Effect of Trade Openness on inflation in developing countries: A case of Rwanda

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Abstract

The development of technology in transportation and communication have boosted international trade. The expansion of trade is also attributed to the effort of nations to remove policy barriers (tariff and non-tariff barriers). The role of trade openness in economy is undeniable. For developing countries, improved resource allocation and higher export revenue contribute to national income and increase the pool of resources available for development-related investment. Furthermore trade openness is seen as a tool of anti-monopoly and it helps to control the inflation.

The aim of this study is to examine theoretically and empirically the relationship existing between openness and inflation. Inflation is a complex and dangerous phenomenon because it can destroy income and wealth. Monetarists think that inflation is a monetary phenomenon while Keynesian economic theory places its causes in demand pull and cost push factors. Proponents of trade openness argue that trade openness is associated with declining prices. In contrast, opponents argue that trade openness does not necessary reduce inflation, rather it increases inflation. Our hypothesis was that there is a negative relation between trade openness and inflation in Rwanda. However, using annual time-series data, the empirical analysis has shown a positive relation between inflation and trade openness in Rwanda.

Key words: trade openness, inflation, time series data, stationarity.
1. Introduction

The world has a long history of international trade. Actually, people have been trading ideas and products for millennia. However, International trade increased rapidly after 1820, underpinned by falling of transport and communication costs. Obviously, the immense technological advances in transportation and communications from steamships, railroads and telegraphs to automobiles, airplanes and internet, steady reduced the cost and the time of moving goods, capital, technology, and people around the globe (WTO, 2013).

The statistics of WTO show that over the last three decades, the value of world merchandise exports rose from US$ 2.03 trillion in 1980 to US $ 18.26 trillion in 2011. Commercial services trade recorded even faster growth over the same period, advancing from US$ 367 billion in 1980 to US$ 4.17 trillion in 2011.

Many factors contributed to the expansion of trade. In addition to the reduction of transportation and communication costs, this expansion is attributed to the effort to remove policy barriers, namely tariff and non-tariff barriers. Trade opening is the result of agreements negotiated mainly under World Trade Organization (WTO). This latter deals with regulation of trade and provides a framework for economic negotiating and designing trade agreements.

The role of free trade in economy relates first to mercantilism, the trade theory that formed the foundation of economic thought from about 15th to 18th centuries. This theory held that a country's wealth was measured by its holdings of treasure, which usually meant its gold. To receive an influx of gold, Mercantilists state that countries should export more than they import. This philosophy developed under laissez-faire conditions led however to protectionism. The mercantilist philosophy weakened after 1800 (Daniels and Radebaugh, 2001).

Adam Smith, in 1776, published "An Inquiry into the Nature and Causes of the Wealth of Nations". This book developed the theory of absolute advantage, which holds that different countries produce some goods more efficiently than other countries; thus, global efficiency can increase through free trade. In his "Principles of Political Economy and Taxation", published in 1817,
David Ricardo expanded on Adam Smith's theory of absolute advantage to develop the theory of comparative advantage. Ricardo argued that even if a country could produce everything it needed more efficiently than another country; it would still benefit if it specialized in what it was best at producing and used the profits to buy the other things it wanted from elsewhere (Daniels and Radebaugh, 2001). Ricardo agreed with Smith that tariffs were generally harmful.

The economic advantages drawn from free trade are many. The opening of markets has boosted trade and economic growth worldwide in the past few decades. Yet tariffs-taxes imposed by importing countries on foreign goods remain a key obstacle to market access. The potential benefits of further reducing the obstacle are significant. For developing countries, improved resource allocation and higher export revenue contribute to national income and increase the pool of resources available for development-related investment (Love and Lattimore, 2009). Similarly, Sunil Ashra (2002), states that due to removal of trade barriers and access to the advanced markets, developing economies earned relatively higher national income and hence economic development. Moreover, Ramzan (2013) states that trade openness is a tool of anti-monopoly and it helps to control the inflation.

Inflation referred to as a measure of a general increase of the price level in an economy is a complex and dangerous phenomenon feared by Central bankers globally and forces the execution of monetary policies that are inherently unpopular. It makes some people unfairly rich and impoverishes others. Although inflation can destroy income and wealth, inflation also has the pernicious effect of redistributing income and wealth, and doing so unfairly (Evans, 2013).

