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Analyzing the Competitiveness of Zimbabwean Economy against its Neighbouring Countries

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Analyzing the Competitiveness of Zimbabwean Economy against its Neighbouring Countries

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Abstract

The purpose of this research is to analyze the impact on economic performance of competitiveness of Zimbabwean economy vis-à-vis its neighbouring countries, namely Botswana, Mozambique, South Africa and Zambia between 2006 and 2015. In this study a panel data model based on random effects model is applied. Results confirm that investment, human capital and overall competitiveness are positive and statistically significant while inflation is negative and insignificant in influencing the economic growth. A 1% increase in investment, human capital and improvement in competitiveness has an expected effect of increasing economic growth by 0.31%, 1.14% and 5.52% respectively. Results further unravel that country's individual competitiveness contributes to economic performance. However, relative to Zimbabwe, there is overwhelming evidence that South Africa, Botswana and Zambia have higher contributions while that of Mozambique is insignificant. Specifically, a competitiveness index of 3 for South Africa, Botswana and Zambia contributes to economic performance by 3.54%, 3.44% and 2.93% respectively higher than that Zimbabwe could achieve using the same score. In light of the above, it is imperative for Zimbabwe to strive towards improving the performance of nine

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pillars of competitiveness that exhibit some weaknesses so that higher economic growth can be attained. Besides addressing competitiveness challenges, countries in the sample need to boost investment as well as improving human capital in order to stimulate economic performance.

Keywords: Competitiveness, Random Effects Model, Zimbabwe
JEL Classification: D4

Disclaimer: The author was an Economist at Ministry of Industry and Commerce, Zimbabwe at the time of writing. The views expressed are of the author and they do not represent the views of the Ministry of Industry and Commerce or its other official position.

1. Introduction

The constantly changing global economy has created a new competitive environment characterized by unpredictable events resulting in a new paradigm shift in country and companies' participation in economic activities. The integration of the global economy has brought in vast opportunities through increased market and on the other hand creating threats through competition. With competition crossing boundaries, Zimbabwean companies are finding it difficult to survive and should therefore be innovative and exploit opportunities for survival and revival. Over the past decade, economic hardships and proliferation of cheap imported goods made it difficult for Zimbabwean companies to compete as they are struggling to produce goods. Since the adoption of the multicurrency in 2009, the country has been able to benefit in overall terms but its ability to stimulate exchange rate and monetary policy to rectify economic imperfections is limited.

1.1. Background

Zimbabwe's economy experienced unusual circumstances between 2005 and early 2009 when compared with other

countries in the Southern Africa Development Community (SADC) region. Severe shortages of cash and basic commodities gripped the economy. Hyperinflation almost put the economy to a halt as inflation rate reached alarming levels of 600% per month in July 2008 as reported by the Zimbabwe National Statistics Agency (ZIMSTAT). As cited by Hanke and Kwok (2009), the unofficial recorded rate reached a calamitous monthly level of 79.6 billion per cent in mid-November 2008. This figure was a mirror of changes in consumer prices, since its calculation was based on changes in stock and exchange rate at the Old Mutual that were traded at Zimbabwe Stock Exchange between Harare and London. Despite this disastrous figure, Zimbabwe failed to break the record of being the country that recorded the highest rate of inflation, a position Hungary still occupies since July 1946 (Hanke, 2009).

