An Empirical Robustness of Okun's Law in South Africa: An Error Correction Modelling approach

Ntebogang Moroke (Dr)*

North West University, Faculty of Commerce and Administration, Corner Dr Albert
Luthuli and University Drive, P/Bag X2046, Mmabatho , 2735, South Africa.
Email address: Ntebo.Moroke@nwu.ac.za

Gontse Patricia Leballo

David Mbathi Mello (Prof)

Faculty of Commerce and Administration, North West University, South Africa

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Abstract

Key intension of this paper was to verify Okun's law in the South African perspective using data of the period 1990Q1 to 2013Q1. After detrending the series, the first lag and rank were used in the analysis to estimate Okun's coefficient. The coefficients obtained were not in accordance with an acclaimed 3%. The short run model confirmed that a speed of 12.8% per quarter may be required to enable the system of unemployment rate in the country to be inverted back to normal. Toda-Yamamoto causality test reported no feedback associations between unemployment and GDP in SA. Empirically, evidence provides positive coefficients implying inapplicability of Okun's law to South Africa. Nonetheless, unemployment still remains high according to the South African standards and it has to be dealt with amicably. The paper recommends to government and policy makers to up their games by employing economic policies that are more focused on to operational changes and makeover in workforce market.

Keywords: Cointegration, Economic growth, Error correction modelling, Okun's law, Unemployment rates

1. Introduction

Most economies, irrespective of their classification status, have their eyes and apprehensions on issues around unemployment and economic production. These two are the most important and closely monitored macroeconomic indicators worldwide. Moreover, unemployment is considered the most challenging and pervading problem faced by most economies. This indicator is also regarded as the basis of poverty and economic dispersion. Due to the emergence of the global economic crises, an accumulative rate of unemployment spilled over in developed nations of the world. Miskolczi, Langhamrova and Fiala (2011) view economic production as an indicator which politicians and economists use to manage efficiency of the economy and businesses. They further emphasise this indicator as being useful in maintaining social and political stability of the country. Subconsciously, high rates of unemployment could mean that available labour resources are not being used efficiently, not allocated at all or inaptly allocated. This has given rise to unrelenting debate around unemployment-economic productivity nexus. However, evidence of effective maximization of resources result in full employment, which is one of the primary economic goals of a country.

Bodies such as policy makers, governmental and non-governmental agencies are continually in dispute on whether or not unemployment can be enhanced with productivity growth without affecting, say, the standard of living. This controversy has borne Okun's (1962, 1970) law which propped relationships between unemployment and economic growth. Okun proposes that if indeed relations between these variables exist, such relations may tend to change over time due to changes in productivity growth rates. Dritsaki and Dritsakis (2009) is in support of Okun's law asserting the relation between the said variables as being inverse, with a decrease in production reflecting an increase in the rate of unemployment. This provides a room to use time series data applying statistical methods in order to determine connections between the variables. Laudmann (2004) proposes that the nature of the mechanism networking unemployment and economic growth should be considered.

This study is important due to the issue of unemployment in SA which has drawn a lot of attention to residents. The

problem appears to be very resilient causing some flux especially to graduates and people equipped with different skills. Likewise, the country is witnessing remarkable trends in terms of economic growth yet it looks like the two are not influential to each other. More emphasis is being placed on the two, but the problem of unemployment is still staggering giving birth to issues such as corruption, intensified crime rates, etc. This paper intends to verify the soundness of Okun's law in SA applying the error correction model (ECM) techniques to quarterly data collected between 1990 and 2013. Differencing mechanism is used in detrending the series. The expected results are both the long and short run coefficients which will be used to make inferences about the applicability of the said law to South African economies. This study is innovative in that no study has previously applied the ECM to quarterly data in the country; let alone authenticating the applicability of Okun's law in the South African economy. Using the findings of this study, suggestions may be formulated and submitted to policy makers. Unemployment may be problem of the past in SA as a result of these suggestions.

2. Brief Literature Review

Okun's law (1962, 1970) assumes the existence of a negative empirical relationship between changes in unemployment rate and real output. His law postulates that a 1 % increase in the economic growth above the growth in potential output leads to only 3 % in reduction of unemployment. In the contrary, percentage increase in unemployment implies approximately an excess of 3 % loss in GDP growth. Simply, this implies that GDP growth must be equal to its possible growth just to keep the level of unemployment rate in parity. Thus reducing unemployment suggests that the rate of GDP growth must be above the growth rate of potential output. As highlighted by Lal, Muhammad, Jalil and Hussain (2010), Okun's law further defines an inverse association between cyclical fluctuations in the output and unemployment gaps, where the values of coefficients vary from region to region and time to time. Several studies have tested the validity of Okun's law for different regions during different time periods and employing different methods.