Two main schools of thought have provided significant contribution to what they believe are responsible for causing inflationary pressures. On one hand, Monetarists argued that inflation is mainly influenced by how fast the money supply grows or falls, thus being a monetary phenomenon. On the other hand, Keynesian economic theory identified demand pull and cost push factors as the main reasons for inflation. Generally, some economists agree that the growth in money supply have greater influence in the long-run while supply and demand pressures tend to

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affect short to medium term inflation levels (Thomas, 2012).

Evans (2013) says that demand-pull inflation is certainly possible for the stimulus to come from the private sector, especially in a smaller economy where the surge might be explained by foreign demand due to a favorable exchange rate move. Likewise if the private sector expands credit rapidly without a government policy accommodation, or consumers and businesses wind down their savings in order to spend (a process called deleveraging) then the aggregate demand can expand for those reasons as well.

In a mature and large economy that does not rely so much upon foreign trade, a strong stimulus or contraction to aggregate demand in a short period of time is likely to be due to government policy. If the policy is the consequence of government spending and/or taxing decisions, then the shift in the aggregate demand is the consequence of fiscal policy. If the aggregate demand shift is engineered by the nation’s Central banking authority, then the shift on the demand is the result of monetary policy (Evans, 2013).

Regarding Loanable Funds Model, Evans evaluates the impact of government budget deficits upon interest rates and the impact of those rates upon aggregate demand. When a budget deficit is financed by selling interest-bearing financial assets in the competitive markets, and the borrowing is competing with private borrowing, the funding of large deficits will have the tendency to push interest rates upward. Because of the higher interest rates, consumer and business spending that are funded by borrowing will decline to some extent.

Proponents of trade openness argue that trade openness is associated with declining prices, so that protectionism is inflationary (Mussa, 1974). Romer (1993) shows a strong and robust negative link between openness and inflation. The purpose of his paper was to demonstrate and test a prediction of models in which the absence of pre-commitment in monetary policy leads to inefficiently high inflation. Romer's (1993) article aroused interest among economists. Terra (1998) claims that this correlation is only evident in severely indebted countries during 1980s crisis period. Contrary to Terra (1998) argument, Gruben and Mcleod (2004) find this negative correlation remerged in the 1990s across all major
country groups, including high income and less indebted countries. Moreover, Gruben and Mcleod (2004) say that during the 1990s openness is associated with less variable inflation and correlation is stronger in countries with floating exchange rates.

According to new growth theory, openness reduces inflation through its positive influence on output, mainly through increased efficiency, better allocation of resources, improved capacity utilization, and increased foreign investment (Jin, 2000). Lotfalipoor et al. (2013) states that greater openness to trade intensifies market competition and reduces the pricing power of firms, thereby dampening inflation. He also says that stronger market competition also influences policy incentives and makes monetary policy more prudent and less inflationary.

Tahir Mukhtar's (2010) study that covers the period from 1960 to 2007, in Pakistan, showed that there is a significant negative long-run relationship between inflation and trade openness. Aron & Muellbauer (2007), in the case of South Africa, stated that increased openness has significantly reduced the mean inflation rate and has reduced the exchange rate pass-through into wholesale price. The study carried out by Kim and Beladi (2005) on relation between trade openness and price level for 62 countries, showed a negative relation for developing countries and a positive relation for advanced economies.

Regarding opponents (cost push hypothesis), trade openness does not necessarily reduce inflation, and rather it increases inflation (Zakaria, 2010). Many other papers confirm a positive relationship between openness and inflation. For instance, Evan (2004) finds that a higher degree of openness in a country is associated with a higher equilibrium inflation rate. This result is driven by the fact that the monetary authority enjoys a degree of monopoly power in international markets as foreign consumers have some degree of inelasticity in their demand for goods produced in the home country. Lotfalipour et al. (2013) argue that it is possible for an open economy to import inflation from the rest of the world via the prices of manufactured imports or raw material imports. Moreover, as the economy opens up, the fiscal and monetary authorities tend to lose their ability to control inflation through fiscal and monetary policies.
Following Romer’s (1993) study results, Thomas (2012) examined the relationship between trade openness and inflation for 8 Caribbean countries over a 30-year period. The results showed that openness positively influences inflation. Zakaria (2010) empirically examines relationship between trade openness and inflation in Pakistan using annual time-series data for the period 1947 to 2007. The empirical analysis shows that a positive relation holds between trade openness and inflation in Pakistan.

