of the population in 2010. In contrast, the poorest 20% accounted for only 4% of the total income. In addition, the Gini coefficient (which is a measure of the extent to which the distribution of income/consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution) is approximately 50.45% (World Bank 2014a).

To address the high-income inequality in the country, the government of Swaziland implemented the Poverty Reduction Strategy and Action Plan (PRSAP) in2005, through the Ministry of Economic Planning and Development. The PRSAP's target was to reduce poverty by more than 50% by 2015, and ultimately to eradicate it by 2022. The main goals of the PRSAP include: (i) macro-economic stability with sustainable economic growth; (ii) rapid acceleration of economic growth based on a broad participation; (iii) empowering the poor to generate income and reduce inequalities; (iv) improvement of the quality of life of the most vulnerable; (v) strengthening of governance institutions to increase the impact of policies for poverty reduction; and (vi) fair distribution of the benefits of growth through fiscal policy (Ministry of Economic Planning and Development 2005).

An assessment of poverty in Swaziland, as measured by international poverty measures shows that there has been a decline in poverty in the country over the years. Approximately 78.59% of the population lived on less than USD 1.25/day in 1995. This figure declined to 62.85% in 2001, and 40.63% in 2011 (World Bank 2014a).

Likewise, non-monetary measures of poverty indicate that there has been a considerable improvement in the living standards of the people of Swaziland. For instance, as shown in figure 1, overall access to sources of drinking water has improved over the years. While only about 39% of the total population had access to reliable sources of water in 1990, the figure rose to 74% in 2012. The greatest improvement has been in the provision of water to the rural population, which comprised 77% and 78% of the total population in 1990 and 2012, respectively. Improved access to drinking water increased from 25% of the population in 1990, to 69% in 2012 among the rural population.

On the other hand, access to drinking water to the urban population has remained relatively high over the years. Whereas 86% had access to drinking water in 1990; about 94% of the urban population had access to reliable sources of drinking water in 2012 (World Bank 2014b).

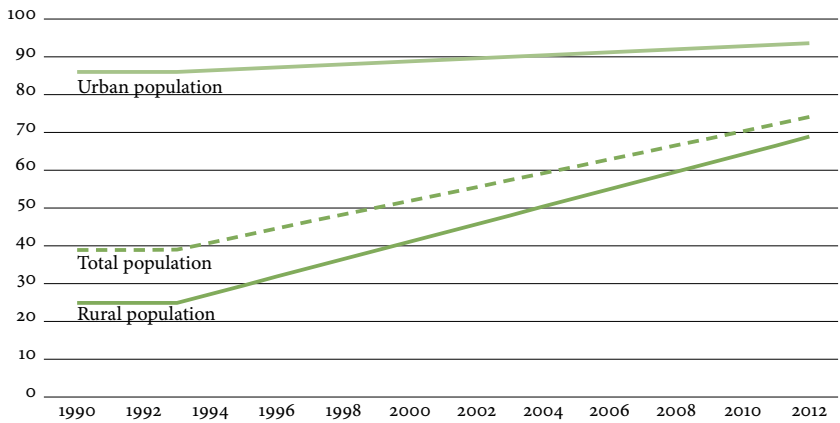

FIGURE 1 Improved Water Source in Swaziland (% of population, based on data from the World Bank 2014b)

Provision of improved sanitation has, however, been less successful than that of access to drinking water. Whereas, approximately 49% of the total population had access to improved sanitation in 1990, the figure increased to only about 58% in 2012. Similarly, in the last 22 years, improved sanitation to the rural population has increased from 44% of the population in 1990, to 56% in 2012. Access to improved sanitation to the urban population has, however, remained at about 63% of the population over the years.

A major challenge for the country is that economic growth has been declining over the years. Average per capita GDP fell from 4.79% in the 1980s, to 2.49% in the 1990s, 1.12% in the 2000s, and –0.10% during the last four years (World Bank 2014b). This is in sharp contrast to most of the other sub-Saharan African countries, which have experienced remarkable growth during the last 15 years.