Kangasharju, Tavera and Nijkamp's (2012) study checked the validity of Okun's law for Finnish region. The existence of cointegration was tested using alternative statistical methods such as the residual based test and conditional error correction model. Long run relationship between regional output and regional unemployment appeared to be asymmetric. The impact of GDP expansion on unemployment was found to be smaller in absolute value than the impact of a GDP contraction.

Kreishan (2011) tested the relationship between unemployment and GDP for Jordan during the period 1970 to 2008. This study used methods such as the augmented Dickey-Fuller (ADF) test (1979), cointegration and simple regression in the analysis. The empirical results could not confirm Okun's law for Jordan, suggesting that the lack of economic growth has no effect on the unemployment problem in Jordan.

Moosa (2008) investigated the soundness of Okun's law in four Arab countries, namely Algeria, Egypt, Morocco and Tunisia. The study findings showed that output growth does not translate into employment gains for these countries suggesting a statistically insignificant Okun's coefficient.

Noor, Nor and Ghani's (2007) study examined the relationship between unemployment and output growth for Malaysia during the period 1970 to 2004. ADF and Phillips-Perron unit root tests were used together with regression analysis. The study reported a negative relationship between the variables. Okun's coefficient -1.75 was found to be much lesser than the anticipated. These findings provided support for the argument that the slope coefficient in Okun's model is unstable.

Numerous other studies that have empirically investigated the relationship between output and unemployment are for example (Lee, 2000; Viren, 2001; Silverstone and Harris, 2001; Sogner and Stiassny, 2002). In general, these studies revealed the validity of the relation between output and unemployment rate though the estimates of Okun's coefficient were reported to be evidently different across countries and regions.

To summarise, empirical and economic approach is used in different scenarios. In almost every study, relationship between two common variables namely unemployment and output have been studied. Gap and difference versions have been applied to produce Okun's coefficient which explains unemployment-output nexus. Techniques such as the Hodrick-Prescott (HP) and the Kalmar filtering have been used to smooth the data in accordance with the ECM and the cointegration methods. However, none of the studies reviewed considered quarterly data and application of Toda-Yamamoto causality. Also, general findings could not proof the rationality of Okun's claim with the chosen methods and data.

3. Data and Methodology

3.1 Data

The study uses quarterly data on unemployment rates and economic growth (GDP) obtained from the South African Reserve Bank website. The data covers the period 1990 Q1 to 2013 Q1. Unemployment rate is an independent and GDP is a dependent variable both measured in percentage changes. The choice of these variables is in accordance with Okun's law. Statistical software analysis (SAS) version 9.3 is used to execute the analysis. The two variables are briefly defined below:

3.2 Model specification

This study tests the validity of Okun's law using the data on SA unemployment rates and GDP. The model in simple functional and differenced form is presented as:

$$Y_t - Y_{t-1} = \beta_0 + \beta_1(X_t - X_{t-1}) + \varepsilon_t \quad (1)$$

The log-linearized form of (1) becomes:

$$\ln(Y_t - Y_{t-1}) = \beta_0 + \beta_1 \ln(X_t - X_{t-1}) + \mu_t \quad (2)$$

Okun (1970) suggested a gap model which is used for further analysis in this paper. The left-hand side of this model represents the output gap and right-hand side represents the unemployment gap. The gap model is a representation of (2) as follows:

$$\ln(Y_t - Y_t^*) = \beta_0 + \beta_1 \ln(X_t - X_t^*) + \mu_t \quad (3)$$

Where Okun's coefficient β ($\beta < 0$) explains the magnitude of variation in the unemployment rate to changes in output, with μ_t denoting the white noise error term, β_0 a constant term, β_1 is an unknown coefficient of unemployment rate and t is time trend. $(Y_t - Y_{t-1})$ denotes differences in GDP and $(X_t - X_{t-1})$ differences in unemployment rate gap. Y_t^* refers to the log of potential output and X_t^* designates the natural rate of unemployment.

3.3 Method

This paper employs the modified Granger causality methodology by Toda-Yamamoto (1995) to determine the direction of causality between unemployment rate and economic growth denoted as GDP. This method was further suggested by Alimi and Ofonyelu (2013). Prior to applying this method, variables are tested for stationarity and cointegration between these variables is also determined. In the main, the paper intends scrutinizing the validity of Okun's law to SA.