The objective of this paper is to assess in theory and through empirical model analysis the impact of trade openness on inflation in Rwanda for the period from 1990 to 2014.

2. Methodology

To understand the effects of trade openness towards inflation rate, we use the traditional econometric methodology. According to Gujarati (2004), the traditional or classical methodology still dominates empirical research in economics and other social and behavioral sciences. Econometric methodology is used among other things to state the theory or hypothesis, to specify the economic model, to estimate the parameters and to test the hypothesis.

2.1 Statement of the hypothesis

Romer (1993) shows a strong and robust negative link between openness and inflation. Similarly Kim and Beladi (2005) confirm a negative relation between trade openness and inflation for developing countries. Our hypothesis states that there is a negative relation between trade openness and inflation in Rwanda.

Econometric Inflation model

Following previous researchers for instance Tahir Mukhatar (2010), the relationship between inflation and other influencing factors is written in the form of a single linear equation regression model as following:

\[
INF = \beta_0 + \beta_1 TO_t + \beta_2 BD_t + \beta_3 ER_t + \beta_4 GDP_t + \mu_t
\]

Where the Trade openness (TO), Budget deficit (BD), Exchange rate (ER), and GDP are explanatory variables while Inflation (INF) is the dependent variable. Inflation is considered as an endogenous variable, the other four variables, namely trade openness, budget deficit, exchange rate and GDP are treated as exogenous variables. \( \mu \) is a stochastic error term, \( \beta \)s are the coefficients or parameters to be estimated. We limit to
four explanatory variables to keep our regression model simple to be able to explain the behavior of inflation substantially against the trade openness. We still assume that the remaining variables not shown explicitly in the model are represented by the stochastic disturbance term ($\mu$). We assume as well that $\mu_t$ is distributed normally: $\mu_t \sim N(0, \sigma^2)$.

The effect of budget deficit on inflation is expected to be positive. The higher the budget deficit, the greater the rate of inflation. The budget deficit affects inflation only if it is monetized to increase the monetary base of the economy. If the budget deficit is monetized, it increases the money supply thereby increasing the price level (Solomon and de Wet, 2004). These latter avoid the use of money supply in the equation because of multicollinearity. There is a high correlation between the budget deficit and money supply.

The exchange rate has a deterministic effect on the level of prices in underdeveloped economies (Solomon and de Wet, 2004). The exchange rate affects, with a relatively small lag, prices of imported goods, i.e. goods intended directly for the consumer market as well as raw materials and semi-manufactured goods intended for production of consumer goods of domestic origin. Another channel through which exchange rate affects inflation is a pass-through one where the change in exchange rate affects the aggregate demand and a changed output gap, and subsequently on inflation.

The last important control variable is the level of GDP, which has an expected negative impact on the inflation rate as the availability of goods and services in the economy eases on the domestic price growth (Tahir Mukhtar, 2010).

2.2 Data

The data that has been analyzed is secondary data. We used annual time-series data collected for Rwanda for the period 1990 to 2014. From 1961 to 1990, Rwanda had an administered economy which imposed severe restrictions on trade and foreign exchange transactions, as well as fixed exchange rate regime (IMF, 2005). Every import and every importer was subject to a quota, and all import operations were subject to a license authorizing external currency disbursement. The period from 1991 until 1994 corresponds to the beginning of the removal of restrictions on trade and foreign exchange transactions, and
the gradual revival of a market economy. During the period 1995 to 2003, the commitment of the government to trade, financial, and exchange reform was much more credible and stable (Malunda, 2012). The period from 1990 up to 2014 is chosen to analyze the effect of openness on the economy.