Another challenge the country faces is that the manufacturing sector is one of the leading sectors that provides employment in the country; and it is a major source of income for many families. The United States is one of the major destinations of exports from the textile industry. However, with the country recently losing its African Growth and Opportunity Act (AGOA) privileges, there is a strong possibility of many job losses in the manufacturing sector, which would likely exacerbate the decline in economic growth, and possibly increase poverty in the country. Figure 2 shows the trends in per capita GDP growth in Swaziland over the years.

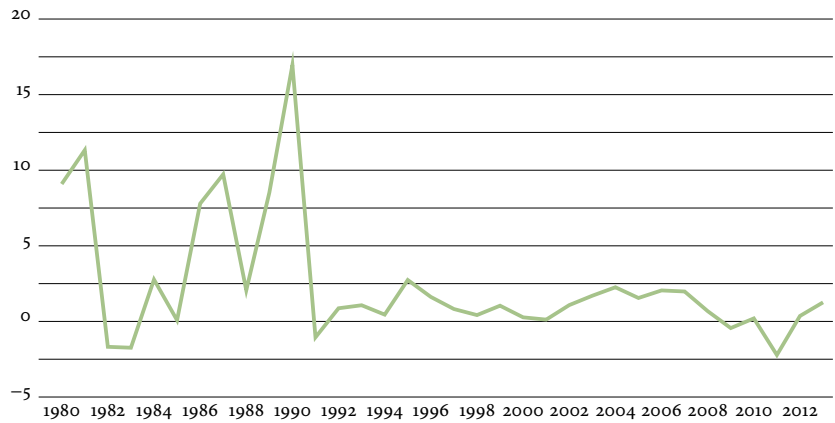

FIGURE 2 Per Capita GDP Growth in Swaziland (%, 1980–2013, based on data from the World Bank 2014b)

Literature Review

There are two contentious views on the relationship between economic growth and poverty in the literature. The 'trickle-down theory' contends that economic growth plays an essential role in poverty reduction in any given country – provided that the distribution of income remains constant. Proponents of this view believe that the benefits of higher economic growth in a country trickle down to the poor. As such, poverty reduction policies should be aimed at boosting economic growth (Aghion and Bolton 1997; Todaro 1997; Roemer and Gugerty 1997; Dollar and Kraay 2002; Norton 2002; Ravallion and Chen 2003; Bourguignon 2004; Thorbecke 2013).

On the other hand, the 'trickle-up theory' asserts that economic growth does not improve the lives of the very poor; but rather, the 'growth processes' tend to 'trickle-up' to the middle classes and the very rich (Todaro 1997). This, in turn, results in a worsening of the distribution of income (i. e., increases in inequality), which then increases poverty.

Put differently, the theory asserts that there are reinforcing factors that maintain poverty amongst the poor population and impede them from contributing to economic growth. The literature essentially contends that countries do not grow fast, because they are simply too poor to grow. This is because poverty dampens economic growth – by creating a vicious circle, whereby high poverty levels lead to lower aggregate growth.

In turn, low growth results in high levels of poverty. In such a scenario, development policies should be aimed at improving the living standards

of the poor, which in turn, would ultimately result in virtuous circles that promote economic growth (Norton 2002; Bourguignon 2004; Lopez 2006; Johannes and Joëlle 2011; Thorbecke 2013).

The extent to which economic growth results in a reduction in poverty in a particular country depends on the initial income distribution, and on how it shifts, as the economy grows. The Kuznets (1955) curve hypothesis asserts that, as incomes grow in the early stages of development, income inequality initially increases – as a wider proportion of the population partakes in the rising national income. However, if the disparity in income distribution and growth worsens, then there would be an increase in poverty (McKay 2013). Thus, the higher the income inequality in an economy, the less effect growth would have on reducing poverty (Lustig, Arias, and Rigolini 2000).

Notable studies on the relationship between poverty and growth include those by De Janvry and Sadoulet (2000), Ravallion and Chen (2003), Basu and Mallick (2008), Odhiambo (2009a; 2011), Sala-i-Martin and Pinhovskiy (2010), Arif and Farooq (2011), Young (2012), McKay (2013), and Okoroafor and Chinweoke (2013). De Janvry and Sadoulet (2000) analysed the determinants of change in poverty and inequality in 12 Latin American countries for the period 1970–1994. They found evidence suggesting that per capita aggregate income growth leads to a reduction in the incidence of urban and rural poverty.