3.3.1 Unit root test

The VAR model in establishing the relationship among variables becomes more efficient on condition that the variables are stationary. This therefore requires before conducting a Granger causality test based on the VAR that the time series is stationary (Sevitenyi, 2012). If the series is non-stationary, it implies the variables may be cointegrated. It is therefore expected that stationarity and cointegration analysis of variables be assessed prior to using Granger Causality test. This may also help in avoiding the problem of spurious regression. Greene (2003) recommended the ADF test of unit root. The following equations are representations of the ADF test;

$$\Delta Y_t = \alpha + \beta X_{t-1} + \sum_{i=1}^n \beta_j \Delta X_{t-1} + \varepsilon_t \quad (4)$$

$$\Delta Y_t = \alpha + \gamma_t + \beta X_{t-1} + \sum_{i=1}^n \beta_j \Delta X_{t-1} + \varepsilon_t \quad (5)$$

Equations (3) and (4) represent the ADF functions without and with trend respectively. $Y_{t-j} = X_{t-j} - X_{t-j-1}$ for $j = 0, 1, 2, \dots, p-1$ and ε_t is a white noise process. The ADF test statistic is calculated as;

$$\hat{\tau}_{ADF} = \frac{\hat{\phi} - 1}{se(\hat{\phi})} \quad (6)$$

The null hypothesis of a unit root $H_0: \phi = 1$ is rejected if $\hat{\tau}_{ADF}$ is less than the appropriate critical value at some

level of significance. Critical values are obtained from the Mackinnon tables. Rejection of the null hypothesis implies that cointegration between the variables is necessary.

Statistical tests for the null hypothesis of trend stationary $I(0)$ is less existent. This is due to the difficulty in the theoretical development. This paper uses the KPSS test which was introduced in Kwiatkowski *et al.* (1992) to test the null hypothesis that an observable series is stationary around a deterministic trend. This helps in checking the authenticity of the ADF test. Kwiatkowski *et al.* (1992) suggested the application of this test so as to enable researchers to test whether the series have a deterministic trend versus the stochastic trend.

The setup of the problem is based on the assumption is that the series is expressed as the sum of the deterministic trend, random walk r_t , and stationary error ε_t , that is:

$$y_t = \alpha + \beta_t + r_t + \varepsilon_t, \quad (7)$$

where $r_t = r_{t-1} + e_t$, $e_t \sim iid(0, \sigma_e^2)$, and an intercept α is assumed to be equal to zero. The null hypothesis of trend stationary is specified by $H_0: \sigma_e^2 = 0$. The alternative hypothesis that $\sigma_e^2 \neq 0$ implying there is a random walk component in the observed series y_t .

Under stronger assumptions of normality and *iid* (independent and identical distribution) of α and ε_t , a one-sided Lagrange multiplier (LM) test of the null that there is no random walk, i.e. $\sigma_e^2 = 0$, $\forall t$ can be constructed as follows:

$$KPSS = n^{-2} \sum_{t=1}^n \frac{S_t^2}{\hat{\sigma}^2}, \quad (8)$$

where $S_t = \sum_{i=1}^t e_i$ and $\hat{\sigma}^2$ are the estimates of the long-run variance of the residuals. The null hypothesis is rejected if (8) exceeds the critical value providing evidence that the series wanders from its mean.

3.3.2 Cointegration Test

According to theories of economics, a group of economic time series are linked together by some long-run equilibrium relationship. Statistically, this phenomenon can be modeled by cointegration. Non stationarity of the series implies that meaningful long-run relationship among these series can be exploited. This may help in identifying a combination of the non stationary series that give the same order of integration by using cointegration techniques. As an example, two series Y_t and X_t are cointegrated if they are both integrated of say $I(1)$. The residuals from the cointegrating equation $I(0)$ is

denoted as ε_t and represents a vector of innovations. The existence of any long-run tendencies between unemployment rate and GDP is tested with the Johansen (1988) and Juselius (1990) maximum likelihood test. These tests focus on the rank of a matrix π . Using the Johansen approach, the study assumes the VAR model as follows;

$$\Delta Y_t - \sum_{i=1}^p \phi_i \Delta X_{t-i} + \theta_i \Delta X_{t-i} \varepsilon_t, \quad (9)$$

$$\text{where } \theta = \sum_{i=1}^p (A_i - 1) \text{ and } \theta = - \sum_{j=i+1}^p A_j.$$

