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Analysis of Economic Linkages of Tanzania's Economy to the World

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Executive Summary

This paper investigates the key channels of Tanzania's economy linkage to the world and vulnerabilities to external demand and supply shocks. The techniques employed involve descriptive analysis to appraise the possible channels of economic linkages, trailed by scatterplots to uncover long run relationships between selected domestic and external variables, and pairwise Granger Causality tests to detect direction of causal effects. Quarterly data were used spanning the period 2000 to 2016 on Tanzania; OECD countries (a proxy of advanced countries); and China, India and South Africa representing the emerging market economies.

The study findings confirmed persistence of strong link between Tanzania's economy and that of the world, mainly through trade and financial flows (especially through FDIs, and transfers, including official development assistance). While the trade channel found to be relatively strong over the last five years to 2017, financial channel registered mixed performance. Stronger financial linkage was recorded over the period 2006-2013, but weaken drastically during the period 2014-2017, mainly due to decline in ODAs and FDIs.

On trade channel, Tanzania's terms of trade has been improving over time since 2014, reflecting increased competiveness with major trading partners. Consequently, the economy has been opening up persistently with the trade openness index or share of external trade averaging 43.0 percent of GDP between 2000 and 2017; having risen from 33.5 percent in 2000 to the peak of 53.3 percent in 2011 before declining to 32.0 percent in 2017. The upward movements of imports and exports particularly since 2002 characterize the trade openness. Nevertheless, the trade openness index has remained below an average of 50.0 percent for the world, 49.0 percent for East Asia and Pacific, and 70.0 percent for sub-Saharan Africa, partly explained by a considerable decline in world commodity prices, especially for coffee, tea, tobacco and gold. On the other hand, increased use of local natural gas has significantly reduced oil import bill.

Further, the study found a strong correlation and significant response of the domestic economic variables to global exogenous shocks, largely arising from changes in global income, prices, cost of production and interest rates. It is worth noting that, full exploitation of some of the benefits offered by the global linkage such as the recent global economic recovery, were constrained by a number of structural problems. These are in relation to concentration of exports markets to few destinations (mainly India and South Africa), narrow exports base, low value addition, and dependence on volatile transfers/official development assistances (ODAs) as the major external sources of finance.

The implications of these findings are two-fold: first, appeals for policy measures to offset undesirable effects of economic shocks from the rest of the world. Second, efforts should be intensified towards expanding production base and diversify the economy. Third, addressing the remaining structural bottlenecks in order to improve further the country's trade competitiveness and resilience to various shocks. In achieving that, the following recommendations are made, among others:

i. *Continued efforts to improve manufacturing value addition, with emphasis on processing of agro-products and minerals*. It is worth to note that manufactured goods exports were found to be resilient to global shocks, even during the Eurozone and global financial crisis. Notwithstanding its potential, manufactured value added as share of GDP, has remained steady at 5.0 percent and relatively lower compared to the level 10.0 percent for sub-Saharan Africa, 9.5 percent for Kenya and 8.7 percent for Uganda, over the five years' period to 2017.

ii. *To scale up supply of local gas to cater for transportation, household and industrial use*. This is because the effect from oil price shocks on domestic prices were found to be immediate and thus threatening domestic inflation.

iii. *There is a need to enhance promotional efforts to attract FDIs*, cognizant the fact that FDI to GDP remained relatively low, averaged at 2.0 percent for the last five years to 2017, the level which is below an average of 8.0 percent in the sub-Saharan African. Going forward, FDIs from non-traditional source countries such as Vietnam, Indonesia, UAE and Singapore are to be encouraged together with attracting complementary FDIs from the EAC and SADC.

iv. *Enhance Government and private sector participation in the EAC and SADC markets which is currently not fully exploited (intra-regional trade is only 10.0 percent of total external trade)*. Effective participation could be realized through supply of products that are affordable and complementary to the existing ones that include iron and steel, plastic products, cooking oil and fats, cement and ceramic products.

1.0 Introduction

Studies on economic linkages have increasingly gained importance in the contemporary world as interdependencies and complementarities across the economies intensify from time to time. Literature points to an increasing linkage of the world economies due to several factors including trade liberalization; innovations in communications technology; increasing role of multinational corporations in global business and investment; harmonization of international trade laws and institutions; and ease mobility of factors of production. Experiences from the Global Financial Crisis from 2008 to 2010, the Eurozone Crisis and recent episodes of geopolitical tensions, natural calamities and economic disputes have attracted several researches on economic integration and related spill-over effects. The integration of global economies has important implications for investors, business leaders, and policy makers since higher integration may contribute to increase in output, better standard of living, improved quality of goods and services and advancement of information technology. However, the integration may result in, among others, loss of jobs, widening divergence between rich and poor, increased vulnerability against external shocks. With these, policy makers are required to continuously keep an eye not only on the local economic conditions, but also to the global economic developments and associated shocks originating outside their economy.

Customary it has been established that global economy affects Tanzania's domestic economy. Nevertheless, understanding on how the effects are transmitted into the economy remained limited. Against this knowledge gap, the study investigates key channels of Tanzania's economy linkage to the world and vulnerabilities. In addition, take stock of responses of Tanzania's economy to various external economic shocks and recommends appropriate policies to optimize benefits while at same time hedging the economy against external risks.

The techniques used comprise descriptive analysis to appraise the possible channels of economic linkages, trailed by scatterplots to trace long run associations between key domestic and external variables, and pairwise Granger Causality tests (Granger, 1969) to identify direction of causal effects. Granger causality test could as well be tested in a VAR framework, but could not be applied in this study due to lack of long data time series.

After the introduction, literature review is covered in section 2, followed by a descriptive analysis of possible channels of Tanzania's economy linkage to the world, and discussion on scatter correlation plots and Granger Causality tests in sections 3 and 4, respectively. Section 5 highlights factors, which could be constraining Tanzania's economy resilience to shocks while section 6 concludes.

2.0 Literature Review

The literature points to an increasing integration of the world economies, facilitated by several factors. The important factors include the liberalization of financial and macroeconomic policies, innovations in communications technology and increasing role of multinational corporations in global business. The evolution of international laws and institutions, as well as emergence of trading blocks and economic unions have reduced barriers to trade in goods and services and movement of capital and technology across borders. Intrinsically, global integration is associated with a number of benefits and disadvantages. On the benefits, they include increase in world output; better standard of living; improved quality of goods and services and advancement of information technology. However, globalization has not been without problems. It has resulted in loss of jobs; widening divergence between rich and poor; increased vulnerability against external shocks; loss of sovereignty of developing nations; exploitation of weak nations by powerful ones and dominance of developed nations in world affairs[1]. With these, the level of integration has important implications for policy-decision to private entities as it is for governments.

As integrated economies move together, the shocks originating in one economy are transmitted to other economies. Chowla et al. (2014) suggest two possible ways in which the world can have an impact on an economy. The first channel is that events occurring outside of an economy may have an impact on the domestic nation through cross-border linkages. Secondly, world shocks common to most nations of the world can affect a nation's economy. Theoretically, both are different but in practice, they are jointly referred as external shocks. Different sources of external shocks can be divided into three broad groups: world demand shocks, world supply/price shocks and world financial shocks. First, world demand shocks are connected with an increase or decrease in firms and households economic spending decisions and confidence in the global economy associated with changes in fiscal policy. Second, world supply or price shocks affect world supply and prices of goods and services; a good example is an oil price shock. Third, world financial shocks occur in the global financial system, such as high stress in the international banking system or financial markets. This contributes to changes in risk premium driven by investors' decisions to reconsider their perception on a certain asset, including holdings of foreign exchange.

Amongst the channels through which external shocks are transmitted to a country, trade channel has been considered the most important. The impact of external shock is felt in the domestic economy through changes in the quantities and prices of domestic nation's exports and imports.

[1] See, Iqbal, Javed and Mirza Aqeel Baig, "Exploring Channels of Economic Linkages of Pakistan's Economy to the Globe" file:///C:/Users/hp/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/J3L15AWD/Exploring%20Channels%20of%20Economic%20Linkages%20of%20Pakistan%20(2).pdf.

These price shocks are generally mirrored in domestic consumer prices. A positive demand shock abroad will boost demand for domestic exports, escalating the price and quantity of domestic goods and services. This increase the output of domestic economy relative to its trading partners. The positive demand shock may also cause an appreciation of the domestic currency. A world supply or price shock that leads to a fall in the production of oil and an increase in oil prices would have an impact through increased domestic import prices, which would subsequently result in an increase in firms' costs and a decrease of households' income allocations for other purchases. A foreign financial shock, such as a failure of a financial institution abroad, results in a fall of demand for domestic exports. Trade may also have a significant indirect effect on domestic economy, which is not significantly linked with the origin of shock. It can happen by transmission of the shock through other economies, which are major trading partners of the domestic economy. This was the case with Tanzania during the global financial crisis of 2008/9 in which the economy was indirectly affected through slow-down in goods exports due to low linkage to the world financial system.

Financial or monetary channels work simultaneously with trade channel. Financial channels are divided into credit channel, funding channel and non-banking channel. The credit channel works through banking sector of the domestic economy. A domestic bank's overseas exposure may affect lending to the households and business sector in domestic economy. Low demand conditions in a foreign economy leads to an increase in non-performing loans. This might add to losses of the domestic bank operating abroad resulting in a reduction of its capital base. In response, the bank may opt to reduce supply of new loans to domestic economy by raising interest rates on new loans in a bid to rebuild its capital ratio (Farag et al., 2013). The funding channel involves reliance of financial institutions of a country on foreign funding. This channel is very important in case of small developing economies. If a foreign bank is short of liquidity, it may withdraw funding to domestic economy. If domestic banks cannot replace this, they may reduce lending thus making it difficult to achieve credit targets. The world shocks can promulgate to the domestic economy through non-banking financial channel. They may occur via 'wealth effect' whereby domestic residents and firms cut down their spending if a shock abroad results in losses on their foreign financial investments. This could be exacerbated if the fall in the value of the assets also restricts ability to borrow. These traditional channels of external shock transmission are also influenced by people's expectations and uncertainty.