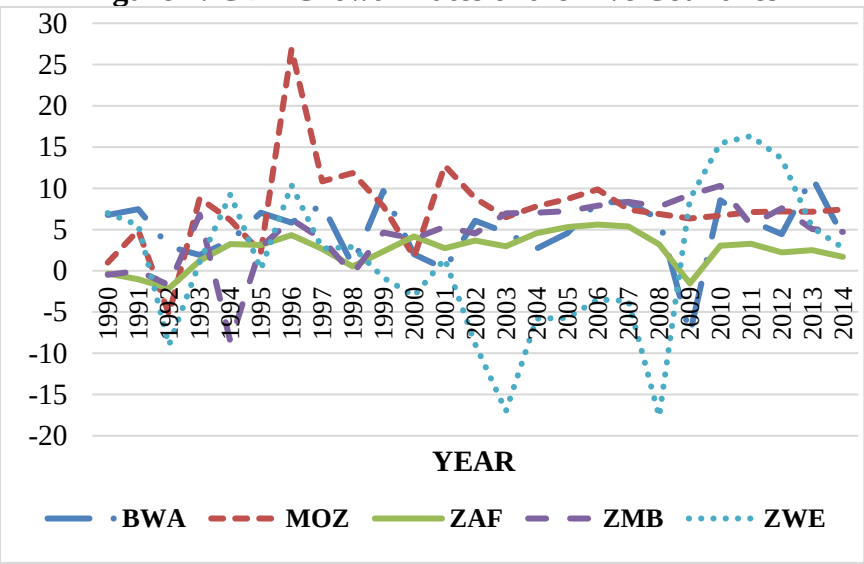
Companies were not spared by the ruthless jaws of hyperinflation as evidenced by their failure to supply the domestic market. The 2015 Zimbabwe national budget indicated that at least 4000 companies closed their operations between 2011 and 2014 and to this effect more than 55000 employees were affected. Even though the country is no longer experiencing hyperinflation, companies are still facing a myriad of challenges including lack of finance, obsolete equipment and high costs of doing business. The adoption of multi-currency came with pros and cons.

Against this backdrop, it is self-evident that the economy is not performing well and as a result scanning and developing competitiveness of the economy is crucial for policy intervention which can guide companies in the restructuring and re-strategizing of their business models. To enhance competitiveness, improve productivity and attract investment, dialogue between private and public sector is required in restructuring and reforming the economy. This can offer insights and stimulate discussions among all stakeholders on the best strategies and policies that are useful in overcoming hurdles hindering the country's competitiveness and ease of doing business. These actions are not only imperative but also crucial if

the country must realize an accelerated recovery of the economy with more opportunities and jobs created.

As can be seen from Figure 1, for the period 2002 – 2008, Zimbabwe's GDP growth rate followed a negative trajectory while it was the opposite for that of all her neighbours. On a positive note between 2010 and 2012, the country had the highest growth rates compared to her neighbours. Moreover, the country recorded a growth rate of about 16.3% in 2011 while the world average was -1.7%. However, by 2012 growth rate started to decline. This can be attributed to lack of competitiveness as evidenced by the falling of the country's global competitiveness index (GCI) ranking beginning 2010.

Figure 1: GDP Growth Rates of the Five Countries



Source: Author Computation of Data from WDI (2016)
Note: BWA – Botswana, MOZ – Mozambique, ZAF – South Africa, ZMB – Zambia and ZWE – Zimbabwe.

1.2. Objectives of the Study

The objectives of this paper are to assess the effect of overall competitiveness along with other variables on economic performance and Zimbabwe's competitiveness in comparison

with its neighbouring countries. Additionally, competitiveness of each country is evaluated through both the size and significance of the country dummy coefficients. The research question is by what magnitude is Zimbabwe's competitive index fairs comparative to that of her neighbours in influencing economic growth.

1.3. Significance of the Study

The comparative analysis of competitiveness can help Zimbabwe in particular and her neighbours in general to tackle issues that are pertinent in driving economic growth. This comparative analysis is done by using country dummies. Countries in the sample share some common aspects in terms of culture, language and geopolitical hence they can draw lessons from one another in boosting the performance of their economies by addressing deficiencies in competitiveness. However, sharing common characteristics does not guarantee similar results from applying similar strategies. The study is the first of its kind to use the global competitiveness indices in unraveling the competitiveness of Zimbabwean economy through the application of panel data approach. Findings from this paper can also contribute immensely to the annual national competitive report that Zimbabwe embarked on in 2015. Previous studies on Zimbabwe's competitiveness (Muñoz, 2006; Arocha, Sibanda, Chigumira, Mudzonga, & Mudzviti, 2014) only did a descriptive analysis without empirically examining the extent of significance of the country's competitiveness and her economic performance relative to other countries. Owing to little or no research on this topic within the confines of Zimbabwe, it is of paramount importance to have a deeper investigation on this topic.