Equation (9) represents a long run association between the variables. The normalised form of this equation implies short run dynamics between variables and is written as follows:

$$\ln UR_t = \alpha + \beta_1 \ln \Delta GDP_{t-i} + \delta ECT_{t-i} + \varepsilon_t, \quad (10)$$

ECT_t is the error correction term representing the deviation from equilibrium in period t and the coefficient δ characterises the response of the dependent variable in each period to departures from equilibrium. The error correction term is represented as:

$$ECT_{t-i} = \Delta \ln UR_t + \beta_1 \Delta \ln GDP. \quad (11)$$

According to Granger's theorem, if the coefficient matrix π has reduced rank $r < k$, then there exist $k \times r$ matrices α and β each with rank r such that $\pi = \alpha \beta'$ and $\beta' y_t$ is $I(0)$. The number of cointegration relations (the cointegrating rank) is denoted by r and each column β is the cointegrating vector. The null hypothesis associated with the cointegration testing asserts that there are at most r cointegrating vectors $H_0: r=0$ versus $H_1: r+1 \neq 0$ for $i=r+1, \dots, k$. The said hypotheses are validated through the application of the trace and maximum eigenvalue statistics expressed as follows:

$$J_{Trace} = -N \sum_{i=r+1}^n \ln(1 - \hat{\lambda}_{\max}), \quad (12)$$

$$J_{Max} = -N \ln(1 - \hat{\lambda}_{\max}), \quad (13)$$

where N is the number of observations and $\hat{\lambda}_{\max}$ is the maximum eigenvalue. The null hypothesis is rejected if the observed values are greater than the critical values implying the presence of cointegration among the variables and a long run relationship (Sjö, 2008). The asymptotic critical values are found in the Johansen and Juselius (1990) tables. Once the long-run and short run relationships between variables has been detected using Johansen procedure, tests for causal relationships are used to determine the short-run relations.

3.3.3 Granger Causality Test

One of the suggested objectives of this study is to investigate the causality between unemployment rates and GDP in SA. Granger (1996) proposed the concept of causality and exogeneity. According to the concept of Granger causality as cited by Tang and Shahbaz (2009), variable Y_t is said to cause X_t , if the predicted value of X_t is enhanced when information related to Y_t is incorporated in the analysis. The study adopted the augmented level VAR with integrated and cointegrated processes as developed by Toda and Yamamoto (1995). The most preferred example is in Jamshaid *et al.* (2010). Toda-Yamamoto method uses a modified Wald test for restrictions on the parameters of the VAR (k) model (Sevitenyi, 2012). The statistic follows a χ^2 distribution with m degrees of freedom. Jamshaid *et al.* (2010) recommends the Toda-Yamamoto causality test as it overcomes the problem of invalid asymptotic critical values when causality tests are performed in the presence of non-stationary series or even cointegration. There are two steps to be followed when employing Toda-Yamamoto.

Firstly, the appropriate lag length of the maximum order of integration of the variables in the system is chosen using Akaike and Schwartz information criteria. These criteria are also suggested by (Verbeek, 2008). Information criteria ensure that residuals are Gaussian and help in choosing the model with small lags. Brooks (2008) suggested that if these information criteria provide conflicting results, the one which produces white noise residual and most economically interpretable results should be chosen. These criteria are estimated using the following equations:

$$AIC - 2\left(\frac{l}{n}\right) + \left(\frac{k}{n}\right) \text{ and,} \quad (14)$$

$$SBC - 2\left(\frac{l}{n}\right) + k \frac{\log(n)}{n}, \quad (15)$$

where l is the log of the likelihood function, k is the number of parameters in the model, n is the number of observations. Given VAR (k) selected, and the order of integration is determined, a level VAR can then be estimated with a total of lag length and the maximum order of integration. The null hypothesis can be drawn as unemployment does not Granger cause GDP if $\delta_{1r} = 0$ with the alternative hypothesis implying the opposite. The first k coefficients are used to compute Wald's test. Similarly, the same hypothesis can be drawn between GDP and unemployment.