Worth noting that the above mentioned channels of external shock transmission are not mutually exclusive; they do not work in isolation. Instead, they are interrelated. It is possible that one channel will increase the extent of impact of another channel. Owing to their relatively higher informational efficiency and frequent data dissemination, the financial markets transmit the shocks rapidly, while the real sector trails the shocks with a lag as adjustment to productive sector takes time.

Empirical studies on financial markets have employed time series techniques of vector auto regression and co-integration to study dynamic linkages of financial and economic variables. Kose et al. (2003) investigated whether world economies are driven by a common business cycle. They used a Bayesian latent factor model for output, consumption and investment for 63 countries. The results supported evidence that in most countries, economic aggregates are driven by common business cycle while region specific factors play a relatively minor role. They found that oil price changes played an important role in increasing business cycle co-movements. It was found that there are strong unilateral spill over effects from North America to the Euro Area that were caused by increasing globalization and resulting in financial market linkages. A variance decomposition analysis showed that the world factor explains a noticeable fraction of aggregate volatility in countries in Latin America, Developed Asia, and Oceania, although it was less important in North America and Europe.

After the pioneering development of the global VAR model by Pesaran et al. (2004), many studies have based empirical analysis on this methodology. Dees et al. (2007) used quarterly data from 1973 to 2003 to estimate a global VAR model using 33 countries (25 separate countries and 8 Euro Area countries treated as one region). They used trade weighted foreign variables. The simulation analysis indicates that financial linkages are strong as the financial shocks from the US to Europe are transmitted quite rapidly. They found that equity and bond markets seem to be far more synchronous as compared to real output, inflation and short-term interest rates. While the impact of an oil price shock on inflation is statistically significant, the impact on output remains limited despite some deterioration in the financing conditions through a tightening monetary policy, an increase in long-term interest rates and a decrease in real equity prices. It was found further that the effect of a change in US monetary policy to the Euro Area were statistically insignificant. Greenwood-Nimmo et al. (2008) used quarterly data from 1980q1 to 2006q4 and constructed a global VAR model by combing 26 countries or region specific models. They investigated the impact of oil price shock, a US monetary policy shock, a US stock market shock and a Chinese inflationary shock on the Korean economy. Theoretically, consistent effect of these global variables on the Korean economy was evident. Oil price shock was found to be inflationary and positive US stock market shock boost was associated with increasing Korean output.

Sun et al. (2013) investigate the regional interdependencies and propagation of real and financial shocks within the European countries using quarterly data from 2000q2 to 2011q4 by estimating a modified global VAR model of Pesaran et. al. (2004). The model included real GDP growth, inflation, real credit growth and long-term interest rate. They found evidence of strong co-movements in output growth and interest rates but somewhat weaker co-movements in inflation and credit growth. Shocks originating from long-term interest rates from the UK had strong impact

on the long-term interest rates in the Euro Area and Nordic countries, but had weak impact on Central, Eastern and Southern European (CESEE) countries.

Biljanovska and Meyer-Cirkel (2016), using quarterly data from 1990q1 to 2013q4, investigated whether low-income developing countries (LIDCs) are more or less exposed to the international business cycle than emerging markets. They tested the transmission of business cycle fluctuations and credit conditions from advanced and emerging market economies to LIDCs using a global VAR framework and related country specific error correction models. The impulse response analyses show that business cycles in oil and commodity exporting as well as in frontier LIDCs are more synchronized with those in emerging market economies. The credit conditions in the US economy were found to have a significant impact on exports and real economic activity in LIDCs, but they were unresponsive to credit availability in emerging markets or economies in other parts of the world.

3.0 Channels of Tanzania's Economy Linkage to the World

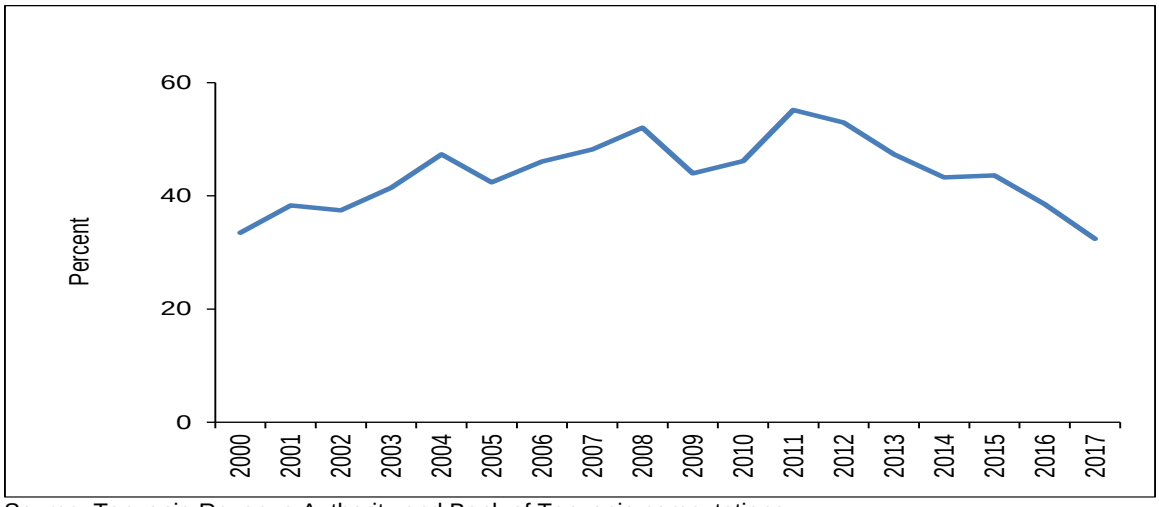
3.1 Trade Openness

The first step in evaluating Tanzania's economic linkages with the global economy is to compute the trade openness index[2]. Trade openness has advantages as it can act as an enabler of growth and job creation. Trade openness provides new market opportunities for domestic firms, improves productivity and innovation through competition. The competitiveness of an economy determines how well it can convert the potential that openness offers into opportunities.

Figure 3.1 depicts the trade openness index, computed as the ratio of Tanzania's total trade (exports plus imports) to nominal GDP using data from 2000 to 2017. It is apparent that the country's economy has been opening up, with the share of external trade averaging 43.0 percent of GDP between 2000 and 2017; having risen from 33.5 percent in 2000 to the peak of 53.3 percent in 2011 before declining to 32.0 percent in 2017. Nevertheless, the trade openness index has remained below an average of 50.0 percent for the world, 70.0 percent for sub-Saharan Africa and 49.0 percent for East Asia and Pacific for the period of 2017 (Deloitte, 2017; IMF, 2018).

[2] Trade openness refers to the outward or inward orientation of a given country's economy. Outward orientation refers to economies that take significant advantage of the opportunities to trade with other countries, whereas inward orientation refers to economies that overlook taking or are unable to take advantage of the opportunities.

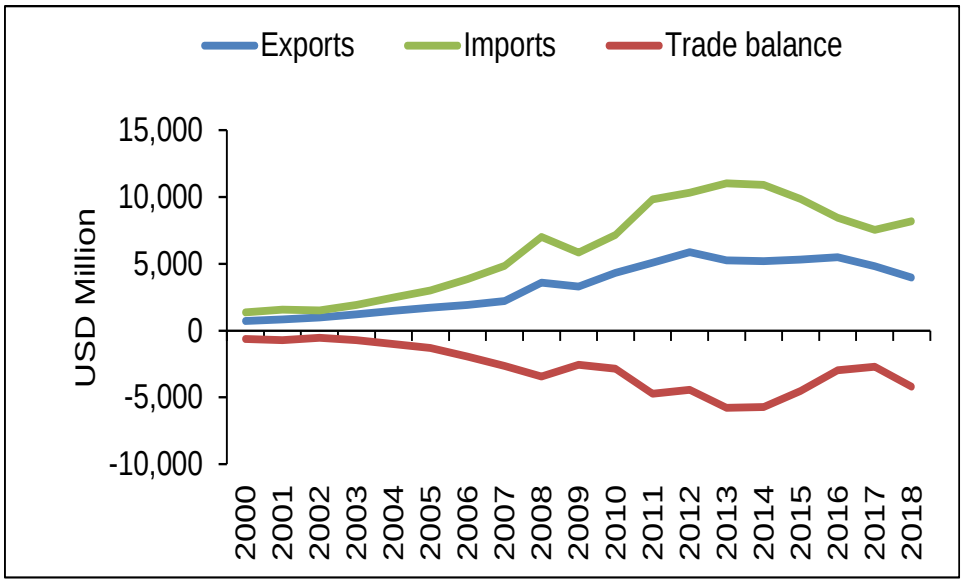
Figure 3.1: Tanzania Trade Openness



Source: Tanzania Revenue Authority and Bank of Tanzania computations

Fast upward movements of imports and exports particularly during 2002-2008 characterized the improving Tanzania's trade openness. On the other hand, narrowing trade openness during 2013-2017 was associated to relatively lower exports to compensate the declining imports. (**Figure 3.1 and 3.2)**. Worth noting is that, imports grew faster than exports until 2014 when it began to decline. Such developments were also reflected in the trade deficit, which widened until 2014 followed by an improvement contributed by slow-down in imports and increase in exports. Reasons explaining decline in imports during 2013-2017 include completion of some mega gas exploration FDI projects and switching to local natural gas from imported oil. The trade openness and improved trade deficit suggest that the country's economy benefits from opportunities provided by the international trade (**Figure 3.3**). The degree of benefit could however depend on country's trade competitiveness and resilience to external shocks.

