TRADE OPENNESS AND FDI IN ZIMBABWE: WHAT DOES DATA TELL US?

Kunofiwa Tsaurai*

Abstract

The study focus on the causal relation between trade openness and foreign direct investment (FDI) in Zimbabwe. The choice for the country came about due to the consideration that such an area on trade openness and FDI has not been adequately covered in Zimbabwe. In the absence of consensus in the literature about the causal relation between trade openness and FDI, it has been found not to be easy to formulate effective FDI and international trade policies. Scores of researchers have failed to agree on the causality relationship between trade openness and FDI. Some have said trade openness boost FDI inflow while other researchers, though few are of the opinion that it is FDI that accelerates trade openness of the host country. On the other hand, some authors maintain that both FDI and trade openness affect each other whilst others says no relationship exist between the two variables. Using the ARDL (Autoregressive distributed lag)-bounds testing approach, this study find that there is no long run relationship between FDI and trade openness in Zimbabwe.

Key words: Trade, Openness, FDI, ARDL, Zimbabwe

* Department of Finance, Risk Management and Banking, University of South Africa, P.O Box 392, UNISA, 0003, Pretoria, South Africa

1.   Introduction

Although a lot of literature has been written on the relationship between trade openness and FDI and it appears a consensus has not yet been reached in as far as the direction of causality between the two variables is concerned. At the centre of the argument is a question on whether trade openness influences FDI, FDI impacts on trade openness, whether both trade openness and FDI affects each other or maybe there might be no causality relationship all together between the two variables.

According to Agosin and Machado (2006), although openness of the economy attracted FDI, its explanatory power was low as compared to the impact of country size, quality of labour force and economic growth on FDI. Specifically, Agosin and Machado (2006) revealed that removing requirements that multinational enterprises have to form joint ventures with local firms before they are allowed to operate in the host country spur FDI inflows. Moreover, liberalizing approval requirements for multinational enterprises also act as a stimulant to FDI inflows in Latin America and Asia (Agosin and Machado, 2006). Liargovas and Skandalis (2012) also found out results that support the trade openness-led FDI hypothesis. They revealed that trade openness was paramount in attracting FDI only in the long run in Latin America, Asia, Africa, Eastern Europe and the Commonwealth of Independent States during the period 1990 to 2008.

On the contrary, Ghosh (2007) found out results that support the FDI-led trade openness hypothesis

even after including other variables in the regression equation such as gross domestic product (GDP) per capita, inflation, institutional quality, macro-economic volatility and measures of capital controls. Moreover, Klasra (2011) using the Auto Regressive Distributive Lag (ARDL) technique revealed a bi-directional causality relationship between exports and FDI for Turkey both in the short and long run. Exports and FDI were found to have complimented each other in Turkey, argued Klasra (2011) whilst Aizenman and Noy (2006) discovered that both FDI and trade Granger caused each other very strongly in developing countries as compared to in developed countries.

As a result of the lack of consensus, this study is investigating the causality relationship between trade openness and FDI in Zimbabwe using the Auto Regressive Distributive Lag (ARDL-Bounds) testing methodology. Total exports and imports of goods and services (% of GDP) is used as a proxy of trade openness. The choice of this trade openness proxy follows Dollar and Kraay (2001) who defined trade openness as exports + imports as a percentage of GDP. Kandiero and Chitiga (2006) also agreed with Dollar and Kraay (2001) in as far as the definition of trade openness is concerned. FDI, net inflow (% of GDP) is used as a proxy for FDI in this study (see Tsaurai and Odhiambo, 2012). The researcher has chosen Zimbabwe as a field of study because no such exact research has so far been accomplished for the country, at least according to the author's knowledge.This study will contribute towards further

enriching literature on FDI and trade openness and also informs the relevant Zimbabwe authorities on which policies they need to craft in order to boost not only FDI inflow but international trade in general.

The following is the structure of the rest of the study. Part 2 contains the trend analysis of trade openness and foreign direct investment (FDI) in Zimbabwe. Part 3 details the literature review. Part 4 deals with the research methodology while Part 5 concludes the study. Part 6 provides for the bibliography of the paper.