Ravallion and Chen (2003) calculated the distributional component of a poverty measure in China in the 1990s,by fixing the mean relative to the poverty line. In addition, they calculated the mean growth rate for the poor. They found that the changes in the distribution of income were poverty reducing only in the early part of the decade. Basu and Mallick (2008) made use of several measures to examine the relationship between economic growth and poverty in India. They found little evidence to suggest that economic growth led to a reduction in poverty. They concluded that the emergence of capital-labour substitution had inhibited the trickling down of the benefits of economic growth to the poor.

Using the ARDL-Bounds testing approach, Odhiambo (2009a) examined the causal relationship between financial development, economic growth and poverty reduction in South Africa for the period 1960–2006. The author found that a unidirectional causal flow from economic growth to poverty reduction existed in South Africa. Sala-i-Martin and Pinhovskiy (2010) estimated income distributions, poverty rates, and inequality and welfare indices for African countries for the period 1970–

2006. They found that the recent spurt in growth in Africa was accompanied by a symmetrical and sustained reduction in poverty, and thus, had a 'trickle-down' effect.

In a later study, Odhiambo (2011) investigated the dynamic relationship between economic growth, unemployment, and poverty reduction in South Africa for the period 1969–2006 using the ARDL-Bounds testing approach. The author found no evidence of a causal relationship between poverty reduction and economic growth in South Africa. Young (2012) uses estimates of the level and growth of real consumption to investigate changes in poverty in 29 sub-Saharan and 27 other developing countries. The author found that living standards in sub-Saharan countries have improved during the last two decades – thereby implying a reduction in poverty.

McKay (2013) analysed the growth and poverty reduction nexus in 25 of the largest sub-Saharan countries in the last two decades, using information from household surveys. The author found that there has been a significant reduction in poverty in most of these countries. However, the reduction in non-monetary poverty was to a lesser extent than that of monetary poverty. Okoroafor and Chinweoke (2013) made use of the OLS technique to examine the relationship between poverty and economic growth in Nigeria for the period 1990–2011. They found no evidence of a correlation between the two variables. They attributed this to the poor attitude of government towards human-capital development.

Estimation Techniques and Empirical Analysis

STATIONARITY TESTS

Although the ARDL-bounds testing approach does not require all the variables included in this analysis to be integrated of the same order, it requires that variables be either integrated of order zero [i. e. I(0)], or order one [i. e. I(1)]. In other words, the technique cannot be used when any of the variables in the regression analysis is integrated of order two or higher.

Consequently, it is important to conduct a unit root test, in order to ensure that none of the variables included in this analysis is I(2) or higher. For this purpose, three unit root tests have been used, namely the Phillips-Perron (PP) Test, the Dickey-Fuller GLS Test and the Ng-Perron Test. The results of these tests in levels are reported in tables 1–3.

The results reported in tables 1 and 2 show that all the variables employed in this study are non-stationary in their levels. The results of the

TABLE 1 Stationarity Tests of Variables: Phillips-Perron and Dickey-Fuller-GLS Tests

Variable	Phillips-Perron				Dickey-Fuller-GLS			
	Without trend		With trend		Without trend		With trend	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Ly/N	−2.37	−4.81***	−1.07	−5.00***	−1.13	−3.42***	−1.02	−4.59***
LPOV	−0.78	−4.96***	−2.19	−5.09***	−0.71	−4.32***	−1.71	−5.22***
LFD	−1.39	−5.55***	−0.86	−6.19***	−1.21	−4.77***	−1.14	−5.95***

NOTES Column headings are as follows: (1) level, (2) 1st difference. The truncation lag for the PP tests is based on Newey and West (1987) bandwidth. Critical values for Dickey-Fuller GLS test are based on Elliot-Rothenberg-Stock (1996, table 1). *** denotes statistical significance at the 1% level.