Figure 3.2: Tanzania's Trade Balance Developments

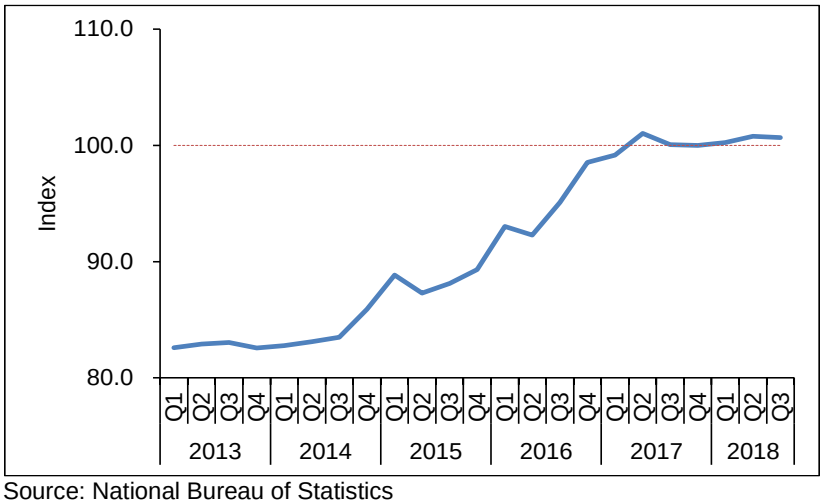


Source: Tanzania Revenue Authority and Bank of Tanzania computations

3.2 Tanzania's Terms of Trade

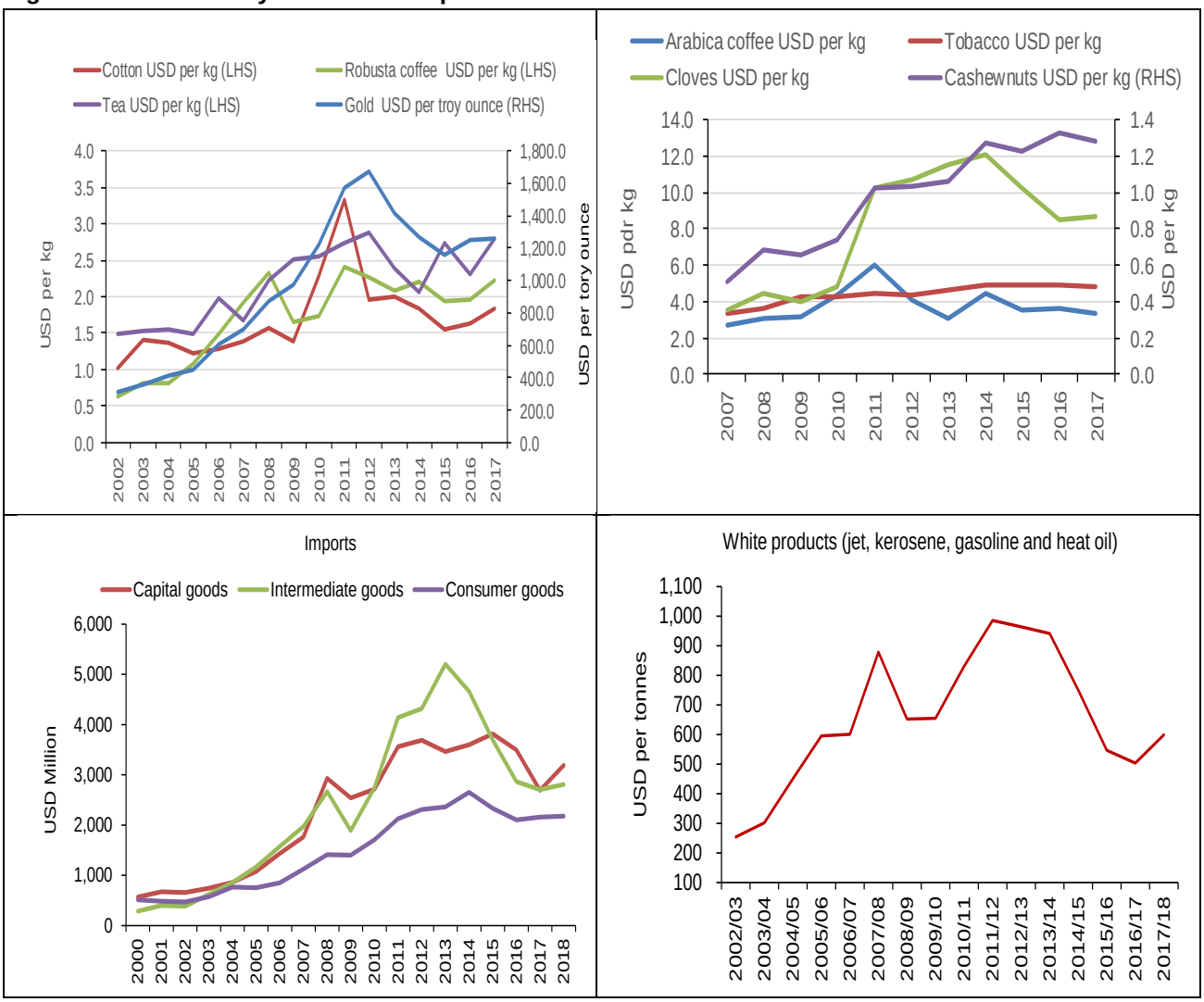
With the increasing trade openness, the question is whether the country stands to benefit or not. To answer this question, the overall pattern of Tanzania's export and import prices is analysed using the terms of trade index. This is captured in **Figure 3.3.** In the graph, terms of trade index recorded persistent improvement since the fourth quarter 2013 and was above 100 since the first quarter 2017, implying improving competitiveness with the trading partners. This could be portraying high demand for the country's exports including minerals (gold), and agricultural crops such as cashew nuts, tobacco and coffee, as reflected in large price increases. In addition, could be reflecting low value of imports, particularly in response to declining oil prices (**Figure 3.4**). However, downward risks are evident going forward, largely driven by considerable decline in world commodity prices of arabica coffee starting from 2011, gold from 2012, and cloves from 2014. In addition, the growth in prices of other key commodities has only been moderate.

Figure 3.3: Tanzania's Terms of Trade



Source: National Bureau of Statistics

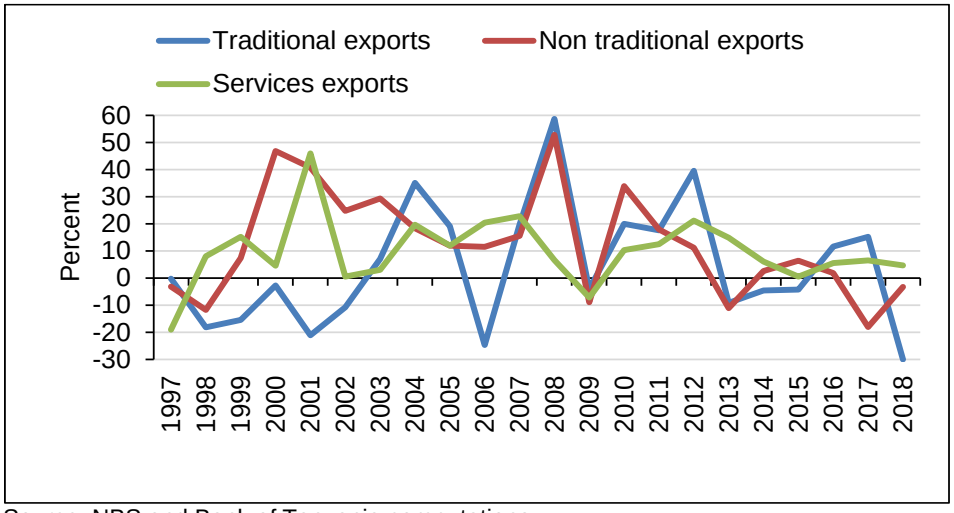
Figure 3.4: Commodity Prices Developments



3.3 Exports Structure and Demand Shocks

The foregoing conclusion on terms of trade notwithstanding, as depicted in **Figure 3.5**, exports growth in Tanzania exhibited considerable volatility[3] over the period 1996 to 2018. This pattern was consistent to the mixed performance observed across the main categories of exports: traditional, non-traditional and services exports, mainly attributed to both internal and external factors. The exports sector recorded high growth rates starting from 2000 through 2008 averaging 15.4 percent partly reflecting the lag effect of the comprehensive economic and financial reforms which started from the mid-1980s through the second half of 1990s and global commodity prices boom. It then declined to an average of 9.6 percent during 2009 to 2018 attributed to, among other factors, global economic crisis of 2008/09, followed by the Euro zone debt crisis of 2011/12. Traditional exports registered relatively higher volatility, reflecting its exposure to price changes as they are mostly traded in raw form. **Figure 3.6** and **Figure 3.7** plot domestic gold export volumes and cash crop producer prices in relation to world market prices; volatility synchronization is very evident.

Figure 3.5: Volatility in Export Earnings



Source: NBS and Bank of Tanzania computations

[3] Literature indicated that, in the long run, volatile exports earnings may retard value addition and eventually impede GDP growth (Gutierrez de Pineres and Ferrantino 2000; Herzer and Nowak-Lehmann 2006, Al-Marhubi 2000, De Ferranti et al. 2001; Ben Hammouda et al. 2010).