2. Trade Openness and Foreign Direct Investment Trends in Zimbabwe

According to World Bank (2014), FDI, net inflows (US$) increased by a massive 83.82%, from US$1.550 million in 1980 to US$2.849 million in 1985. However, the period 1985 to 1990 saw FDI, net inflows plummeting by 528.48%, representing a significant decline from US$2.849 million in 1985 to a negative of US$12.206 million in 1990. The subsequent five year period witnessed a huge increase in FDI net inflow which saw the year 1995 closing off at FDI, net inflow of US$117.7 million (refer to Figure 1).
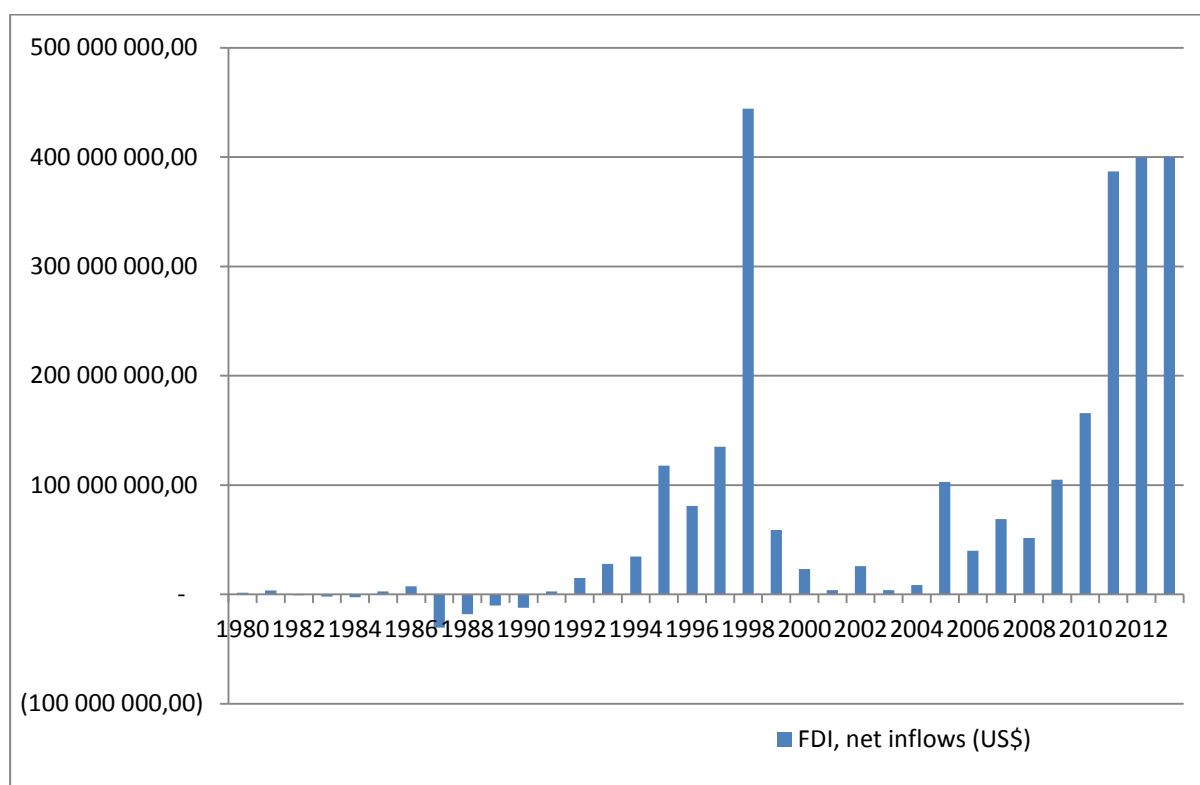

Figure 1. FDI, net inflows (US$) trends in Zimbabwe during the period 1980 to 2012
Source: World Development Indicators (2014)

However, the next five year period saw FDI, net inflows nose diving by 80.29%, from US$117,7 million in 1995 down to US$23.2 million in 2000. The period 2005 to 2013 generally experienced an upward trend in FDI, net inflows (World Bank, 2014). World Bank (2014) statistics show that FDI, net inflows jumped upwards from US$23.2 million in year 2000 to US$102.8 million in year 2005, representing a massive gain of 343.10% whilst the subsequent five year period between 2005 and 2010 saw FDI, net inflows experiencing another positive 61.38% growth to close off year 2010 at US$165.9 million. Last but not least, FDI, net inflows increased by an unprecedented 141.11% during the period between 2010 and 2013. The same period saw FDI; net inflows going up from US$165.9 million in 2010 to US$400 million in 2013 (see Figure 1).

Figure 2 shows the trend of the total exports and imports during the period between 1980 to 2012. The World Bank (2014) statistics shows that the total exports and imports plummeted by 25.20%, from US$3.332 billion in 1980 down to US$2.492 billion in 1985 before registering a massive 60.91% growth during the subsequent five year period (1985 to 1990). Total exports and imports increased from US$2.492 billion in 1985 to US$4.011 billion in 1990 (see Figure 2) before registering another positive jump of 40.35%, from US$4.011 billion in 1990 to US$5.629 billion in 1995. World Bank (2014) statistics also show that the ten year period between 1995 and 2005 was characterised by a gradual decline in the total exports and imports of Zimbabwe. Total exports and imports declined by 11.97%, from US$5.629 billion in 1995 down to US$4.955 billion in 2000 before