2. Conceptual and Theoretical Framework

2.1. Competitiveness

Indicators and measurements of competitiveness play a critical role in signaling the performance of economies, companies and individuals mostly for developed economies and the world at

large. Competitiveness has various interpretations and its definition is not straight forward and it varies across professionals and academic circles. In the Global Competitiveness Report (GCR) of 2014 – 2015, Schwab (2015) defines competitiveness as:

The set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the sustainable level of prosperity that can be earned by an economy. In other words, more competitive economies tend to be able to produce higher levels of income for their citizens. The productivity level also determines the rates of return obtained by investments in an economy (Schwab, 2015).

The inclusion of the rate of return in the definition is that it is a fundamental driver of the country's growth rate. This entails that a more competitive economy has a high likelihood of registering a faster growth rate than a less competitive one.

On the other hand, Sharples and Milham (1990) broadly define competitiveness as the ability of an organization to deliver goods and services at the time, place and form sought by overseas buyers at prices as good as or better than those of other potential suppliers whilst earning at least opportunity cost returns on resources employed. Blunck (2006) also explained a company's competitiveness as its capacity to provide goods and services in a more efficient and effective manner relative to what its competitors can do. In short it is the advantage that a company gets through provision of superior products and increased productivity. As cited by Abbott and Brehdahl (1993), the Agriculture Canada describes a competitive industry as one that possesses the sustained ability to profitably gain and maintain market share in domestic and/or foreign markets. The Organization for Economic Co-operation on Development (OECD) defines competitiveness as "*the degree to which a country can, under free and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real incomes of its people over the long term*" (Chartrand, 2012).

Unlike Lalinsky (2013), Nwachukwu and Oseghale (2010) and Syverson (2010) who used profitability, export performance, production efficiency and market share as proxies to measure competitiveness, this study uses the global competitive index data published annually by the World Economic Forum (Schwab, 2015).

The 2014 – 2015 GCR stated that the quality of the basic requirements which include efficient infrastructure, institutions, stable macroeconomic environment and high human capital are key enablers in promoting the competitiveness of any country. The above variables are critical in attracting and influencing investors' decisions and if they are not in good shape they render a negative bearing on the competitiveness and growth of the economy. Krugman (1996) noted that a country can achieve prosperity through competitiveness only if there is understandability of contextual meaning of competitiveness and differentiability of national, industrial and firm competitiveness.

The basic requirements, efficiency enhancers, and innovation and sophistication factors which are referred to as pillars of measuring competitiveness by the WEF should be unified and strengthen each other since a weakness in one can spoil the whole process of enhancing the competitiveness. It is in this context that countries are ranked according to their competitiveness in terms of economic performance, the efficiency of their governmental policies and their business environment as well as their infrastructural development (Ionescu & Dumitru, 2015).

According to the WEF report of 2014 – 2015, Zimbabwe was ranked number 124 out of 144 economies unlike South Africa, Botswana and Zambia who were ranked 56, 74 and 96 respectively. This is an indication that tremendous effort must be done to improve the country's ranking. The country must strive to improve the basic requirements since these define and shape the first pillar of competitiveness for any economy.

Various scholars are of the view that countries do not compete, but their enterprises do, and it is the government's responsibility to ensure that better economic environment, institutions and policies prevail for efficient operations of enterprises. As Porter (1990) emphasizes in his diamond model which identifies appropriate actions to be taken by both the government and the private sector in enhancing competitiveness, it is necessary for companies to make sure that their commodities are of remarkable quality in the eyes of consumers so that they can manage to compete with their rivalries. He also stressed that companies or industries can achieve the above only if they produce low cost commodities and differentiate their products from those of competitors. According to Serafica (2015), a firm can sustain competitive advantage through maximizing on its factors of production, the level of demand of its commodities by the consumers, the absence or presence of related industries and nature and structure of its strategy and that of its rivalry.