TABLE 2 Stationarity Tests of Variables: Ng-Perron Test (Level)

Variable	Without trend				With trend			
	MZ	MZ_t	MSB	MPT	MZ	MZ_t	MSB	MPT
Ly/N	−5.56	−1.54	0.28	4.74	−1.90	−0.76	0.39	34.63
LPOV	−1.47	−0.69	0.47	13.33	−3.21	−1.23	0.38	27.49
LFD	−2.89	−1.11	0.38	8.26	−2.92	−1.01	0.34	26.03

TABLE 3 Stationarity Tests of Variables: Ng-Perron Test (First Difference)

Variable	Without trend				With trend			
	MZ	MZ_t	MSB	MPT	MZ	MZ_t	MSB	MPT
DL$y/N$	−11.39**	−2.27**	0.19**	2.59**	−15.29*	−2.76*	0.18*	5.97*
DLPOV	−14.19***	−2.65***	0.19**	1.75***	−22.65**	−3.31**	0.14**	4.35**
DLFD	−11.40**	−2.34**	0.20**	2.31**	−75.44***	−6.12***	0.08***	1.28***

NOTES *, ** and *** denote 10%, 5% and 1% level of significance, respectively.

Phillips-Perron (PP), the Dickey-Fuller – GLS and Ng-Perron tests reject the stationarity – irrespective of whether the test is conducted at the 1%, 5% or 10% levels of significance. The variables are, therefore, differenced once, in order to perform stationarity tests on differenced variables.

Based on the results reported in tables 1 and 3, it is clear that after differencing the variables once, all the variables were found to be stationary. The results of all the unit-root tests employed here show that all the three variables are integrated of order one. This applies irrespective of whether the variables are estimated with or without trend. This shows that none of the variables is integrated of order 2 or higher. Consequently, we can now

use the recently introduced ARDL-bounds testing approach to examine the long-run relationship between these three variables.

CO-INTEGRATION TEST: THE ARDL-BOUNDS TESTING PROCEDURE

The Autoregressive Distributed Lag (ARDL)-Bounds model used in this study can be expressed as follows (see also Odhiambo 2011):

$$\begin{aligned}\Delta \ln y/N_t = {} & \alpha_0 + \sum_{i=1}^{n} \alpha_{1i} \Delta \ln y/N_{t-i} + \sum_{i=0}^{n} \alpha_{2i} \Delta \ln \mathrm{POV}_{t-i} \\ & + \sum_{i=0}^{n} \alpha_{3i} \Delta \ln \mathrm{FD}_{t-i} + \alpha_4 \ln y/N_{t-1} + \alpha_5 \ln \mathrm{POV}_{t-i} \\ & + \alpha_6 \ln \mathrm{FD}_{t-i} + \mu_t, \end{aligned} \tag{1}$$

$$\begin{aligned}\Delta \ln \mathrm{POV}_t = {} & \beta_0 + \sum_{i=1}^{n} \beta_{1i} \Delta \ln \mathrm{POV}_{t-i} + \sum_{i=0}^{n} \beta_{2i} \Delta \ln y/N_{t-i} \\ & + \sum_{i=0}^{n} \beta_{3i} \Delta \ln \mathrm{FD}_{t-i} + \beta_4 \ln \mathrm{POV}_{t-i} + \beta_5 \ln y/N_{t-1} \\ & + \beta_6 \ln \mathrm{FD}_{t-i} + \mu_t, \end{aligned} \tag{2}$$

$$\begin{aligned}\Delta \ln \mathrm{FD}_t = {} & \delta_0 + \sum_{i=1}^{n} \delta_{1i} \Delta \ln \mathrm{FD}_{t-i} + \sum_{i=0}^{n} \delta_{2i} \Delta \ln y/N_{t-i} \\ & + \sum_{i=0}^{n} \delta_{3i} \Delta \ln \mathrm{POV}_{t-i} + \delta_4 \ln \mathrm{FD}_{t-i} + \delta_5 \ln y/N_{t-1} \\ & + \delta_6 \ln \mathrm{POV}_{t-i} + \mu_t, \end{aligned} \tag{3}$$

where $\ln y/N$ is the log of real per capita income, $\ln \mathrm{POV}$ is the log of private consumption per capita (a proxy for poverty reduction), $\ln \mathrm{FD}$ is the log of domestic credit to the private sector (a proxy for financial sector development), μ_t is white noise error term, and Δ is the first difference operator.