The second step applies a standard Wald test to the first k VAR coefficient matrix in order to make a Granger causal inference. Toda-Yamamoto based Granger causality between aggregate unemployment rates and GDP represented in bivariate VAR form is as follows;

$$\begin{bmatrix} GDP_t \\ Unemp_t \end{bmatrix} = \begin{bmatrix} \alpha_1 \\ \alpha_2 \end{bmatrix} + \sum_{i=1}^{k+q} \begin{bmatrix} \beta_{1i} \\ \beta_{2i} \end{bmatrix} \begin{bmatrix} GDP_{t-i} \\ Unemp_{t-i} \end{bmatrix} + \begin{bmatrix} \epsilon_{1t} \\ \epsilon_{2t} \end{bmatrix}, \quad (16)$$

where β_{1i} , β_{2i} , δ_{1i} and δ_{2i} are the coefficients of GDP_t and $Unemp_t$ respectively. ϵ_{1t} and ϵ_{2t} are error terms that are assumed to be white noise.

4. Empirical Results

The initial step of this section addresses the issue of unit root in the two series. The plots are represented in Figure 1.

Figure 1 SA GDP and unemployment rates

Source: Author's own calculations

The figure shows, as a general rule, the inverse relationship hypothesised by Okun not holding for South African data. The series also seem not to be stationary and as such differencing is applied to induce stationarity. Both series follow a trend, as a result the restrictions on trend are imposed to the model. The results of the ADF unit root and KPSS stationarity tests are summarized on Table 1 with Figure 2 showing GDP and unemployment rate following no pattern after being subjected to first difference.

Figure 2 First differenced GDP and unemployment rates

Source: Author's own calculations

Table 1 gives summary results of unit root tests on the gaps between GDP and unemployment series. To obtain robust results, the ADF and KPSS tests were employed.

Table 1: First difference of GDP and unemployment rate

ADF Unit Root Tests			
Variable	Type	Test	Pr < Tau
GDPdif	Trend	-6.57	<.0001
URdif	Trend	-7.91	<.0001
KPSS Stationarity test			
GDPdif	Trend	0.5105	0.4630
URdif	Trend	0.0560	0.1460

Source: Author's own calculations

According to the ADF test in Table 1, the two series do not have unit root after first difference. The observed probabilities are compared with a significance level of 0.05. This is also confirmed by the KPSS test. It is therefore concluded that the series are integrated of the same order, I (1). Having confirmed the stationarity conditions of the series, the next step discusses the results obtained using the Johansen cointegration. With this test, a long run relationship between GDP and unemployment rates is determined. Provided the sequence of residuals from the regression (9) is stationary, the variables are said to be cointegrated of order (1,1). Moreover, if these residuals are non-stationary, no long run equilibrium relationship or no cointegration exist between the GDP and unemployment gaps. Table 2 provides a summary of the Johansen cointegration results for GDP and unemployment in SA.

Table 2: Johansen Cointegration Rank Test Using Maximum Eigenvalue

H ₀ : Rank=r	H ₁ : Rank=r+1	Eigenvalue	Maximum	5% Critical Value	Trace	5% Critical Value
0	1	0.852	175.947	15.67	182.306	19.99
1	2	0.067	6.359	9.24	6.359	9.13

Source: Author's own calculations

Results in Table 2 ascertain the existence of long run relationship between GDP and unemployment. Both the trace and the maximum eigenvalue exceed the corresponding critical values at rank one under the null hypothesis. This leads to the rejection of the null hypothesis in favour of the alternative providing more evidence to conclude that cointegration and long run relationships do exist between the variables as also displayed on Figure 1.

To be able to continue with the analysis, an optimal lag is selected using the AIC and SBC. Both the AIC and SBC choose the first lag as illustrated in Table 3. Therefore, a model explaining cointegration between the variables is built based on lag one and the first rank is shown in Table 4.

Table 3: Minimum information criterion

AIC					
AR 1	-14.746**	-14.636**	-14.559**	-14.542**	-14.510**
AR 2	-14.657	-14.560	-14.480	-14.460	-14.484
SBC					
Lag	MA 0	MA 1	MA 2	MA 3	MA 4
AR 1	-14.582**	-14.355**	-14.165**	-14.035**	-13.891**
AR 2	-14.381	-14.166	-13.973	-13.841	-13.752

** represents an optimal lag chosen

Source: Author's own calculations

Table 4 provides the results for long run relationship between GDP and unemployment rate gaps in SA. Unemployment rate have been normalised as a dependent variable.