2.2. Why Competitiveness is Necessary?

In a broader sense, competitiveness is an important concept that is commonly used to measure, assess and compare performance and success of one organization from another. Competitiveness can be measured at individual, company, national and regional level. Nowadays, competitiveness is one important instrument of measurement and evaluation of a country's economic performance and the prosperity of its citizens. The nation's competitiveness depends on firms' competitiveness. In view of this companies should take advantage and utilize opportunities that their countries present to them. Companies' competitiveness can be an ingredient for spurring economic growth and it is in this regard that domestic firms should maximize their potentials. For developing countries like Zimbabwe, competition is growing and it is becoming fiercer than anticipated. As in Damiyano, Muchabaiwa, Mushanyur, Chikomba (2012) and Karim (2009) emphasizes that there are unprecedented pressures on companies to improve their operational efficiency for enhanced competitiveness and overall business performance. It is important to also note that today's competitive environment is dynamic, and

no country can survive without relying on other countries in one way or the other. Competition is unavoidable since a country must be connected to the international community through importation and exportation of goods and services and by doing this it is exposed to competition.

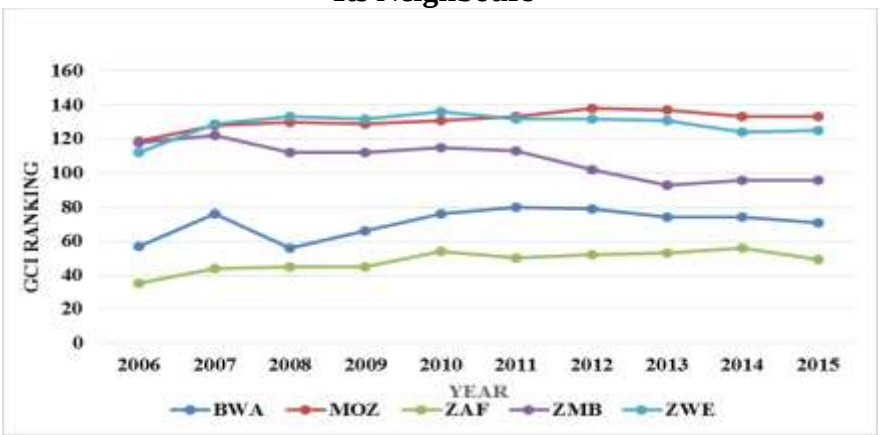
2.3. Status of Zimbabwe's Competitiveness and that of its Neighbouring Countries

A snapshot of competitiveness from Figure 2 reveals that Zimbabwe and Mozambique recorded dismal competitiveness performance as evidenced by their scores which are above 120 from the period 2007 to 2015. This is contrary to Zambia which shows improvements in her ranking despite being above 100 on average in the same period. Botswana is below 80, which is good given the size of its economy. However, between 2008 and 2011 her competitiveness has been deteriorating on average. The same applies to that of South Africa which followed a downward trend during 2006-2010. Fortunately and on a positive note her score is below 60 and it is the best in SADC and Africa. From 2010 onwards Zimbabwe showed some improvements in her performance though not significant.

Also, analyzing Zimbabwe's competitiveness from a pillar standpoint, one can see from Figure 3a in the appendix that P1 and P3 (institutions and macroeconomic environment) performed well between 2008-2013 and 2010-2014 respectively. The same is noticed of P9 (technological readiness) in Figure 3b from 2010-2014. The remaining pillars contributed to the fall of the overall competitiveness of Zimbabwe. During these periods, two factors namely: adoption of multicurrency to combat hyperinflation and the Government of National Unity, could have contributed to improvements in performance of P1, P3 and P9. Given the competitiveness performance scenario, it therefore implies that companies producing in Zimbabwe find it difficult to compete with their counterparts producing in South Africa, Botswana and Zambia. As a result, Zimbabwe has a lot of work in ensuring improvement of the pillars that need attention in order to improve her overall GCI ranking.

In terms of stage of development, the WEF 2013 and 2014 Reports indicate that Mozambique, Zambia and Zimbabwe are all in the factor driven stage while Botswana and South Africa are in the transition from factor driven to efficiency driven and efficiency driven stages respectively. Zimbabwe by being in the factor driven stage, this means that she has to work an extra mile to improve basic requirements. A huge disappointment in terms of performance is found on efficiency enhancers and this puts Zimbabwe in a precarious position to compete with her neighbours especially Botswana and South Africa.