Figure 3.6: Relationship between Selected Domestic Cash Crop Producer and World Prices

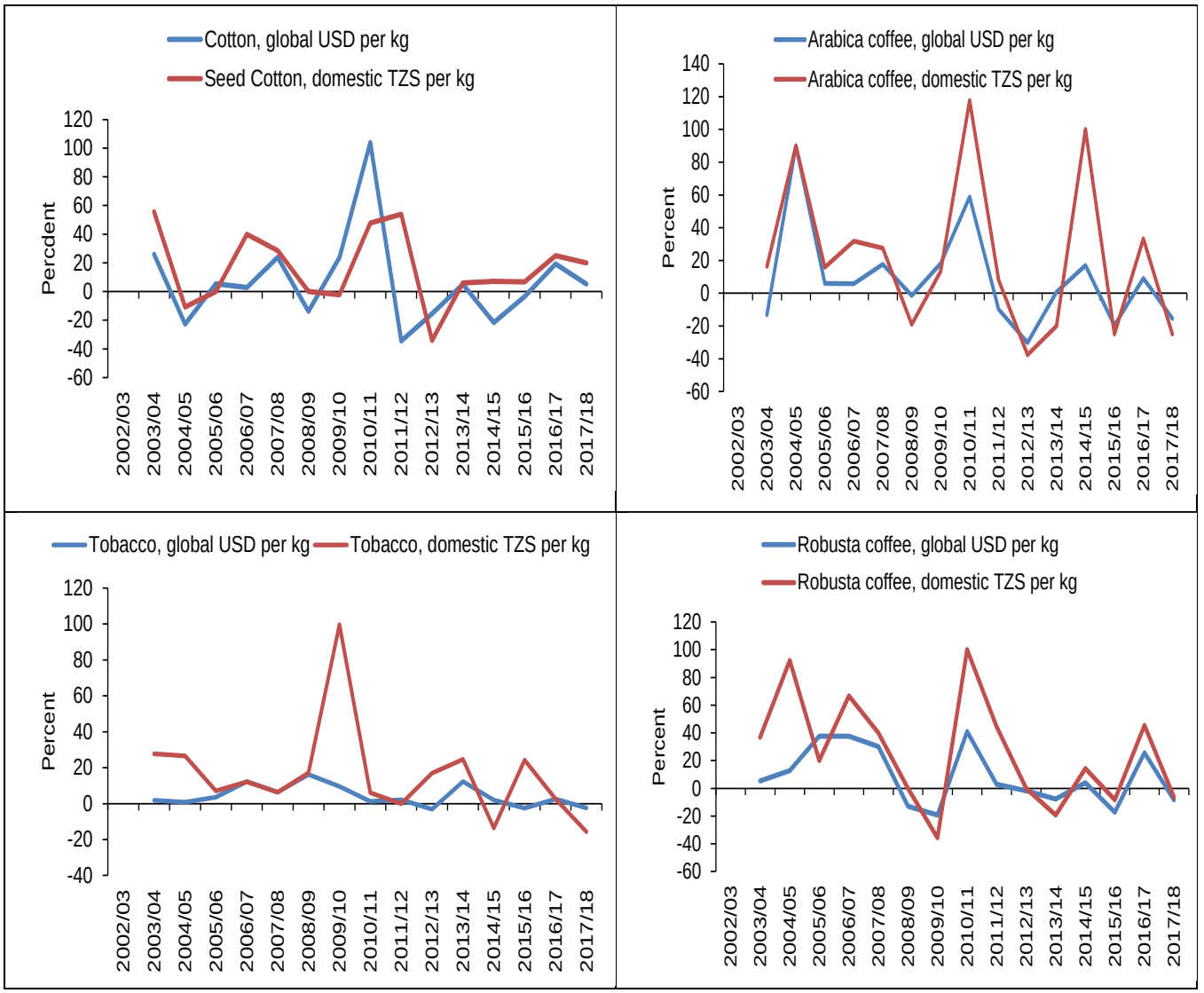
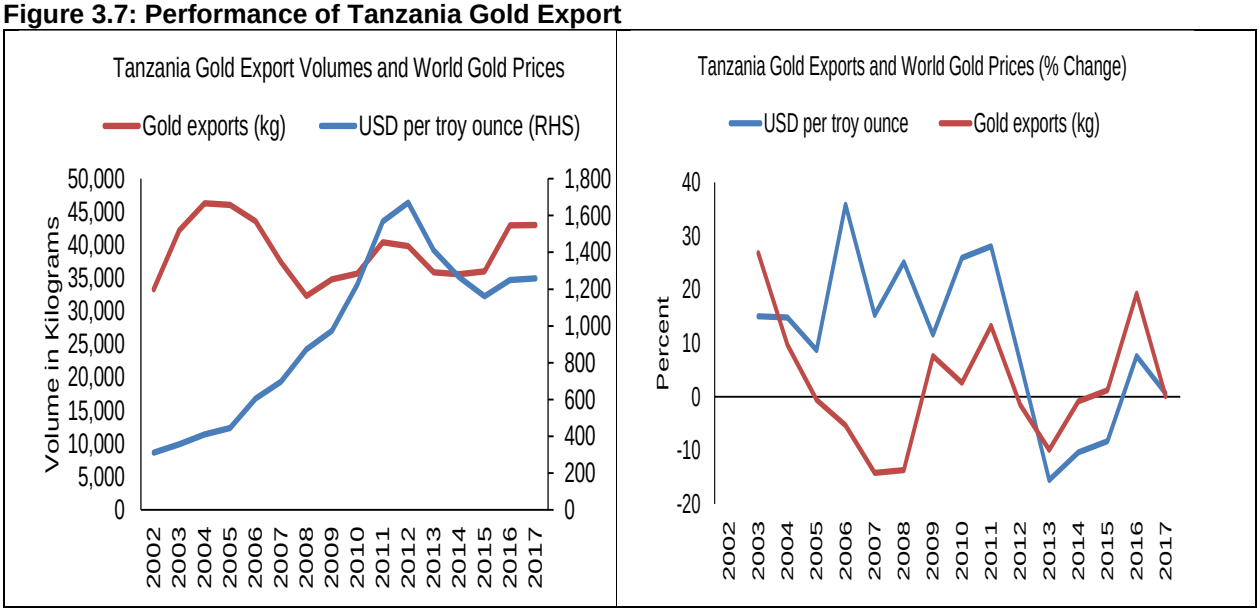


Figure 3.7: Performance of Tanzania Gold Export



Source: World Bank and respective large scale mining companies

The instability in gold export volumes from 2008 was influenced by the global economic and financial crisis of 2008/9, which led to the use of gold as safe haven investment. The same pattern was observed during the Euro zone debt crisis of 2011/12, while in 2017, export of gold slowed following recovery of the global economy coupled with appreciation of the US Dollar.

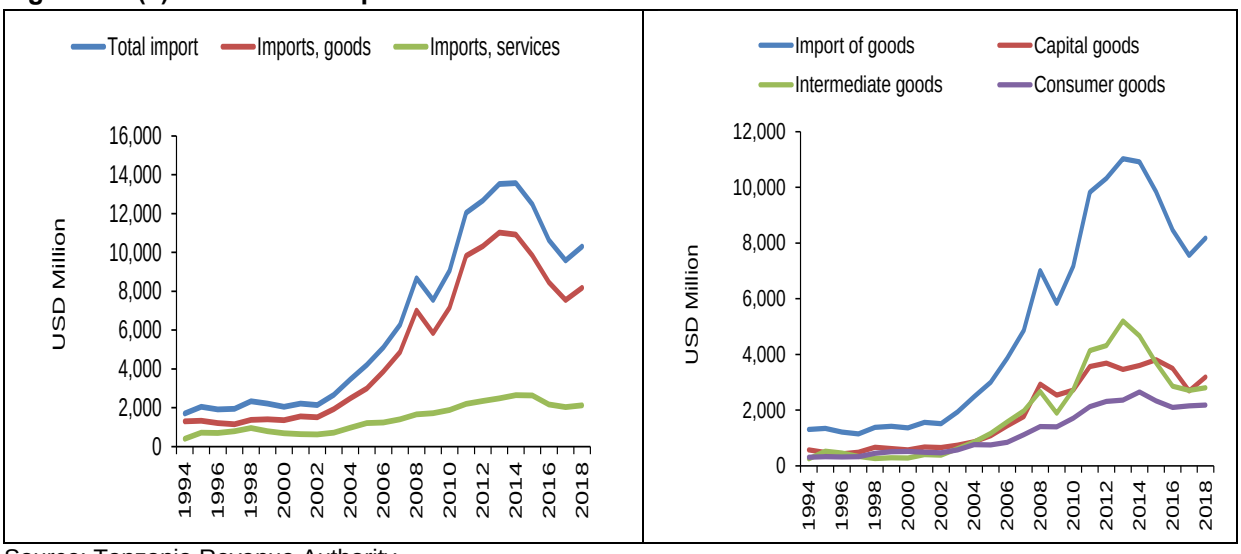
Supportive government policies and strategies could as well explain the developments in the exports sector. Such policies were consistent with the comprehensive economic reforms and liberalization which started in 1986. The efforts focused on setting trade facilitative conditions, developing infrastructure (soft and hard) and integrating the country in regional and international trade systems by signing and/or ratifying a number of trade agreements and protocols. Despite the policy measures, the high exports volatility could point to remaining policy and structural weaknesses in the exports sector. These could be hindering Tanzania's economy resilience to shocks.

3.4 Imports Structure and Supply Shocks

As indicated earlier, shocks can also be transmitted to Tanzania's economy via the imports window. This could happen through the major imports of the country. Imports are grouped under capital goods, intermediate goods, and consumer goods. Reflecting a growing economy, imports of intermediates goods is quite significant, which account for 29.2 percent of total goods imports in the five years to 2018, of which oil and industrial raw materials contributed 72.6 percent and 23.6 percent respectively. Capital goods, which are also important for growth, accounted for 30.0

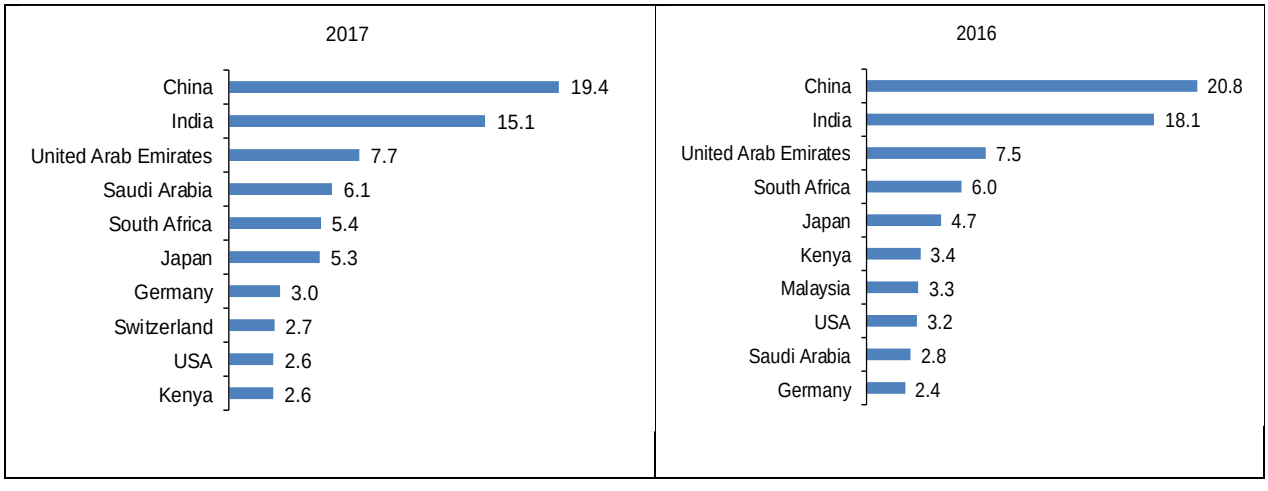
percent in the same period. **Figure 3.8(a)** indicates Tanzania's imports structure, in which all import categories depicted a strong upward trend since 2004, before starting to decline from 2014 partly contributed by substitution of oil with natural gas in power generation, and completion of construction of some projects including gas pipeline and some cement factories. It is worth mentioning that Tanzania's import source countries are dominated by China and India, from which the country imported more than one third of its imports over the period 2014-2017 (**Figure 3.8 (b)**).