The sources of data are the World Bank (WB) database, International Monetary Fund (IMF) and Banque Nationale du Rwanda (BNR) annual reports. Inflation is measured by the consumer price index. Trade openness is the summation of import and export as a share of gross domestic product (GDP): \[\frac{[\text{Imports + exports (both goods and services)}]}{\text{GDP}}\]. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is expressed in billions of United States dollar. Exchange rate is calculated as an annual average based on monthly averages (local currency units relative to the US dollar). Budget deficit (cash basis) is revenue (including grants) minus expense, minus net acquisition of nonfinancial assets.

Eviews program has been used to process the data. This program allowed us to estimate the parameters as well as to run the hypothesis tests. Basically empirical work based on time series data assumes that the underlying time series are stationary. But there are significant reasons that bring researchers to know whether a time series is stationary or nonstationary before one embarks on a regression analysis. The main reason is to avoid obtaining apparently significant results from unrelated data when nonstationary series are used in regression analysis.
3. Results

3.1 Summary of statistics for the variables and trend graph

Table 1: Summary of some statistics for variables

<table>
<thead>
<tr>
<th></th>
<th>INF</th>
<th>TO</th>
<th>BD</th>
<th>ER</th>
<th>GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>11.01600</td>
<td>36.01600</td>
<td>-45.42800</td>
<td>418.5960</td>
<td>3.235200</td>
</tr>
<tr>
<td>Median</td>
<td>8.900000</td>
<td>33.50000</td>
<td>-22.80000</td>
<td>475.3700</td>
<td>2.030000</td>
</tr>
<tr>
<td>Maximum</td>
<td>48.20000</td>
<td>71.10000</td>
<td>5.200000</td>
<td>681.8600</td>
<td>7.890000</td>
</tr>
<tr>
<td>Minimum</td>
<td>-2.400000</td>
<td>19.70000</td>
<td>-295.0000</td>
<td>83.70000</td>
<td>0.750000</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>12.14268</td>
<td>10.19145</td>
<td>72.34829</td>
<td>188.9469</td>
<td>2.180140</td>
</tr>
<tr>
<td>Skewness</td>
<td>2.220782</td>
<td>1.502468</td>
<td>-2.635207</td>
<td>-0.442420</td>
<td>1.002606</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>7.418015</td>
<td>6.727154</td>
<td>8.923215</td>
<td>1.793257</td>
<td>2.548975</td>
</tr>
</tbody>
</table>

Figure 1: Inflation, trade openness, budget deficit, exchange rate and GDP graph

During the period under review, high inflation rates (two-digit) are observed for the period of 1991 to 1997 and for the years 2004, 2008 and 2009. In 1994, the country inflation rate attained the highest level of 42.2%. From 1998 to 2014, the rate is relatively low except in 2004 with 12.30; 2008 with 15.40 and 10.30 for 2009.

The period from 1991 to 1997 is the time just before and after the genocide against the Tutsi. We have to remember that the genocide against the Tutsi took place in 1994. The high rate in 2004 is explained by a widespread rise in consumer prices due to a low supply of locally produced foodstuffs on the market. The high rates of 2008 and 2009 are due to worldwide inflationary pressures led by rising energy and food prices (BNR, reports). Trade openness which
is measured by the sum of exports and imports to GDP has been increasing for the period under study. We have to notice that during the whole period, the imports surpassed largely exports.

With regard to exchange rate, from 1994, exchange rates for Rwandan Franc against US dollar have followed an upward curve. The Rwandan Franc exchange rate what was at 83.7 per 1 dollar in 1991 stands at 681.86 in 2014. The deep strong depreciation of Rwandan Franc against the dollar can be attributed first to the genocide tragedy. The second raison is the pressure resulting from high demand for hard currency for import financing.

In line with budget deficit (on cash basis) including grants, the flow has known a sharp increasing during the period from 2012 to 2014. For instance in 2012, overall deficit accounting for 8.0 percent of GDP. This deficit was financed mainly by foreign borrowing in-form of project loans.