Figure 2: Global Competitiveness Ranking of Zimbabwe and Its Neighbours



Source: Author computation based on WEF data.
Note: 2006 GCI is compiled from the period 2006-2007 and for the rest of the years are as such.

3. Methodology and Data Sources

The research applies the concept of competitiveness as a driving factor of a country's performance. Panel data which forms the basis for mostly macroeconomic components is used. The premises of applying panel data model is that both across entities and time effects can be detected. This is also useful when comparing performance of countries or companies.

3.1. Specification of the Econometric Model

The estimation for each country's competitiveness is formulated in the model of panel data. The period of analysis is from 2006 – 2015 and there are five countries. Since the sample size is randomly selected and country dummies are included in the analysis, random effects model is used. Applying fixed effects model cannot capture country dummies resulting in biased coefficient estimates. Because economic shocks that can affect GDP per capita of a country may also affect the competitiveness of that country, it entails that GCI is treated as an endogenous regressor.

In this study non-linear form of the natural logarithm is applied because some of the explanatory variables are assigned in monetary terms and others are expressed in index form. Using natural logarithm will make some of the large numbers stationary and it is easy to use since it measures elasticity of the dependent variable resulting from the explanatory variable. Equation 2 is borrowed from the work of Melecky and Nevima (2011). The study then incorporates competitiveness in familiar determinants of economic growth in the regression model.

$$GDPpc = f(GFCF, INF, HCAP, GCI) \quad \textbf{(1)}$$

By taking natural logarithm of equation 1, the following equation is arrived at;

$$\ln GDPpc_{it} = \alpha_0 + \alpha_1 \ln GFCF_{it} + \alpha_2 \ln INF_{it} + \alpha_3 \ln HCAP_{it} + \alpha_4 \ln GCI_{it} + \varepsilon_{it} \quad \textbf{(2)}$$

To account for country's competitiveness in the model equation 3 is performed.

$$\ln GDPpc_{it} = \alpha_0 + \alpha_1 \ln GFCF_{it} + \alpha_2 \ln INF_{it} + \alpha_3 \ln HCAP_{it} + \alpha_4 \ln GCI_{it} + \alpha_5 \sum_{i=1}^{5} D_i \ln GCI_{it} + \varepsilon_{it} \quad \textbf{(3)}$$

Investment, inflation and human capital are used as control variables while competitiveness index is the variable of interest. Investment represents the country's capacity to produce while human capital index measures the capacity of a country to improve knowledge development and an excellent education system hence producing quality labor force (Barro & Lee, 2013). These are critical in shaping the productive capacity of a country hence its GDP.

The global competitive index measures both the micro and macroeconomic fundamentals of a country's competitiveness. It is a composite index comprising 12 pillars namely; institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market development, technological readiness, market size, business sophistication and innovation. These variables should be prioritized because they are key drivers which explain the competitiveness nature for Zimbabwe and its neighbouring countries.

It should be noted that sometimes improvement in a country's competitiveness is not associated with rising GDP since there are other variables that can bring down GDP levels despite improvements in competitiveness.

Country dummies are used as moderator that capture the influence of competitiveness on economic performance of each country. In interpreting the impact of competitiveness on economic growth country differences captured by the dummy should be accounted for.

A comprehensive description of variables, their data sources and expected signs of parameter estimates is in Table 1. Data for per capita GDP, investment and inflation was retrieved from the World Development Indicators (WDI), while that of human capital and competitiveness index were accessed from the Penn World Table 8.1 and WEF databases respectively. GDP per capita is used as the dependent variable because it gives the most

important macroeconomic aggregate of activities at country level that an individual can do. It is also good for country comparison purposes.