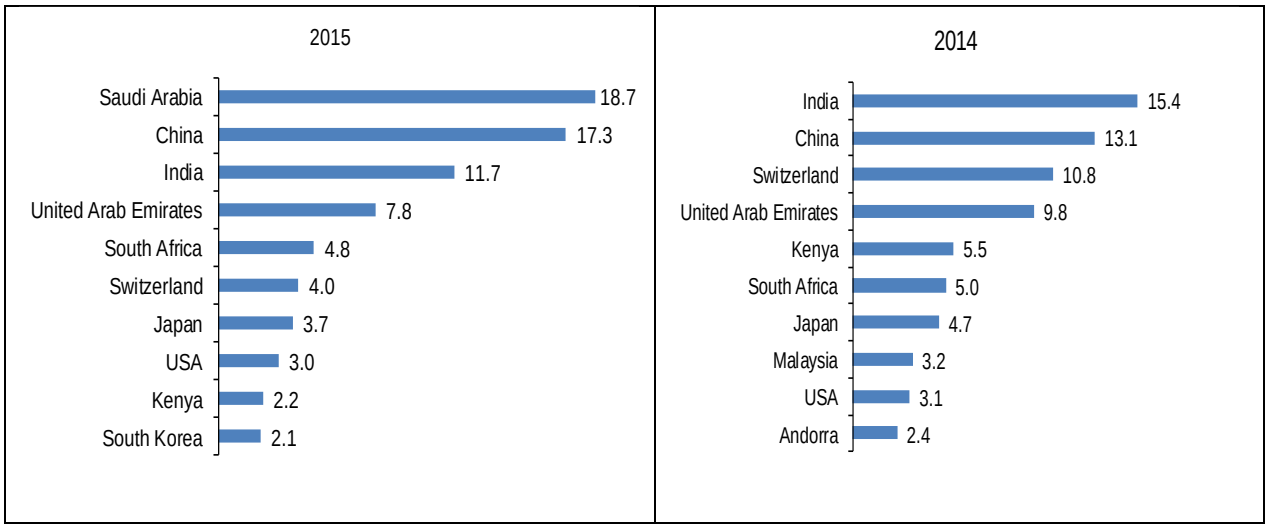
Figure 3.8 (a): Tanzania's Imports Structure



Source: Tanzania Revenue Authority

Figure 3.8 (b): Tanzania's Top Ten Import Source Countries





Effects of oil prices instability can be traced both at micro- and macro-economic levels. On micro level, gasoline purchases are necessary for most households, so when gasoline prices increase, for example, a larger share of households' budgets is likely to be spent on it, which leaves less to spend on other goods and services. The same applies for businesses whose goods must be transported from place to place or that use fuel as a major input. Higher oil prices tend to make production more expensive for businesses, just as they make it more expensive for households.

Figure 3.9 plots annual world market oil price from 2009 through 2018, using the spot oil price (West Mediterranean) and domestic pump prices for gasoline and kerosene. The two sets of series track each other very closely over time. Up-ward movement in domestic gasoline prices accompanies increases in oil prices. Thus, when oil prices spike, gasoline prices could be expected to spike as well, and that would affect the costs faced by the vast majority of households and businesses.

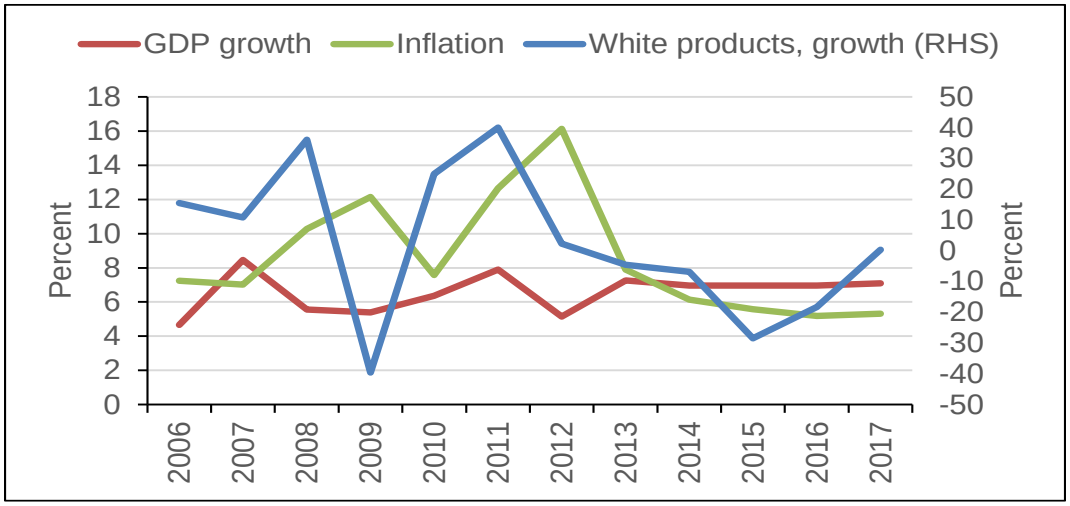
Figure 3.9: Domestic and World Oil Prices

At macro level, increases in the world oil prices are generally thought to increase inflation and reduce economic growth. In terms of inflation, oil prices directly affect the prices of goods made with petroleum products. As mentioned above, oil prices indirectly affect costs such as transportation and power. The increase in these costs can in turn affect the prices of a variety of goods and services, as producers may pass production costs on to consumers. The extent to which oil price increases lead to consumption price increases depends on how important oil is for the production of a given type of good or service.

Oil price increases can also stifle the growth of the economy through the effects on the supply and demand for goods other than oil. Upsurges in oil prices can depress the supply of other goods because they increase the costs of producing them. High oil prices also can reduce demand for other goods because they reduce wealth, as well as induce uncertainty about the future (Sill, 2007). As shown in **Figure 3.10**, inflation in Tanzania partly responds to changes in world market oil prices,

with a lag. However, response of real GDP growth is less clear partly suggesting that other factors besides oil prices could also be explaining movements in output.

Figure 3.10: Domestic GDP Growth and Inflation against World Oil Price



Source: National Bureau of Statistics and World Bank

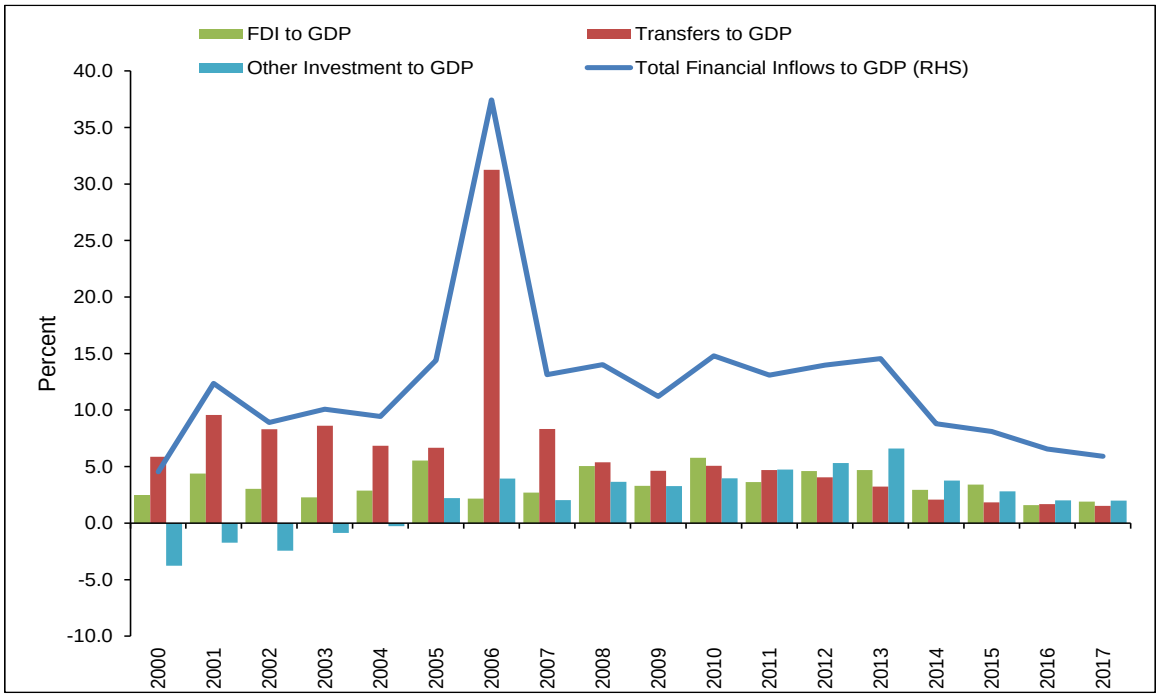
3.5 Financial Linkages

3.5.1 FDI and Transfers

On financial channel, the country's economy linkage to the world could be through FDI, transfers, factor incomes (compensation of employees and investment income), other investment[4] and portfolio investment. **Figure 3.11 (a)** indicates that the share of financial inflows to GDP averaged 13.6 percent between 2007 and 2013, and declined to 7.5 percent in 2014 to 2017 shiny declining trends of FDI, development assistance and other financial flows including other investments.