Rwanda had a steady rise in GDP since the end of genocide against the Tutsi in 1994. The average annual growth rated in GDP was 8.8 percent between 2005 and 2009. The Rwandan economy maintained its good performance for the years 2010 and 2011, where we registered 7.5 percent in 2010, 8.6 percent in 2011. In 2012, the Rwanda economy started to slow down to reach 4.6 percent in 2013 due to the temporary aid suspension and bad weather. (BNR, report). The Rwanda economy displayed good performance in 2014 where it grew by 7.2 percent.
3.2 Tests of stationarity

3.2.1 Unit roots test

Table 2: Augmented Dickey Fuller (ADF) test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level of difference</th>
<th>ADF t-statistic</th>
<th>Test critical value at 5%</th>
<th>Decision</th>
<th>Order of integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>INF</td>
<td>Level</td>
<td>2.613720</td>
<td>-2.998064</td>
<td>Nonstationary</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1st difference</td>
<td>-5.155950</td>
<td>-1.95704</td>
<td>Stationary</td>
<td>I (1)</td>
</tr>
<tr>
<td>TO</td>
<td>Level</td>
<td>-4.089514</td>
<td>-2.991878</td>
<td>Stationary</td>
<td>I (0)</td>
</tr>
<tr>
<td>BD</td>
<td>Level</td>
<td>0.817738</td>
<td>-2.998064</td>
<td>Nonstationary</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1st difference</td>
<td>-2.580688</td>
<td>-1.957204</td>
<td>Stationary</td>
<td>I (1)</td>
</tr>
<tr>
<td>ER</td>
<td>Level</td>
<td>-0.971488</td>
<td>-2.998064</td>
<td>Nonstationary</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1st difference</td>
<td>-2.035537</td>
<td>-1.957204</td>
<td>Stationary</td>
<td>I (1)</td>
</tr>
<tr>
<td>GDP</td>
<td>Level</td>
<td>1.236192</td>
<td>-2.998064</td>
<td>Nonstationary</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1st difference</td>
<td>-3.653925</td>
<td>-2.998064</td>
<td>Stationary</td>
<td>I (1)</td>
</tr>
</tbody>
</table>

The results of the ADF test show that the variable TO is stationary at level whereas the variables INF, BD, ER, and GDP are stationary at first difference. This implies that they are integrated of the order one, i.e., I (1).

3.2.2 Cointegration

The cointegration relationship among the variables INF, TO, BD, ER and GDP is tested using Engle and Granger's two-step procedure. The first step is to estimate the least squares regression. The second step performs a unit root test by using Augmented Dickey-Fuller test by regressing the change of the residual series.

Table 3: Regression results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TO</td>
<td>0.767408</td>
<td>0.195458</td>
<td>3.926203</td>
<td>0.0008</td>
</tr>
<tr>
<td>BD</td>
<td>0.036487</td>
<td>0.036684</td>
<td>0.994636</td>
<td>0.3318</td>
</tr>
<tr>
<td>ER</td>
<td>-0.032676</td>
<td>0.013701</td>
<td>-2.384917</td>
<td>0.0271</td>
</tr>
<tr>
<td>GDP</td>
<td>-0.602835</td>
<td>1.524400</td>
<td>-0.395457</td>
<td>0.6967</td>
</tr>
<tr>
<td>C</td>
<td>0.662939</td>
<td>7.010189</td>
<td>0.094568</td>
<td>0.9256</td>
</tr>
</tbody>
</table>

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Table 4: Augmented Dickey-Fuller Unit root test on residuals

<table>
<thead>
<tr>
<th>Augmented Dickey-Fuller test statistic</th>
<th>t-Statistic</th>
<th>Prob.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
<td>-4.579723</td>
<td>0.0014</td>
</tr>
<tr>
<td>Test critical values:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1% level</td>
<td>-3.737853</td>
<td></td>
</tr>
<tr>
<td>5% level</td>
<td>-2.991878</td>
<td></td>
</tr>
<tr>
<td>10% level</td>
<td>-2.635542</td>
<td></td>
</tr>
</tbody>
</table>

Since the calculated Dickey-Fuller test statistic (-4.579723) is less than the 5% critical value of (-4.42) (Davidson and MacKinnon, 1993), we reject the null that the residuals have a unit root. Thus, the variables are cointegrated meaning that they are moving together in the long run. Their parameters are long run parameters. Thus, returning to the regression results, we can say that the relationship between inflation (INF) and trade openness (TO) and budget deficit (BD) is positive. Exchange rate (ER) and GDP have a negative effect on inflation.