The annual time-series data, which cover the period 1980–2011, have been used in this study. The data were obtained from various issues of the International Financial Statistics (IFS) and the World Development Indicators.

Due to the lack of time-series data on poverty in most developing countries, a number of proxies have been proposed in the literature as

possible measures of poverty. For example, some previous studies have used datasets based on Deininger and Squire (1996) and Lundberge and Squire (1998). These datasets, give both the income and headcount data for the poor, as well as the Gini coefficient. Others have, however, used the annual income per capita as a proxy for poverty.

Unfortunately, the annual income per capita is somewhat unreliable – as it fails to account for other dimensions of poverty (see Odhiambo 2009a; 2011). On account of this weakness, we decided to use per capita consumption rather than per capita income as a proxy for poverty (see also Odhiambo 2009a; 2011; Quartey 2005). Moreover, previous studies have shown that consumption expenditure among the poor is usually more reliably reported; and it is more stable than income (see Ravallion 1992). Hence, our assumption is that the higher the per capita private consumption, the lower the poverty rate in the study country, and vice versa. This measure is also consistent with the World Bank's definition of poverty as, 'the inability to attain a minimal standard of living,' when measured in terms of basic consumption needs (World Bank 1990).

The current study uses the newly developed ARDL-bounds testing approach to examine the causal relationship between economic growth, financial development and poverty reduction in Swaziland. The ARDL-bounds testing approach was originally introduced by Pesaran and Shin (1999) and later extended by Pesaran, Shin, and Smith (2001). It involves two steps. In the first step, the appropriate lag lengths of the differenced variables in Equations (1)–(3) are selected. For this purpose, we use the Schwartz-Bayesian Criterion. In the second step, we apply the bounds-*F*-test to equations (1)–(3), in order to establish a long-run relationship between the variables of economic growth, poverty reduction and financial development. The results of the bounds test are reported in table 4.

The results reported in table 4 show that the calculated *F*-statistic is higher than the upper-bound critical value in the two equations, namely poverty reduction and financial development, but not in the economic growth equation. The calculated *F*-statistics in the poverty reduction and financial development equations are higher than the asymptotic critical values at the 1% and 5% levels, respectively. This, therefore, confirms the existence of a co-integration relationship among economic growth, poverty reduction and financial development in these two equations. Unlike in the case of poverty reduction and financial development, the calculated *F*-statistic in the economic growth equation is lower than the upper-bound critical value, which means that the null hypothesis of no co-integration cannot be rejected in this case.

TABLE 4 Bounds *F*-test for Co-integration

Dependent variable		Function		*F*-test statistic	
ln*y*/*N*		ln *y*/*N* (lnPOV, lnFD)		1.9701	
lnPOV		lnPOV (ln*y*/*N*, lnFD)		6.4101***	
lnFD		lnFD(ln*y*/*N*, lnPOV)		4.8963**	
Asymptotic critical values					
1%	1%	5%	5%	10%	10%
I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
4.13†	5.00†	3.10†	3.87†	2.63†	3.35†

NOTES ** and *** denote statistical significance at the 5% and 1% levels, respectively. † Pesaran, Shin, and Smith (2001, 300).

GRANGER NON-CAUSALITY TEST

Having established that there is a long-run relationship between economic growth, poverty reduction and financial development, the next step is to examine the short-run and long run causality between these variables. For this purpose, we use the following error-correction based Granger causality model in a trivariate setting (see also Odhiambo 2011; Narayan and Smyth 2006; 2008).