[4] Other investments include loans, currency and deposits, and trade credits from unrelated companies.

Figure 3.11 (a): Tanzania Financial Inflows as Percent to Nominal GDP



Source: Bank of Tanzania

The decline in FDI and development assistance are associated with high competition as well as global economic and financial dynamics particularly in Canada and Euro Area as reflected in **Table 3.1**. Such volatility in the key sources of funds adversely affects private investment and government financing of budgetary commitments, especially development projects. The mostly affected sectors due to decline in FDI include manufacturing, information and communications, and transportation and storage (**Figure 3.11 (b)**).

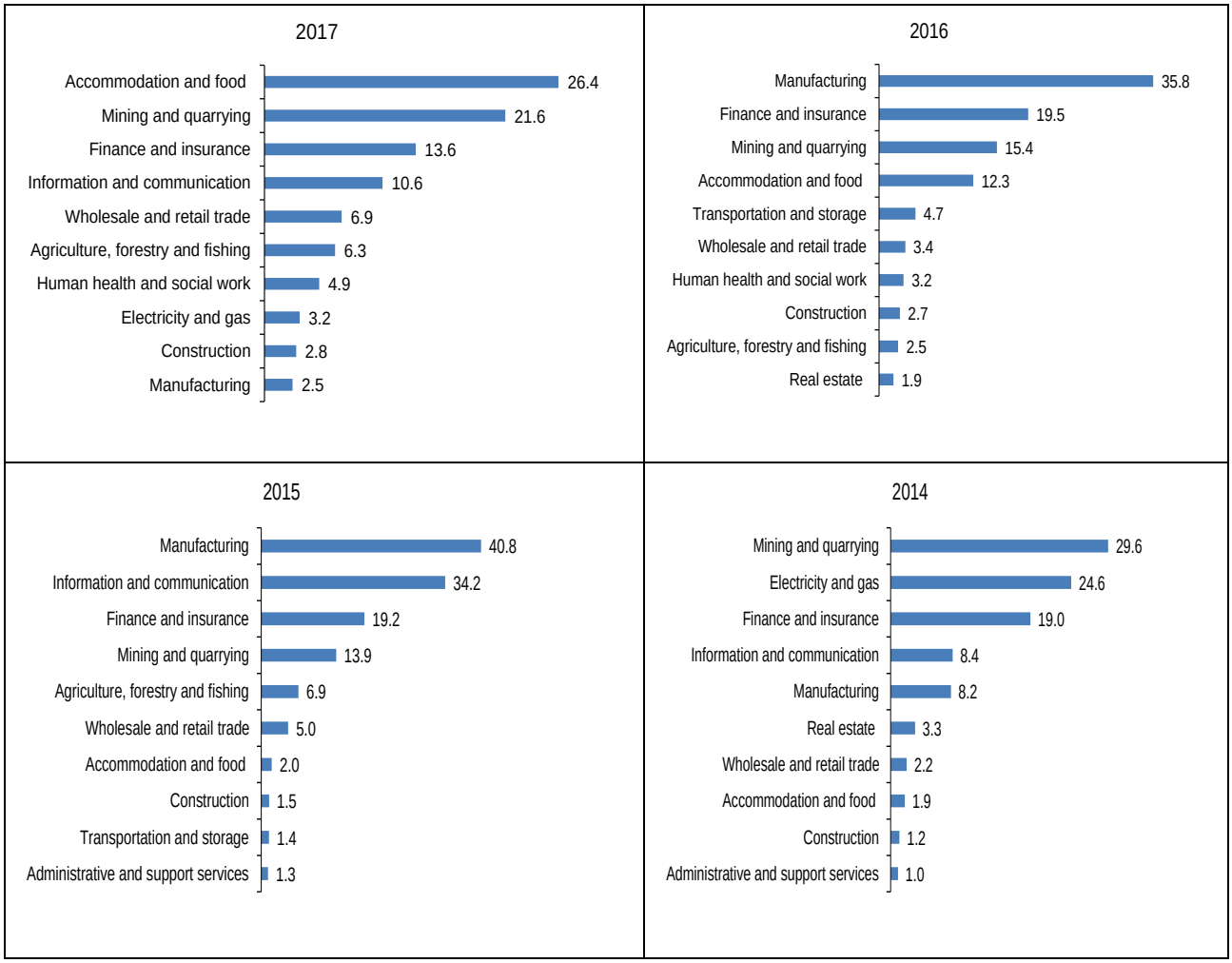
Table 3. 1 FDI Inflows by Countries

USD Millions

Country	2013	2014	2015	2016	2017	Average 2013-2017
South Africa	437.8	222.0	82.3	-8.1	211.0	189.0
Canada	472.0	116.4	128.7	115.7	3.8	167.3
Nigeria	74.4	10.9	521.9	136.1	7.1	150.1
Netherlands	341.9	18.7	127.8	170.9	85.3	148.9
United Kingdom	133.6	229.5	61.8	84.6	227.2	147.4
Mauritius	57.3	115.2	81.4	92.1	26.3	74.5
Kenya	197.6	86.4	50.7	-3.3	30.1	72.3
United States of America	77.0	41.5	17.4	43.5	178.8	71.7
Vietnam	0.0	34.4	343.1	-130.9	1.4	49.6
France	27.0	38.6	97.1	15.2	27.9	41.2
United Arab Emirates	121.0	50.6	8.0	-12.7	8.0	35.0
Norway	5.3	349.0	-204.7	76.1	-67.5	31.6
Switzerland	51.8	-72.6	93.9	23.5	23.4	24.0
Luxembourg	0.5	21.9	105.3	35.7	-44.8	23.7
Others	133.6	153.5	45.9	117.0	219.7	133.9
Grand Total	2130.8	1416.0	1560.7	755.4	937.7	1,360.1

Source: National Bureau of Statistics

Figure 3.11 (b): FDI Inflows by Top Ten Major Activities (Percentage Share)



Source: National Bureau of Statistics

It is worth underscoring that foreign assistance is important in stimulating economic growth by supplementing domestic sources of finance such as savings, thus increasing the amount of investment and capital stock. According to Morrissey (2001), there are number of mechanisms through which development assistance can contribute to economic growth. These include: (a) aid increases investment, in physical and human capital; (b) aid increases the capacity to import capital goods or technology; (c) aid does not have indirect effects that reduce investment or savings rates; and aid is associated with technology transfer that increases the productivity of capital and promotes endogenous technical change.

3.6 Experience from the Recent Global Financial Crises

Experience from the recent past global financial crises indicates that Tanzania was affected through the second-round effects, mainly via trade due to the collapse of demand in America and other advanced economies, which pushed commodity prices down leading to reduction of export earnings as well as government revenues (Masawe et al. 2015). Statistics show a slump in Tanzania's trade share in GDP to 40% in 2009 (crisis period) compared with 50% in 2008 (pre-crisis period).

Weak effects through the financial markets was due to: a) low level of integration with the international capital and financial markets; b) foreign assets component in Tanzania's commercial bank system was 11 percent of total commercial bank assets; c) Commercial banks are licensed, regulated and supervised under Tanzania law. That is, they do not operate as branches of parent banks abroad but as independent subsidiaries; and d) the system had low exposure to the crisis because it had limited amount of foreign borrowing and none held securities of the international banks, which were affected by the crisis.

According to the Bank of Tanzania recent Financial Stability Report (2017), risks in the financial system seem to be on the lower side as offshore borrowing in Tanzania remains low, at 4.8 percent of the total funding for the top 10 banks implying minimal foreign exchange[5]. In addition, placements with banks abroad continues to decline, mainly associated with falling import bill. Although, the share of foreign banking institutions to the total banking sector's assets is high at 47.35 percent at end 2016[6], banks remain licensed, regulated and supervised under Tanzanian laws.

4.0 Empirical Analysis of Tanzania's Economy Response to Shocks

In the preceding sections, it is shown that Tanzanian economy is linked to the world economy and could be vulnerable to external shocks, mainly propagated to the economy through trade, prices of goods, and costs of production. Further evaluation is made to trace the major channels of Tanzania's economy linkage to the world employing scatter correlation plots and Granger Causality tests. Considered here are values of the key domestic macroeconomic variables: real output (real GDP used as a proxy), CPI inflation, and real effective exchange rate. Reserve money is also included to measure the economy's response to monetary policy stance. On the external side, real output (a measure of external aggregate demand shock), inflation, world oil prices (a measure of supply shock) and interest rate (six month Libor) are used. All values are computed as annual natural log growth rates except changes in the interest rates, which were calculated in levels.

[5] See, Bank of Tanzania, *Financial Stability report September 2017*
[6] See, Bank of Tanzania, *Banking Supervision Annual report 2016*.