experiencing another 11.68% decrease, from US$4.955 billion in year 2000 down to US$4.376
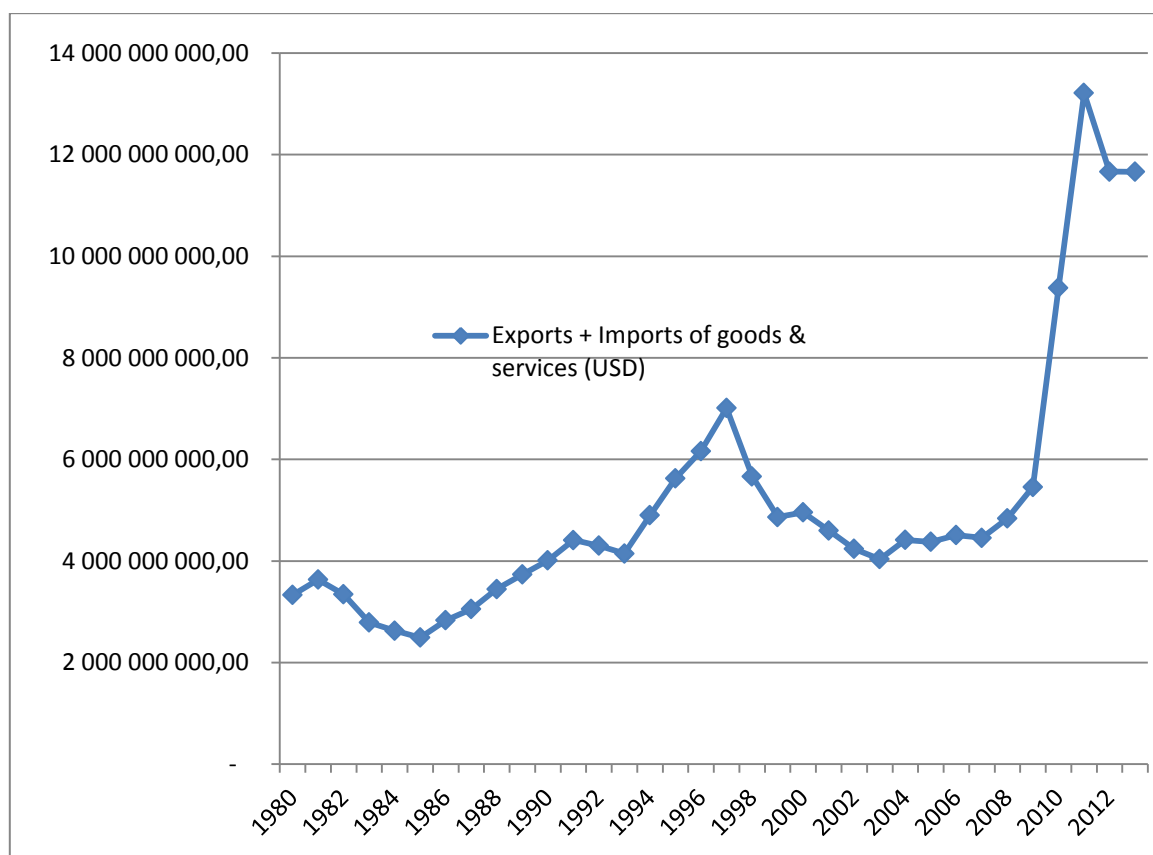
billion in year 2005 (refer to Figure 2).

Figure 2. Exports + Imports of goods & services (USD) trend in Zimbabwe during the period 1980 to 2012
Source: World Development Indicators (2014)

However, the subsequent five year period saw total exports and imports of Zimbabwe registering an unprecedented positive growth of a massive 114.23%, from US$4.376 billion in 2005 to US$9.376 billion in 2010. This was before total exports and imports of Zimbabwe increased by another 24.38% during the three year period ranging between 2010 and 2013 to close off at US$11.662 billion.

Figure 3 shows the trends of FDI, net inflow (% of GDP) and total exports and imports of goods and services for Zimbabwe during the period 1980 and 2012. According to World Bank (2014) statistics, FDI, net inflows (% of GDP) went up by a marginal 0.03 percentage points, from 0.02% in 1980 to 0.05% in 1985 whilst total exports and imports (% of GDP) decreased by 5.68 percentage points (from 49.89% in 1980 down to 44.21% in 1985) during the same period. However, the subsequent five year period saw FDI, net inflows (% of GDP) declining by a mere 0.19 percentage points to end the year 1990 at a negative 0.14% before registering a positive growth of 1.79 percentage points during the period between 1990 and 1995. FDI, net inflows (% of GDP) was negative 0.14% in 1990 and went up to 1.66% in 1995.

On the other hand, total exports and imports (% of GDP) went up by a marginal 1.45 percentage

points, from 44.21% in 1985 to 45.66% in 1990 before registering a massive positive gain of 33.50 percentage points during the next five year period, from 45.66% in 1990 to 79.16% in 1995. However, FDI, net inflows (% of GDP) declined by 1.31 percentage points between 1995 and 2000 whilst total exports and imports (% of GDP) also experienced a decline of 5.09 percentage points during the same period. FDI, net inflows (% of GDP) was 1.66% in 1995 and declined to 0.35% in 2000 whilst total exports and imports (% of GDP) was 79.16% in 1995 before declining to 74.07% in 2000 (refer to Figure 3).

The subsequent five year period between 2000 and 2005 saw both FDI, net inflows (% of GDP) and total exports and imports (% of GDP) registering positive growth rates with the former going up by 1.44 percentage points and the latter increasing by 1.98 percentage points. However, FDI, net inflows (% of GDP) decreased by a mere 0.03 percentage points, from 1.79% in 2005 to 1.75% in 2010 whilst total exports and imports (% of GDP) had a significant gain of 23.10 percentage points (from 76.04% in 2005 to 99.14% in 2010) during the same time frame. Last but not least, total exports and imports (% of GDP) plummeted by 12.69 percentage points, from 99.14% in 2010 to 86.45% in 2013 whereas FDI, net inflows