Table 4: Long-Run Parameter Beta Estimates

Variable	Rank 1	Rank 2
UR	1.000	1.000
GDP	-0.037	-1.488

Source: Author's own calculations

In equation form, the model showing unemployment-GDP nexus fitted using the South African data becomes:

$$\begin{aligned}
 \beta' y_t &= [1 \quad -0.037] \begin{bmatrix} UR \\ GDP \end{bmatrix} \\
 &= [UR - 0.037 GDP] \\
 &= 0.037 GDP
 \end{aligned}$$

Having the results showing positive relations between GDP and unemployment rate gap makes it superficial that a priori expectations are not met. Though positive relationship is revealed between the variables, the results do not support implications of the Okun's law in SA. This was expected as unemployment rates are on an increase in the country

coupled with increased economic growth as also proven in Figure 1. This is an indication that a cyclical recovery will not be complemented by a reduced unemployment rate. Additionally, the sizable structural and/or frictional component of unemployment in SA is also reflected. Moosa (2008) reported similar scenario in case of most Arab countries and other developing countries. Long run volatility is corrected by constructing a parsimonious regression model which captures the short run analysis. The results of this model are summarized in Table 5.

Table 5: Error correction model

Equation	Parameter	Estimate	Standard Error	t-Value	Pr > t	Variable
D_UR	CONST1	0.279	0.161	1.74	0.086	1
	XL0_1_1	0.010*	0.008	1.12	0.267**	GDP _(t)
	AR1_1_1	-0.128	0.050			UR _(t-1)

**insignificant at 0.01 and 0.05 levels of significance

Source: Author's own calculations

The short run dynamic coefficient 0.010 is positive and is about 2 % less than an implied Okun's coefficient of 3 %. The observed coefficient also appears to be insignificant both at 0.01 and 0.05 significance levels. It is therefore clear based on these findings that lack of economic growth does not explain the unemployment problem in the South African context. Though the long run coefficient is just 0.7 % higher than the hypothesised, the positive sign invalidates Okun's claim. The findings are in accordance with Lal *et al.* (2010) and likewise Kreishan (2011) and other researches on the subject. However, the ECM is negative as expected implying that for the system of unemployment rates in SA to be reinstated back to normal, a short run adjustment rate of about 12.8 % per quarter may be applied. Next the paper presents the results for causality testing between the variables. The results of this test are summarized in Table 6.

Table 6: Toda-Yamamoto Causality Test

Group1	Group2	DF	Chi-Square	Pr > ChiSq
UR	GDP	1	1.28	0.257**
GDP	UR	1	0.04	0.838**

**insignificant at 0.01 and 0.05 levels of significance

Source: Author's own calculations

Note that all the observed probabilities exceed the 0.05 significance level. This means that the null hypothesis of no causality is not rejected for both variables. There is no feedback relation running between unemployment rate and GDP or vice versa. Therefore, GDP is weakly exogenous in the systems of unemployment rate in SA. This supports the findings from the cointegration analysis as reflected in Tables 4 and 5.

5. Conclusion and Policy Recommendation

The purpose of this paper is to investigate the nexus of unemployment and GDP in SA using data set collected between the first quarter of 1990 and 2013. The paper further tests the soundness of Okun's law in the South African perspective. Empirical methods used consist of the ADF unit root and the KPSS stationarity tests due to nature of the variables analysed. The said methods were used to check the volatility and incongruities in the properties of time series variables. Preliminary reflection of the series exhibited unit root and lack of stationarity. After first differencing was applied, stationarity was induced to both series allowing the implementation of cointegration methods. The Johansen cointegration technique was used to determine the associations between the variables in the long run and the empirical results revealed that indeed the variables somehow have a relationship, yet insignificant.

The coefficient obtained from the Johansen framework was equivalent to 3.7 %, which is 0.7 % higher than the law being validated. However, the ECM confirmed that for the system to go back to normal in the long run, disequilibrium in unemployment in the short run may be corrected at a speed of 12.8 % per quarter, providing a short run coefficient of about 1 %. Toda-Yamamoto causality showed no feedback relationship running between the variables. Unfortunately both coefficients obtained are in contrast with one hypothesised by Okun, suggesting that the lack of economic growth does not explain the unemployment rate problem in SA. This could be one of the reasons why the South African government is not placing more emphasis on addressing intensifying unemployment problem as it plays very little if any role in economic growth.

Besides the fact that economic growth has been found to be having insignificant contribution to rising unemployment rates in SA, the latter still remain high according to the standards of the country. This paper therefore recommends that government and policy makers improve ways and means of dealing with the problem by employing economic policies that are more oriented to structural changes and transformation in labour market. This is because unemployment poses a major impediment to social progress and results in waste of dexterous manpower which the government has invested on.

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