4. Limitations of the Study

In this study the use of the GCI as a measure of competitiveness may not be the best one since other indicators like size of economy, trade performance, price changes and exchange rate are prominently used. GCI is a composite index making it highly correlated with other explanatory variables[2] resulting in biased estimates. Also the time period is short and this may compromise efficiency of results. The unavailability of data at company level may not depict the situation that companies are facing in comparison with those in the region. Another limitation is that due to time constraint primary data was not collected from companies and this could have been used instead of aggregate national data.

Table 1: Variable Description and Data Sources

Variable Name	Explanation	Data Sources	Expected Sign
GDPpc	Annual gross domestic product per capita in US$ adjusted to purchasing power parity (PPP).	WDI	
GFCF	Gross fixed capital formation as a percentage of GDP. It is a measure of a country's investment.	WDI	Positive

[2] Particularly human capital and inflation since the componential aspect of education and economic environment are embedded within the global competitive index. See correlation matrix in Table 2

Variable Name	Explanation	Data Sources	Expected Sign
$HCAP$	Index of human capital per person, based on years of schooling.	Penn World Table	Positive
INF	Inflation rate.	WDI	Negative
GCI	Global competitive index, which ranges from 1 – 7 with 1 implying poor performance and 7 meaning best performance.	WEF	Positive
D_i	Country dummy variable taking 1 when the country's data corresponding that period and 0 otherwise.		Positive/ Negative
$D_i \ln GCI_{it}$	Multiplicative term which is an interaction of country dummy and GCI		Positive/ Negative.
i and t	Are countries namely Botswana, Mozambique, South Africa, Zambia and Zimbabwe and the time period from 2006 – 2015 respectively.		

5. Results and Discussion

Summary statistics of the data in Table 3 below exhibit that the 5 countries are performing below average in terms of GCI since their mean GCI is 1.299. The same pattern of poor performance is also verified in other nine components of the GCI.

In analyzing the impact of overall competitiveness and individual country competitiveness on GDP per capita, random effects model is applied. A positive and statistically significant coefficient of GCI suggests a positive influence of competitiveness on economic performance while a negative statistically significant suggests otherwise. As for the impact of the interaction term on economic performance the coefficient of GCI should also be accounted for, so that the true impact of the interaction term is reflected[3]. Coefficients of all the explanatory variables are as anticipated before running the regression. Column 1 of Table 3 shows the overall impact of GCI, column 2 exhibits the impact of GCI by each country in the sample while column 3 shows how other countries perform relative to Zimbabwe. Results in column 1 show that the coefficients of investment, human capital and competitiveness are positive and statistically significant while that of inflation is negative but insignificant in influencing economic growth.

Table 2: Correlation Matrix of Variables

	$lnGDPpc_{it}$	$lnGFCF_{it}$	$lnHCAP_{it}$	$lnINF_{it}$	$lnGCI_{it}$
$lnGDPpc_{it}$	1				
$lnGFCF_{it}$	0.47*	1			
	0.00				
$lnHCAP_{it}$	0.71 *	0.00	1		
	0.00	0.96			
$lnINF_{it}$	0.78 *	0.23	0.63*	1	
	0.00	0.10	0.00		
$lnGCI_{it}$	0.94 *	0.44 *	0.59*	0.80*	1
	0.00	0.00	0.00	0.00	

Source: Stata 12 output results. Note: * means significant at 5%

[3] $(\alpha_4 + \alpha_5 \sum_{i=1}^{5} D_i) * \ln GCI_{it}$, see Jaccard and Turrisi (2003), Jaccard et al. (1990) and Stock and Watson (2007).

Specifically, a 1 per cent increase in investment, human capital and improvement in competitiveness suggests a 0.31, 1.14 and 5.52 percentage increase in economic growth respectively.

According to column 2, competitiveness in all the countries is statistically significant to influence GDP per capita. By way of comparing coefficients of the multiplicative interaction of country dummies and competitiveness, results reveal that South Africa is more competitive than other countries in the sample. It has the highest contribution to GDP while that of Zimbabwe is the least in the sample.