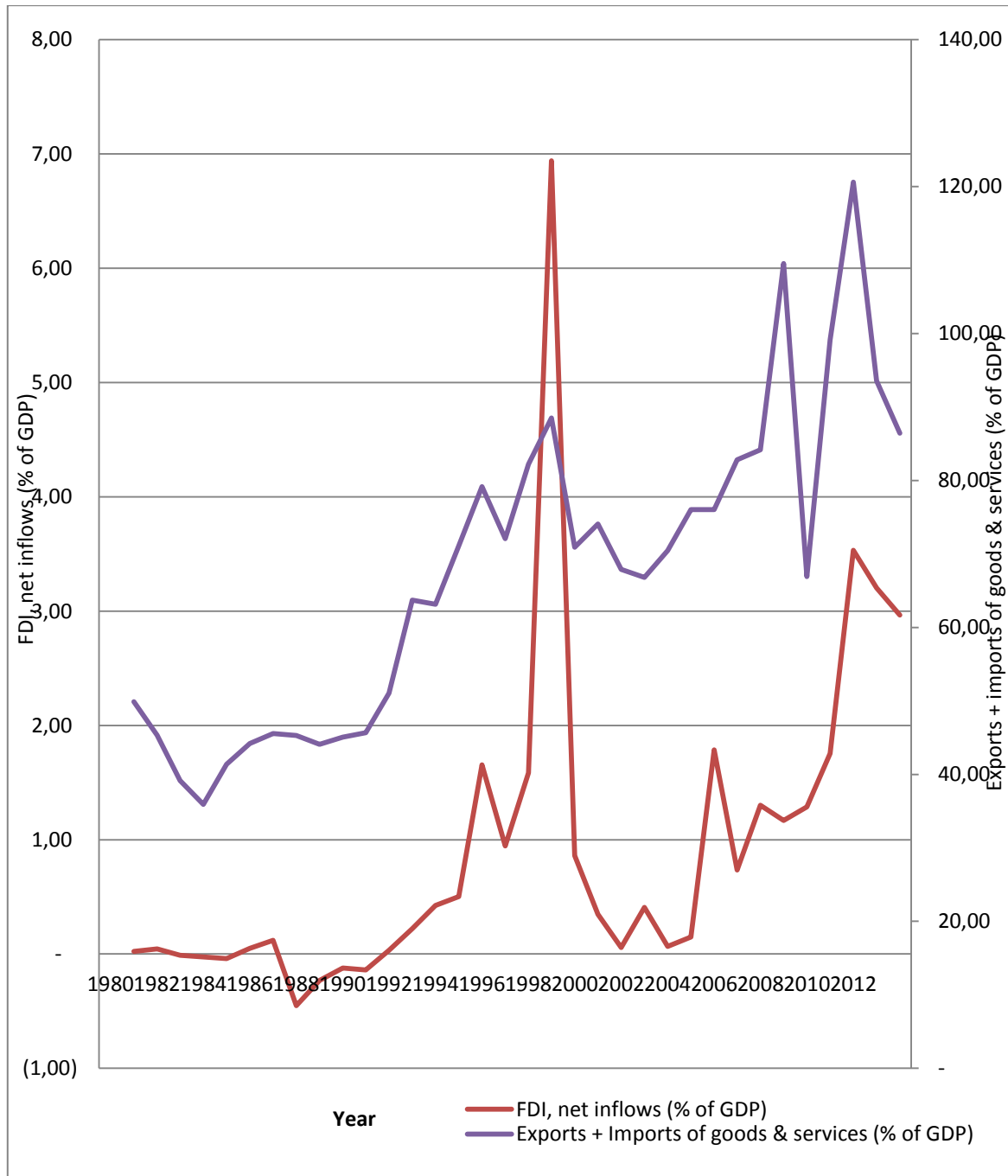only managed a 1.21 percentage points growth (from 1.75% in 2010 to 2.97% in 2013) during the same time frame.

Figure 3. FDI, net inflows (% of GDP) and Total Exports and Imports of goods and services (% of GDP) trends for Zimbabwe -1980 to 2012
Source: World Development Indicators (2014)

3. Literature Review

Four views exist in the literature with regard to the relationship between trade openness and FDI. These encompass the trade openness –led FDI, FDI –led trade openness, feedback view and the no relationship view which says that there is no relationship at all between trade openness and FDI both in the short and long run.

The trade openness –led FDI view is supported by McDermott (2007), amongst others mentions that FDI is attracted mainly by trade openness of the host country. According to MacDermott (2007), trade integration was found to have played a huge role in attracting FDI into Mexico, Canada and United States of America (USA) during the period 1982 to 1997. Using the fixed effects gravity model, MacDermott

(2007) disclosed that North American Free Trade Agreement (NAFTA) encouraged more FDI flow into the member countries which include Mexico, Canada and the USA. NAFTA pushed up FDI inflow into USA, Mexico and Canada by 0.96%, 1.73% and 1.54% respectively during the period under study (MacDermott, 2007). A panel data analysis approaches (fixed effects and random effects models) that included 29 African countries carried out by Onyeiwu and Shrestha (2004) discovered that one of the critical factors that were instrumental in attracting FDI inflows into Africa is the degree of openness of the economy.

Mina (2007) also showed that trade openness, institutional quality and infrastructural development attracted FDI into the GCC countries during the period 1980 to 2002. The impact of trade openness on FDI was found to be both positive and significant in GCC countries, revealed Mina (2007). Financial market liberalization was found to have influenced the choice of FDI location in Central and East European countries (Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia) by a study done by Majocchi and Strange (2007). On the contrary, the same study by Majocchi and Strange (2007) revealed that openness to foreign banks negatively affected FDI flows into the Central and East European countries. A co-integration and error correction modeling (ECM) study using monthly time series data by Zhang and Felmingham (2001) found out that trade positively influenced FDI in Central China during the period 1986 to 1999.