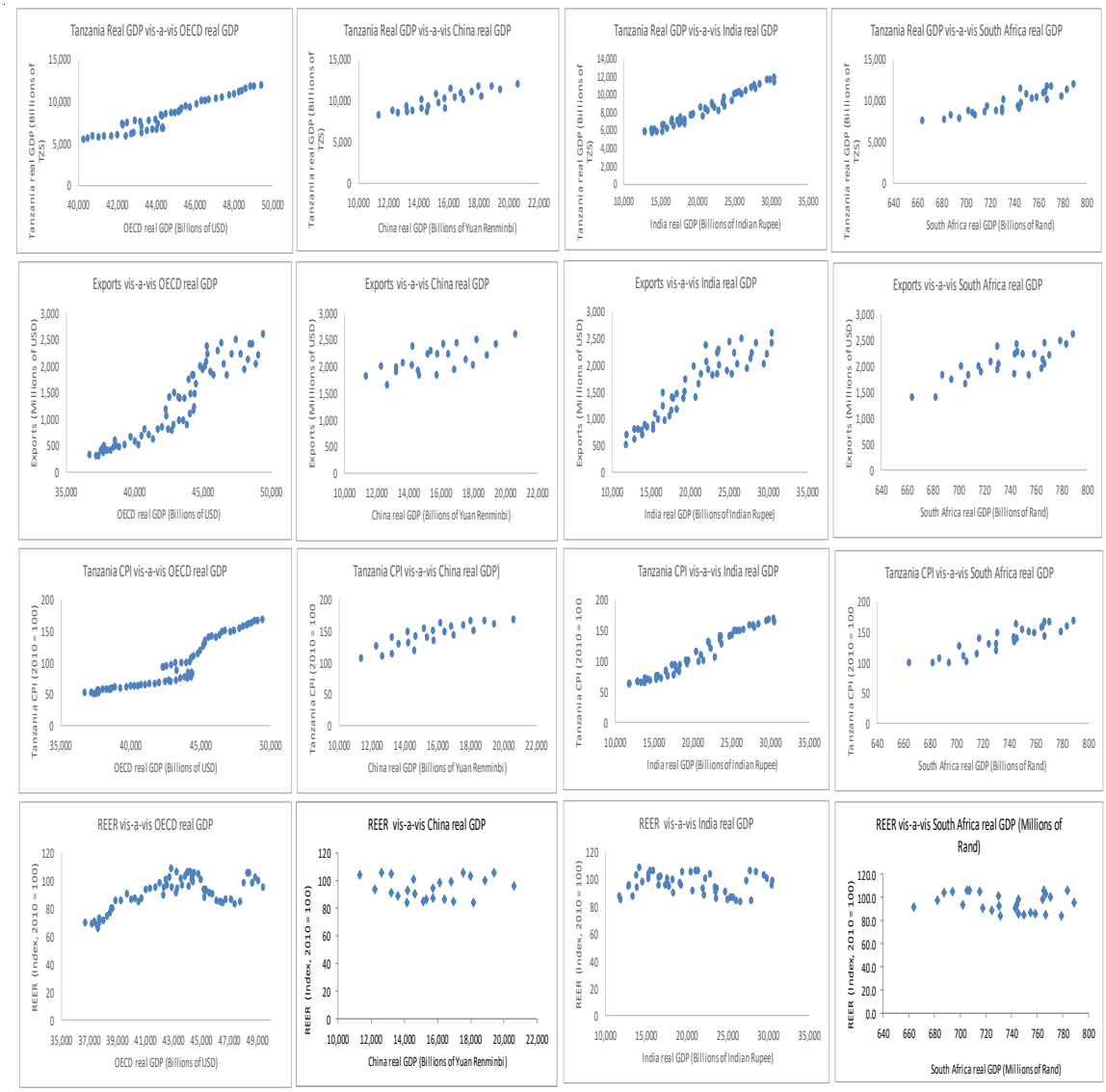
Quarterly data are used spanning the period 2000 to 2016 on Tanzania; OECD countries (a proxy of advanced countries); and China, India and South Africa representing the emerging market economies.

In the plots, if low x-values correspond to high y-values, and high x-values correspond to low y-values a negative correlation is presumed to exist, while when low x-values correspond to low y-values, and high x-values correspond to high y-values it would infer a positive correlation. If there is no any trend to the dots, the scatterplot shows no correlation, implying changes in the values could be explained by other factors.

4.1 Response to External Demand Shocks

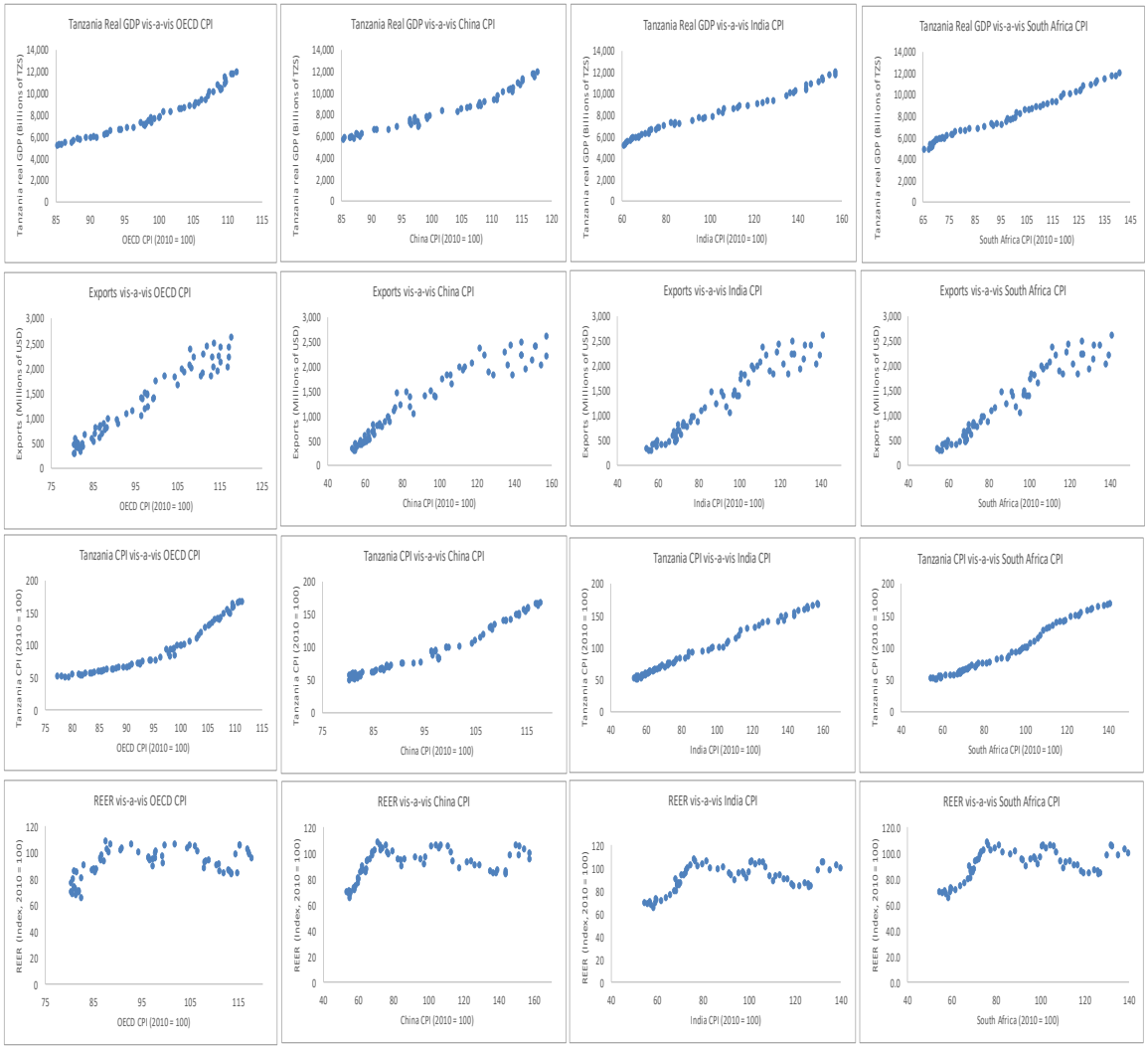
As exposed in **Figure 4.1**, domestic real GDP has strong positive relationship with those of OECD, China, India and South Africa. Such a positive relationship is also reflected in Tanzania's exports, which through the demand effect, influences inflation positively. Another channel through which Tanzania's inflation could be influenced is through domestic cost of production affected by large variations in prices of imported capital and intermediate goods. However, the positive correlation depicted in **Figure 4.2** on real GDP and exports against OECD, China, India and South Africa's inflation could be signifying Tanzania's competitiveness gains arising from increase in trading partners' prices of goods and services that outweighs the loss emanating from possible increase in domestic cost of production. No clear relationship is found between Tanzania's REER and OECD, China, India and South Africa's demand and inflation, partly proposing interplay of other factors.

Figure 4.1: Key Domestic Macroeconomic Variables against real GDP of OECD, China, India and South Africa



Source: Bank of Tanzania computations

Figure 4.2: Key Domestic Macroeconomic Variables against inflation of OECD, China, India and South Africa



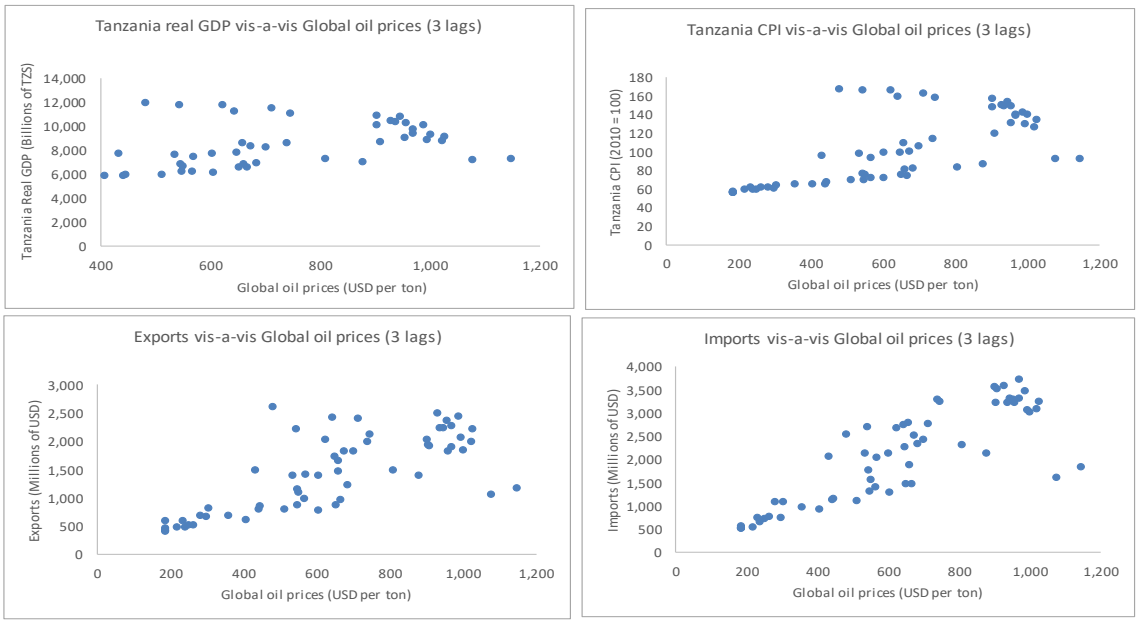
Source: Bank of Tanzania computations

4.2 Response to External Supply Shocks

Plots on real GDP, exports and oil prices seem to be scattered, even after controlling for lag effects, probably indicating weak relationships[7]. This could be representing incomplete price pass through to domestic real variables. The weakening association could also reflect the declining imports of oil as the country switches from oil to domestic gas in power generation. Noteworthy the global oil price changes, as expected, influence Tanzania's imports positively (**Figure 4.3**).