$$\Delta \ln y/N_t = \alpha_0 + \sum_{i=1}^{n} \alpha_{1i} \Delta \ln y/N_{t-i} + \sum_{i=0}^{n} \alpha_{2i} \Delta \ln \mathrm{POV}_{t-i} + \sum_{i=0}^{n} \alpha_{3i} \Delta \ln \mathrm{FD}_{t-i} + \alpha_4 \mathrm{ECM}_{t-1} + \mu_t, \quad (4)$$

$$\Delta \ln \mathrm{POV}_t = \beta_0 + \sum_{i=1}^{n} \beta_{1i} \Delta \ln \mathrm{POV}_{t-i} + \sum_{i=0}^{n} \beta_{2i} \Delta \ln y/N_{t-i} + \sum_{i=0}^{n} \beta_{3i} \Delta \ln \mathrm{FD}_{t-i} + \beta_4 \mathrm{ECM}_{t-1} + \mu_t, \quad (5)$$

$$\Delta \ln \mathrm{FD}_t = \delta_0 + \sum_{i=1}^{n} \delta_{1i} \Delta \ln \mathrm{FD}_{t-i} + \sum_{i=0}^{n} \delta_{2i} \Delta \ln y/N_{t-i} + \sum_{i=0}^{n} \delta_{3i} \Delta \ln \mathrm{POV}_{t-i} + \delta_4 \mathrm{ECM}_{t-1} + \mu_t, \quad (6)$$

where ECM_{t-1} is the lagged error-correction term obtained from the long-run equilibrium relationship.

TABLE 5 Granger Non-Causality Test

Variable	$\Delta \ln y/N_t$	$\Delta \ln POV_t$	$\Delta \ln FD_t$	ECM_{t-1}
$\Delta \ln y/N_t$	–	4.735 (0.0185)**	0.334135 (0.7192)	–
$\Delta \ln POV_t$	0.331007 (0.7219)	–	2.711782 (0.0896)*	−0.070692 [−0.760714]
$\Delta \ln FD_t$	6.932 (0.0049)***	1.612626 (0.2231)	–	−0.254334*** [−3.551433]

NOTES ***, ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

The causality in this case is examined through the significance of the coefficient of the lagged error-correction term and the *F*-statistic. The results of the causality tests are reported in table 5. While the short-run causality is represented by the significance of the *F*-statistic, the long-run causality is determined by the *t*-statistic on the coefficient of the lagged error-correction term (see also Odhiambo 2009b; 2011; Narayan and Smyth 2006). The results of the causality tests are reported in table 5.

The results reported in table 5 show that economic growth does not Granger-cause poverty reduction in Swaziland. This applies irrespective of whether the causality test is conducted in the short run or in the long run. Instead, the results show that it is poverty reduction that Granger-causes economic growth in the short run. The causality from economic growth to poverty reduction has been rejected by the coefficients of the error-correction term and the *F*-statistic in the poverty reduction equation, which were found to be statistically significant.

The short-run causality from poverty reduction to economic growth, on the other hand, has been accepted by the corresponding *F*-statistic, which is statistically significant in the economic growth equation. Other results show that: (i) There is a distinct short-run and long-run causal flow from economic growth to financial development in Swaziland; and (ii) financial development Granger-causes poverty reduction in Swaziland in the short run.

Conclusion

In this study, we have examined the causal relationship between poverty reduction and economic growth in Swaziland – using time-series data from Swaziland. There are currently two conflicting views regarding the

causal relationship between economic growth and poverty reduction. The first view posits that higher economic growth trickles down to the poor. The second view, however, maintains that economic growth does not necessarily lead to poverty reduction. In fact, the latter view argues that the beneficial effects of economic growth 'trickle up' to the middle-class and the super rich. Unlike some of the previous studies, the current study makes use of the recently developed ARDL-bounds testing approach to co-integration and the ECM-based Granger-causality model to examine the dynamic linkage between economic growth and poverty reduction in Swaziland.

The results of this study show that economic growth does not Granger-cause poverty reduction in Swaziland – either in the short run or in the long run. Instead, the study finds a causal relationship from poverty reduction to economic growth in the short run. These findings, however, are not surprising given the high level of inequality in Swaziland. Studies have shown that when the level of income inequality is too high, economic growth alone does not necessarily lead to poverty reduction. Previous studies have shown that economic growth is unlikely to trickle down to the poor when the country's level of income inequality is high. Swaziland, whose GINI coefficient is estimated to 50.45, is currently ranked number eight (8) in Africa-based on the current CIA country comparison. Other results show that: (i) There is a distinct short-run and long-run causal flow from economic growth to financial development in Swaziland; and (ii) financial development Granger-causes poverty reduction in Swaziland in the short run.

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