Basu et al (2003) revealed that for countries characterized by high trade openness, GDP and FDI affect each other whilst GDP Granger caused FDI in the long run in countries characterized by restrictive trade regimes. Using cross sectional data for 38 developing countries, Demirhan and Masca (2008) found out that degree of trade openness among other factors such as inflation rate, GDP per capita growth rate, telephone lines per 1 000 people measured in logs and labour cost per unit were instrumental in attracting FDI in developing countries during the period 2000 to 2004. According to Charkrabarti (2001), higher trade openness as measured by the ratio of exports plus imports to GDP positively influenced FDI. However, the extent of impact of trade openness on FDI relies on the nature of the investments according to Jordaan (2004). In cases where investments are market seeking, low levels of trade openness is likely to result in more FDI, all other factors remaining constant (Jordaan, 2004). On the contrary, multi-national enterprises involved in export oriented investments prefer to invest in countries with high trade openness levels as such environments reduces exporting transaction costs, revealed Jordaan (2004). However, studies done by ODI (1997) concluded that domestic market variables are less relevant in deciding FDI inflow for export oriented firms.

Wheeler and Mody (1992) found out results that support the trade openness-led FDI hypothesis only in the manufacturing sector. The same study by Wheeler and Mody (1992) revealed that trade openness had a negative influence on FDI in the electronic and telecommunication sector. Using quarterly data for the period 1972 to 2010, Zakaria et al (2014) showed the existence of a significant positive impact of trade openness on FDI in Pakistan. This finding remained unchanged when different trade openness measures and alternative model specifications are used (Zakaria et al, 2014), thus corroborating previous findings which highlighted that trade openness and FDI complement each other and they do not substitute one another. In support of the trade openness-led FDI hypothesis, Cuadros et al (2004) showed that the benefits of FDI inflow can be better enjoyed by those countries characterized by high level of trade openness and macro-economic stability.

According to Majeed and Ahmad (2009), multinational enterprises were attracted to invest in developing countries that were characterized by a high level of trade openness during the period between 1970 and 2008. The study by Majeed and Ahmad (2009) involved 72 developing countries using the General Method of Moments (GMM) technique in order to avoid the endogeneity problem that might have been associated with the host countries' characteristics. Buthe and Milner (2008) also discovered that international trade agreements and preferential trade agreements re-assures foreign investors about the safety of their investments in a study involving 122 developing countries during the period 1970 to 2000. As a result, host countries that are part of the international and preferential trade agreements attract more FDI as multinational enterprises feels secure, argued Buthe and Milner (2008).

Using cross country data from a selected list of African countries, Kandiero and Chitiga (2006) showed that openness of the whole economy especially in the services sector attracted FDI during the period 1980 to 2001. The same study by Kandiero and Chitiga (2006) revealed that the openness in the manufacturing sector had a negligible impact on FDI inflows in African countries. On the other hand, a study carried out by Chakrabarti (2001) revealed that trade openness has got a higher probability of attracting more FDI than other explanatory variables such as tax, wages, exchange rates, GDP growth rate and trade balance. FDI was also found to have depended on trade openness and GDP per capita levels in Sub-Saharan African countries during the period 1980 to 2003 (Babatunde, 2011). Babatunde (2011) also showed that trade openness along with infrastructural quality slightly pushed up FDI inflows in the Sub-Saharan African countries during the same period. On the other hand, Asiedu (2002) discovered that FDI inflow was more responsive to trade openness in non-Sub Saharan Africa than in Sub-

Saharan Africa. In other words, the marginal benefit of trade openness on FDI inflow though positive in both groups of countries, but was more pronounced in non-Sub-Saharan Africa than in Sub-Saharan Africa (Asiedu, 2002).

Apart from infrastructural quality and stable macro-economic and political environment, trade openness was found by Sekkat and Varoudakis (2007) to have played a huge role in attracting FDI in South Asia, Africa and the Middle East. Trade openness and political and economic stability had a greater impact on FDI especially in the manufacturing sector in South Asia, Africa and the Middle East as compared to the other sectors of the economy. Aizenman and Noy (2006) also found out results that supports the trade openness –led FDI hypothesis. A study by Ang (2008) also showed that trade openness, market size, infrastructure and financial development formed part of the reasons why Malaysia received more FDI during the period 1960 to 2005. Ang (2008) also noticed that statutory corporate tax and exchange rate appreciation in Malaysia strongly discouraged FDI inflows.

Ghosh (2007) did a study whose findings resonate with the FDI –led trade openness hypothesis. Using panel data approach, Ghosh (2007) revealed a uni-directional causality relationship running from FDI to trade openness in developing countries during the period between 1970 and 1997.The same study by Ghosh (2007) still found results that support the FDI-led trade openness hypothesis even after including other variables in the regression equation such as gross domestic product (GDP) per capita, inflation, institutional quality, macro-economic volatility and measures of capital controls.