Surprisingly, Mozambique is on the second spot yet in terms of competitiveness ranking it is the least ranked within the sample. However, when the effect of the moderator and the indicator variables are both accounted for, results in column 3 suggest that South Africa followed by Botswana and Zambia are more competitive than Zimbabwe. Though Zambia is more competitive than Zimbabwe, evidence is only significant at 10 per cent. As for Mozambique, there is no evidence of it being more competitive than Zimbabwe because its coefficient is insignificant. Actually, Mozambique is less competitive than Zimbabwe as far as contribution to economic growth is concerned. Results in column 3 resonates well with descriptive statistic results in Figure 2.

Table 3: Random Effects Regression Results

VARIABLES	1	2	3
$lnGFCF_{it}$	0.313***	0.281***	0.281***
	(0.082)	(0.064)	(0.064)
$lnINF_{it}$	-0.027	-0.392**	-0.392**
	(0.291)	(0.187)	(0.187)
$lnHCAP_{it}$	1.148***	2.337*	2.337*
	(0.185)	(1.322)	(1.322)
$DBO*lnGCI_{it}$		3.133***	0.763***
		(0.435)	(0.109)
$DMO*lnGCI_{it}$		3.223***	0.854
		(0.873)	(0.806)

VARIABLES	1	2	3
DZA*lnGCI$_{it}$		3.224***	0.854***
		(0.403)	(0.0992)
DZM*lnGCI$_{it}$		2.665***	0.295*
		(0.444)	(0.167)
DZW*lnGCI$_{it}$		2.370***	
		(0.477)	
lnGCI$_{it}$	5.525***		2.370***
	(0.573)		(0.477)
Constant	-1.468***	1.518	1.518
	(0.427)	(1.021)	(1.021)
Observations	50	50	50

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

To observe the exact extent of how Zimbabwe's competitiveness fairs with its neighbours, the coefficient of the GCI and that of the interaction term are considered. This gives the true variation of the impact of country dummy competitiveness. Precisely, if GCI of each country improves from a value of 3 to a value of 4, South Africa, Botswana and Zambia's GDP per capita is expected to increase from 3.54, 3.44 and 2.93 percent to 4.47, 4.34 and 3.69 percent higher than that of Zimbabwe in that order. Although, that of Mozambique can increase there is no evidence to suggest that it will be higher than that of Zimbabwe.

6. Robustness Checks

The regression results from the random effects regression under specification 3 (column 3) is tested. The hypothesis is that GCI and country dummies have same slope. To find out this, the coefficient on GCI is tested if it is equal to zero or not. The null hypothesis based on the t-test is that the coefficient on GCI is equal to zero. Against this background, the null hypothesis that the two terms have same slope is strongly rejected at 1 per cent level of significance. Alternative tests also support the inclusion and relevance of the interaction term. These tests are based on highly significant p-values from the Wald or Likelihood ratio tests (Prob. > F = 0.00) hence inclusion of the interaction term and the

moderator variable is valid and justifiable (Cameron & Trivedi, 2010).

7. Conclusion and Policy Implications

This study analyzes how Zimbabwe's economy compete vis-à-vis its neighbouring countries. The study examines how overall competitiveness and each country's competitiveness impact economic performance measured by GDP per capita over the period 2006 – 2015. The selection of the other 4 countries is that they share some similar characteristics with Zimbabwe and they are also neighbours to the country.

Descriptive results reveal that on average Zimbabwe's competitiveness is debilitated by nine pillars except the macroeconomic environment, institutions and technological readiness during the period under review. Also using random effects model of panel data that comprises variables namely investment, human capital, inflation, global competitive index and interaction term of country dummy and competitive index, the study finds South Africa, Botswana and Zambia to be more competitive than Zimbabwe while it is not evident for Mozambique. Regression results are supported by descriptive statistics which show that Zimbabwe is less competitive than South Africa, Botswana and Zambia. This is because the coefficients of interaction terms of all countries have positive and significant influence on GDP per capita except for that of Mozambique. In view of the above, it is imperative for Zimbabwe to strive to work on the nine pillars of GCI to improve overall competitiveness so that higher economic growth is achieved. Besides addressing the competitiveness challenges, countries in the sample need to boost investment as well as improving human capital in order to stimulate overall economic performance.