The change of one unit of trade openness will lead to 0.77 change of inflation. The change in GDP of one unit, decreases inflation of 0.60. In our case, the effect of budget deficit and exchange rate on inflation in not very significant.

4. Discussion of the research

Our hypothesis states that there is a negative relation between trade openness and inflation in Rwanda. However, empirical study shows us that there is a strong positive relationship between inflation and trade openness in Rwanda. This result brings us to refute what Romer (1993) and supporters like Kim and Beladi (2005) and Tahir Mukhtar (2010) found about the link existing between those two factors. Those latter confirmed a strong and robust negative effect of trade openness on inflation. Thus, our results support Zacharia (2010) and Thomas's (2012) papers that empirically show a positive relation between trade openness and inflation.

In the case of Rwanda, the positive relationship between inflation and trade openness should be explained by its dependence on imports. Evans' (2013) paper shows that Nations that rely very heavily on exports and imports are more vulnerable to
inflation because of the role played by exchange rates in their economies. Lotfalipour et al. (2013) state that it is possible for an open economy to import inflation from the rest of the world via the prices of manufactured imports or raw material imports. We support Lotfalipour, however, we can't go now in the line of those who assert that as the economy opens up, the fiscal and monetary authorities tend to lose their ability to control inflation through fiscal and monetary policies. In fact, in Rwanda, in general, the inflation pressures are kept on declining due to better economic performances and efficient monetary and fiscal policies. Even if the inflation is under control, it is advisable to always analyze the effect of trade openness on inflation in all of its aspects.

The explanatory variable, GDP, has been found to be negatively related to inflation. This behavior seems to be true because we know that GDP has a negative impact on the inflation rate as the availability of goods and services in the economy eases pressure on the domestic price growth.

We have found that the factor budget deficit has a positive effect on inflation. However the magnitude of the parameter measuring the change of inflation seems to be not significant. The data collected on the matter shows that the budget deficit in Rwandan economy is still increasing since 2012. This deficit is being financed by foreign and domestic borrowing. As Evans (2013) states that when a budget deficit is financed by selling interest-bearing financial assets in the competitive markets, and the borrowing is competing with private borrowing, the funding of large deficits will have the tendency to push interest rates upward. Because of the higher interest rates, consumer and business spending that are funded by borrowing will decline to some extent.

5. Conclusion and policy implication

The economic advantages drawn from free trade are many. The opening of markets has boosted trade and economic growth worldwide in the past few decades. Ramzan (2013) states that trade openness is a tool of anti-monopoly and it helps to control the inflation. Inflation has been described as a dangerous phenomenon feared by central bankers because it can destroy income and wealth. Some economists argue that inflation is mainly a monetary phenomenon. For others, inflation is caused by demand pull and cost push factors.
An important debate has centered on the effects of trade openness on inflation. On one hand, proponents of trade openness argue that trade openness is associated with declining prices. Furthermore, the negative relationship between trade openness and inflation has been confirmed for developing countries. On the other hand the opponents argue that trade openness does not necessarily reduce inflation, rather it increases inflation. Evans (2013) says that nations that rely very heavily on exports and imports are more vulnerable to inflation because of the role played by exchange rates in their economies.

The empirical study fulfilled using data for Rwanda as one of developing countries brought us to join researchers like Zacharia (2010) who confirmed a positive relationship between inflation and trade openness. This relationship for Rwanda has been associated to the heavy dependence of the country on imports. On the contrary, the influence of the GDP to inflation has found to be negative. In fact, Rwanda has a good sustainable economic growth. To control the positive effect of trade openness on inflation, the country has to develop a good export strategy to improve the trade balance. Thus, for those who can fear the possible bad effect of openness on inflation will be comforted by both the balance created between imports and exports and the effect of GDP.

The inflation model used in this paper has shown that the budget deficit has a positive effect on inflation. Even if this relationship is not significant, may be because of the efficient monetary and fiscal policies, we can however urge the policy makers to be prudent about the increasing trend of budget deficit. Through public borrowings, budget deficit can raise interest rates which in turn can affect

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