The feedback or bi-directional view which says that trade openness and FDI affect each other was empirically supported by Zhang and Felmingham (2001), Klasra (2011), Aizenman and Noy (2006), only to mention a few. Using monthly time series data and error correction modeling (ECM) techniques, Zhang and Felmingham (2001) discovered a bi-directional causality relationship between FDI and exports from China provinces. Zhang and Felmingham (2001) also showed that both exports and FDI positively affected each other in the Chinese Coast and Western China. Moreover, Klasra (2011) using the Auto Regressive Distributive Lag (ARDL) technique revealed a bi-directional causality relationship between exports and FDI for Turkey both in the short and long run. Exports and FDI were found to have complimented each other in Turkey by Klasra (2011). Aizenman and Noy (2006) discovered that both FDI and trade Granger caused each other very strongly in developing countries as compared to in developed countries.

The fourth view says that there is no long run relationship between trade openness and FDI. A study carried out by Ghosh (2007) resonates with this view. Firstly using trade openness as a dependent variable and secondly using FDI as a dependent variable, Ghosh (2007) found out that neither trade openness had an explanatory power on FDI trends nor FDI had any impact on trade openness in developing countries during the period 1970 to 1997.

4. Research Methodology

This section looks at sources of data, stationarity tests of the data and co-integration tests to determine if long run relationship exists between trade openness and FDI in Zimbabwe.

a) Data and Data Sources

This study used annual data ranging between 1980 and 2013 that was obtained from the World Bank (2014) Development Indicators. The study used total exports and imports of goods and services (% of GDP) as a proxy of trade openness. Dollar and Kraay (2001) defined trade openness as exports + imports as a percentage of GDP. Kandiero and Chitiga (2006) also agreed with Dollar and Kraay (2001) in as far as the definition of trade openness is concerned. The FDI variable was expressed as a share of GDP (see also Tsaurai and Odhiambo, 2012).Trade openness data was auto-correlated at level which was then removed at first difference whilst there was no auto-correlation of FDI net inflows data at level.

b) Stationarity Tests

The stationarity of a time series refers to its statistical features which include mean, variance and standard deviation over a given period of time. If both are constant over time, then the series is said to be stationary and if they are not constant, they are described as being non-stationary. The behavior of a time series can be determined by its stationarity. In a model format, y and z time series relationship as a simple Ordinary Least Squares (OLS) lead to the following equation if y and z are assumed to be non-stationary.

$$Y_t = \alpha + \beta Z_t + \varepsilon_t \qquad \text{(i)}$$

Where Y_t and Z_t stands for individual time series.

Differencing the time series in (1) gives the following.

Level	Z_t	(ii)
1st differenced value	$Z_t - Z_{t-1}$	(iii)
2nd differenced value	$Z_t - Z_{t-2}$	(iv)
3rd differenced value	$Z_t - Z_{t-3}$	(v)

I (0) is also known as integrated of order zero (0) and it's a name given when the time series have been found to be stationary at level or without any differencing whilst I (1) or integrated of order one (1)

is when a time series is found to be stationary at first difference and so forth and so on.

All time-series data variables need to be tested for stationarity before causality tests are done to ensure that the data is not volatile. Trade openness and FDI data sets were tested for stationarity using the Augmented Dickey Fuller (ADF), Philips-Perron (PP) tests and the Dick-Fuller GLS (see Table 1).

Table 1. Stationarity Tests of Variables in Levels

Variable	ADF /PP Test Statistic – Trend & Intercept	Critical Values	
Stationarity Tests of Variables on levels - Augmented Dickey-Fuller - Test			
FDI	-4.271542	-4.262735***	-3.552973**
TRDOP	-4.641111	-4.262735***	-3.552973**
Stationarity Tests of Variables on levels – Phillips-Perron (PP) Test			
FDI	-4.268939	-4.262735***	-3.552973**
TRDOP	-4.653258	-4.262735***	-3.552973**
Stationarity Tests of Variables on levels – Dickey-Fuller GLS (ERS) Test			
FDI	-4.403474	-3.770000***	-3.190000**
TRDOP	-4.454451	-3.770000***	-3.190000**

Note:
*1) *** and ** denote 1% and 5% levels of significance, respectively.*
3) The truncation lag for the PP tests is based on Newey and West (1987) bandwidth.
2) Critical values for Dickey-Fuller GLS test are based on Elliot-Rothenberg-Stock (1996, Table 1).
3) TRDOP stands for trade openness.

Table 2. Stationarity Tests of Variables in first Difference

Stationarity Tests of Variables in first Difference: ADF Test			
Variable	NO TREND	TREND	Stationarity Status
DFDI	-2.647120***	-4.309824***	Stationary
DTRDOP	-2.669359***	-4.416345***	Stationary
Stationarity Tests of Variables in first Difference: Philip-Perron (PP) Test			
Variable	NO TREND	TREND	Stationarity Status
DFDI	-2.641672***	-4.284580***	Stationary
DTRDOP	-2.641672***	-4.284580***	Stationary
Stationarity Tests of all Variables in first Difference: DF-GLS Tests			
Variable	NO TREND	TREND	Stationarity Status
DFDI	-2.870281***	-3.770000***	Stationary
DTRDOP	-2.861249***	-3.770000***	Stationary

Note:
*1) *** denote significance at 1%.*
2) Critical values for Dickey-Fuller GLS test are based on Elliot-Rothenberg-Stock (1996, Table 1).
3) The truncation lag for the PP tests is based on Newey and West (1987) bandwidth.