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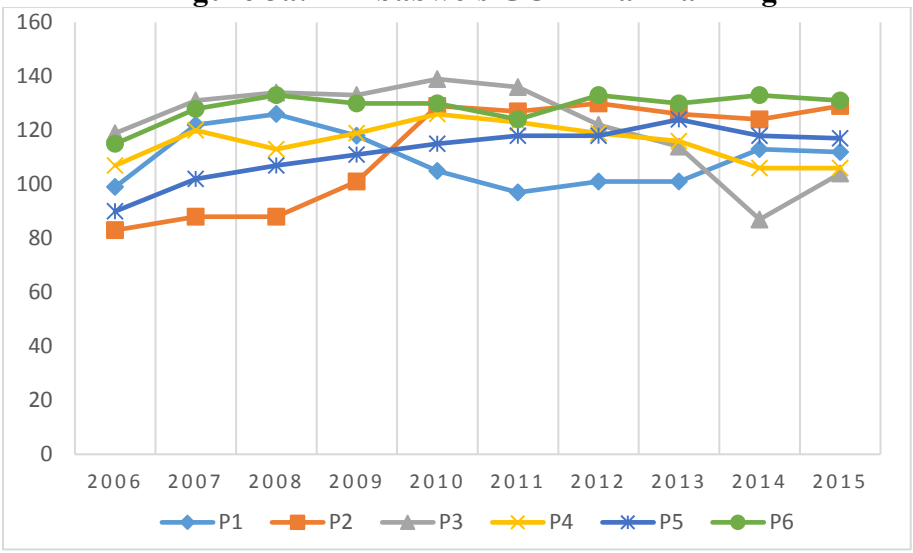
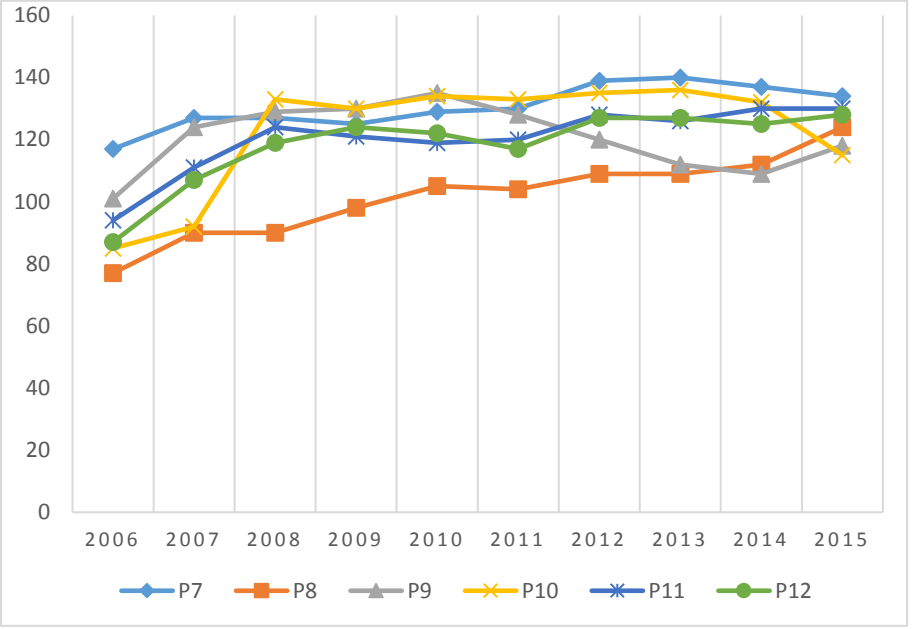
Annexure – A

Figure 3a: Zimbabwe's GCI Pillar Ranking



Source: Author computation based on WEF data Note: P1, P2 …P12 are pillars 1-12 namely, institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market development, technological readiness, market size, business sophistication and innovation in that order.

Figure 3b: Zimbabwe's GCI Pillar Ranking



Source: Author computation based on WEF data. Note: P1, P2 …P12 are pillars 1-12 namely, institutions, infrastructure, macroeconomic environment, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market development, technological readiness, market size, business sophistication and innovation in that order.