Table 2 shows that the null hypothesis of non-stationarity for both time series is rejected at first difference as both time series are integrated of order 1 or I (1).

c) Co-integration Test

The newly developed ARDL-bounds testing approach was used to investigate the existence of a long run relationship between FDI and trade openness since it has been confirmed that the time series are integrated of order 1. The ARDL model used by this study is expressed as follows:

$$\Delta InFDI_t = a_0 + \sum_{i=1}^{n} a_{1i}\Delta InFDI_{t-i} + \sum_{i=0}^{n} a_{2i}\Delta InTRDOP_{t-i} + a_3 InFDI_{t-1} + a_4 InTRDOP_{t-1} + \mu_t .....(vi)$$

$$\Delta InTRDOP_t = \beta_0 + \sum_{i=1}^{n} \beta_{1i}\Delta InTRDOP_{t-i} + \sum_{i=0}^{n} \beta_{2i} InFDI_{t-i} + \beta_3 InFDI_{t-1} + \beta_{4I} InTRDOP_{t-1} + \mu_t ....(vii)$$

Where: In TRDOP = Log of trade openness variable; In FDI = Log of foreign direct investment variables; Δ = first difference operator; μ is a white noise error whilst subscripts $_t$ and $_{t-i}$ represents time periods.

As the first step of the ARDL-bounds test, the author examined the order of lags on the first differenced variables in equations (vi) and (vii) – using the Akaike Information Criterion (AIC) and the Schwartz-Information Criterion (SIC).The results of the AIC and SIC tests indicate that the optimal lag length of both FDI and trade openness is 2 (see Table 3).

Table 3. Determination of optimal lag length

VAR Lag Order Selection Criteria						
Endogenous variables: DFDI DTRADEOPEN						
Exogenous variables: C						
Lag	LogL	LR	FPE	AIC	SIC	HQ
0	-171.2415	NA	529.5286	11.94769	12.04198	11.97722
1	-163.9447	13.08392	422.4422	11.72032	12.00321*	11.80892
2	-157.7412	10.26784*	364.8771*	11.56836*	12.03984	11.71602*
3	-154.7169	4.588543	395.1755	11.63565	12.29572	11.84238
4	-152.2289	3.431667	448.7659	11.73993	12.58859	12.00572
* indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error						
AIC: Akaike information criterion						
SIC: Schwarz information criterion						
HQ: Hannan-Quinn information criterion						

After determining the optimal lag length, the author applied the bounds F-test to equations (vi) and (vii), in order to assess the existence of any long-run relationship between FDI and trade openness. The results of the bounds test are reported in Table 4.

Table 4. Bounds F-Test

Dependent variable	Function		F-test statistic			
FDI	FDI(TRDOP)		2.553549**			
TRDOP	TRDOP(FDI)		2.922027*			
Asymptotic Critical Values						
	1 %		5%		10%	
	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
Pesaran et al. (2001), p. 300, Table CI(i) Case I	3.88	5.30	2.72	3.83	2.17	3.19

Note:
* denotes statistical significance at the 5% level.
** denotes statistical significance at the 10% level.

Table D shows that that the F-statistic is not statistically significant in both the FDI and trade openness equation. This is confirmed by the F statistic in both the FDI and trade openness equations which is either lower or in between the asymptotic critical values at 1%, 5% and 10% levels of significance. The study therefore concludes that long run relationship or co-integration between FDI and trade openness in Zimbabwe does not exist.

5. Conclusion

The study focused on the relationship between trade openness and FDI using Zimbabwe as a case study. Time series data ranging between 1980 and 2013 was used for the purposes of this research. The choice for the country came about due to the consideration that such an area on trade openness and FDI has not been adequately covered in Zimbabwe. As a result, due to lack of consensus in the literature about the causal relation between trade openness and FDI, it has been found not to be easy to formulate effective FDI and international trade policies. Scores of researchers have failed to agree on causality direction between trade openness and FDI. Other researchers are of the opinion that trade openness boost FDI inflow while others though they constitute a minority are of the view that it is FDI that accelerates trade openness of the host country. On the other hand, another group of authors maintain that both FDI and trade openness affect each other whilst others says no relationship exist at all between the two variables. Using the ARDL (Autoregressive distributed lag)-bounds testing approach, this study find that there is no long

run relationship between FDI and trade openness in Zimbabwe.

References:

1. Agosin, M.R. and Machado, R. (2006) 'Openness and the international allocation of foreign direct investment', *Journal of Development Studies,* Vol.43, No. 7, pp.1234-1247.
2. Aizenman, J. and Noy, I. (2006) 'FDI and trade – two way linkages?', *The Quarterly Review of Economics and Finance,* Vol. 46, No. 3, pp. 317-337.
3. Ang, J.B. (2008) 'Determinants of foreign direct investment in Malaysia', *Journal of Policy Modelling,* Vol. 30, No. 1, pp. 185-189.
4. Asiedu, E. (2002) 'On the determinants of foreign direct investment to developing countries: Is Africa different?', *World Development,* Vol. 30, No. 1, pp. 107-119
5. Basu, P. Chakraborty, C. and Reagle, D. (2003) 'Liberalisation, FDI and growth in developing countries: A panel co-integration approach', *Economic Inquiry,* Vol. 41, No. 3, pp. 510-516.
6. Babatunde, A. (2011) 'Trade openness, infrastructure, FDI and growth in Sub-Saharan African countries', *Journal of Management Policy and Practice,* Vol. 12, No. 7, pp. 27-36.
7. Buthe, T. and Milner, H.V. (2008) 'The politics of foreign direct investment into developing countries: Increasing FDI through international trade agreements?', *American Journal of Political Science,* Vol. 52, No. 4, pp. 741-762.
8. Chakrabarti, A. (2001) 'The determinants of foreign direct investment: Sensitivity analysis of cross country regressions', *Kyklos,* Vol. 54, No. 1, pp. 89-114.
9. Cuadros, A. Orts, V. and Alguacil, M (2004) 'Openness and growth: Re-examining foreign direct investment, trade and output linkages in Latin America', *The Journal of Development Studies,* Vol. 40, No. 4, pp. 167-192.
10. Demirhan, E. and Masca, M. (2008) 'Determinants of foreign direct investment flows to developing countries: A cross sectional analysis', *Prague Economic Papers,* Vol. 2008, No. 4, pp. 356-369.
11. Dollar, D. and Kraay, A. (2001) 'Trade, growth and poverty', *Finance & Economics. A Quarterly Magazine of the IMF,* Vol. 38, No. 3, pp. 1-5.
12. Duasa, J. (2007). Malaysian foreign direct investment and growth: Does stability matter. *Journal of Economic Cooperation*, Vol 28, No. 2, pp.83-98.
13. Elliot G., Rothenberg T., Stock J. (1996) 'Efficient tests for an autoregressive unit root', *Econometrica*, Vol. 64, No. 4, pp. 813–836.
14. Ghosh, I. (2007) 'The relation between trade and FDI in developing countries – A panel data approach', *Global Economy Journal,* Vol. 7, No. 3, pp. 1-30.
15. Gul, E. and Ekinc, A. (2006). The causal relationship between nominal interest rates and inflation: The case of Turkey. *Scientific Journal of Administrative Development*, Vol (4), pp. 54-69.
16. Jordaan, J.C. (2004) 'Foreign direct investment and neighbouring influences', *Unpublished doctoral thesis,* University of Pretoria.
17. Kandiero, T. and Chitiga, M. (2006) 'Trade openness and foreign direct investment in Africa', *Sajems NS,* Vol. 9, No. 3, pp. 355-370.
18. Klasra, M.A. (2011) 'Foreign direct investment, trade openness and economic growth in Pakistan and Turkey: An investigation using bounds test', *Qual Quant,* Vol. 45, No. 1, pp. 223-231.
19. Liargovas, P.G. and Skandalis, K.S. (2012) 'Foreign direct investment and trade openness: The case of developing economies', *Soc Indic Resi,* Vol. 106, No. 2, pp. 323-331.
20. MacDermott, R. (2007) 'Regional trade agreement and foreign direct investment', *North American Journal of Economics and Finance,* Vol. 18, No. 3, pp. 107-116.
21. Majeed, M.T. and Ahmad, E. (2009) 'An analysis of host country characteristics that determine FDI in developing countries: Recent panel data evidence', *The Lahore Journal of Economics,* Vol. 14, No. 2. pp. 71-96.
22. Majocchi, A. and Strange, R. (2007) 'The FDI location decision: Does liberalization matter?', *Transnational Corporations,* Vol. 16, No. 2, pp. 1-40.
23. Mina, W. (2007) 'The location determinants of FDI in the GCC countries', *Journal of Multinational Financial Management,* Vol. 17, No. 4, pp. 336-348.
24. Newey, W.K., West, K.D. (1987), 'A simple, positive semi-definite, heteroskedasticity and autocorrelation consistent covariance matrix', *Econometrica*, Vol. 55, No. 3, pp. 703-708.
25. ODI (1997) 'Foreign direct investment flows to low income countries: A review of the evidence.
26. Onyeiwu, S. and Shrestha, H. (2004) 'Determinants of foreign direct investment in Africa', *Journal of Developing Societies,* Vol. 20, No. 1-2, pp. 89-106.
27. Pesaran, M., Shin, Y., and Smith, R. (2001), "Bounds testing approaches to the analysis of level relationships', *Journal of Applied Econometrics*, Vol. 16, No. 3, pp. 289–326.
28. Sekkat, K. Varoudakis, M.V. (2007) 'Openness, investment climate and FDI in developing countries', *Review of Development Economics,* Vol. 11, No. 4, pp. 607-620
29. Tsaurai, K. and Odhiambo, N.M (2012) 'Foreign direct investment and economic growth in Zimbabwe: A dynamic causality test', *International Journal of Economic Policy in Emerging Economies,* Vol. 5, No. 2, pp. 183-196.
30. Wheeler, D. and Mody, A. (1992) 'International investment location decisions: The case for US firms', *Journal of International Economics,* Vol. 33, No. 1-2, pp. 57-76.
31. World Bank (2014). World Development Indicators published by the World Bank, Washington D.C.
32. Zakaria, M. Naqvi, H. A. and Fida, B.A. (2014) 'Openness and FDI in Pakistan: What does the data tell us?', *Middle East Journal of Scientific Research,* Vol. 19, No. 12, pp. 1587-1597.
33. Zhang, Q. and Felmingham, B. (2001) 'The relationship between inward direct foreign investment and China's provincial export trade', *China Economic Review,* Vol. 12, No. 1, pp. 82-99.