[7] However, as it will be shown later, a strong causal effect of world oil prices growth to domestic real GDP growth seems to exist.

Figure 4.3: Domestic real GDP and exports against global oil prices

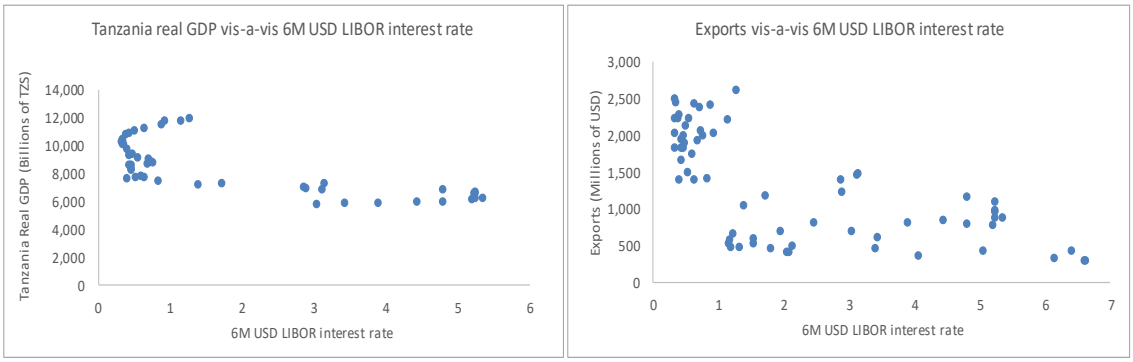


Source: Bank of Tanzania computations

4.3 Response to External Financial Shocks

Global interest rate—proxied by six month LIBOR—is negatively correlated to Tanzania's real GDP and exports (**Figure 4.4**). This is consistent with the theory, as increase in LIBOR could lead to capital outflows from Tanzania thus depressing growth in supply sectors.

Figure 4.4: Domestic real GDP and exports against LIBOR interest rate

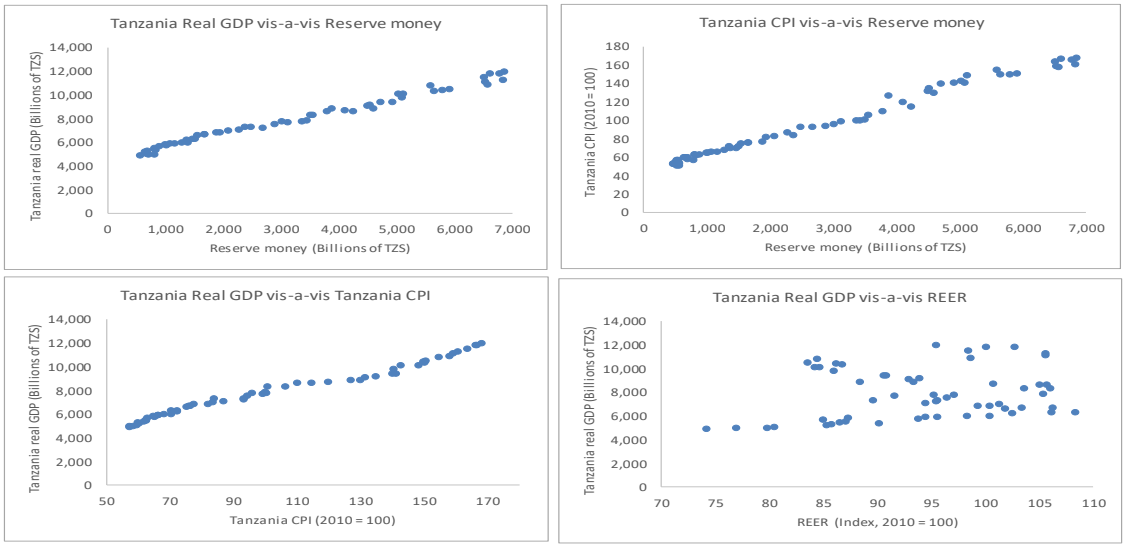


Source: Bank of Tanzania computations

4.4 Response to Internal Shocks

Plots in **Figure 4.5**, measure relationship between domestic variables. It is evident that besides external shocks, Tanzania's economy could also be reacting to internal shocks. This is mirrored in positive association between real GDP, reserve money and inflation. A weak link seems to exist between real GDP and REER; implying that in explaining economic growth in the country, other factors could be responsible as well.

Figure 4.5: Correlation between domestic real GDP, CPI inflation, Reserve Money and REER



Source: Bank of Tanzania's computations

4.5 Granger Causality Results

The Granger Causality tests were undertaken along two specifications: with one and two lags. Appendix 1 summarizes the results. The tests indicate significant response of Tanzania's economy to both internal and external shocks. Such relationships feature in causal effects as follows:

a) *External demand shocks*: OECD's inflation and real GDP affect domestic inflation and interest rates respectively; China's inflation and real GDP variably influence domestic inflation, interest rates and real effective exchange rate; and domestic real GDP responds to South Africa's inflation.

b) *External supply shocks*: The weak correlation on real GDP and global oil prices suggested by the correlation scatterplot notwithstanding, causality test indicates statistically significant response of Tanzania's real GDP to world oil prices (at 1 percent level).

c) *External financial shocks*: Influence of changes in LIBOR to Tanzania's real GDP cannot be denied both at 1 percent and 5 percent significance levels, with one and two lags respectively.
d) *Internal shocks*: domestic inflation causes real effective exchange rate; domestic inflation and real effective exchange rate influence domestic interest rates; and reserve money responds to growth in real GDP.

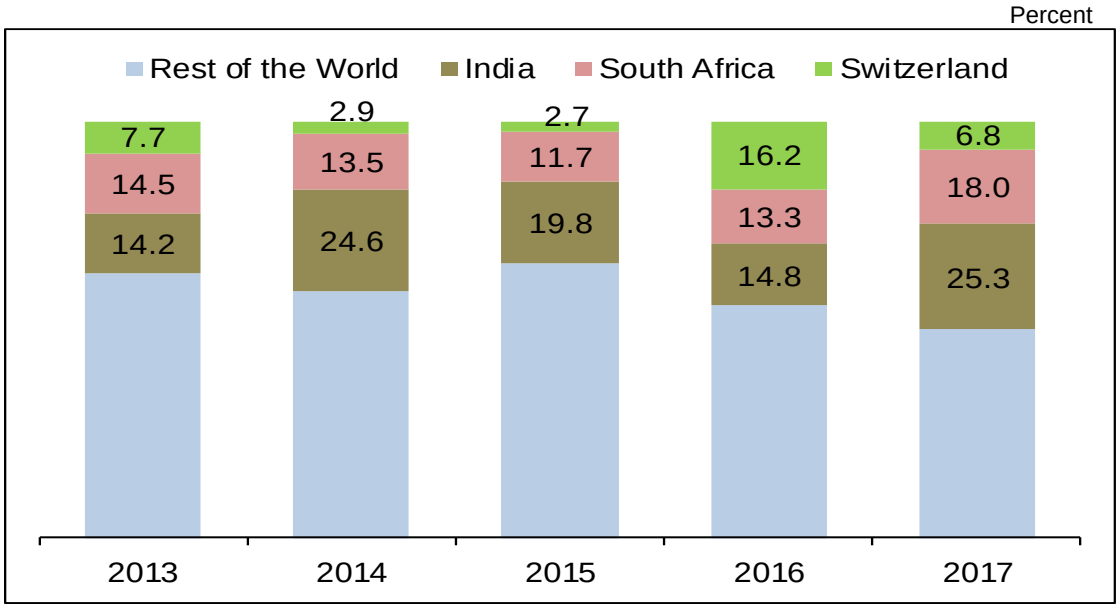
5.0 Factors Constraining Tanzania's Economy Resilience to Shocks

Two issues emerge from the analysis on factors constraining Tanzania's economy resilience to shocks. First, limited export markets, with low intra EAC and SADC trade. The second point is in relation to narrow product base (i.e., limited value addition) and low market diversification. Interactions of these factors together with other policy weaknesses could be limiting the ability to cushion the economy from shocks.

5.1 Limited Export Markets, with Low Intra-Regional Trade

Over the last five years to 2017, in aggregate, the country's exports markets remained concentrated in only few countries with the top three markets accounting for more than 40 percent of the total goods exports, of which India and South Africa on average contributed 34.0 percent. Likewise, the main destinations of gold, which constitutes about 27 percent of total goods exports, are Switzerland, India and South Africa. Meanwhile, the country's manufactured export goods are concentrated in limited products: edible oil, cement, metal products and plastic products, most of which go to DRC. Travel (tourism) is dominated by UK, Kenya, US, Germany and Italy which together accounted for about 50 percent of tourist arrivals over the last five years. **Figure 5.1 (a)** and **Table 5.1** show Tanzania's top three and top ten goods market destinations, respectively, while **Table 5.2** indicates major tourist source countries.

Figure 5.1 (a): Top Three Global Market Destinations of Tanzania's Goods Exports



Source: Tanzania Revenue Authority

Table 5. 1: Top Ten Goods Market Destinations

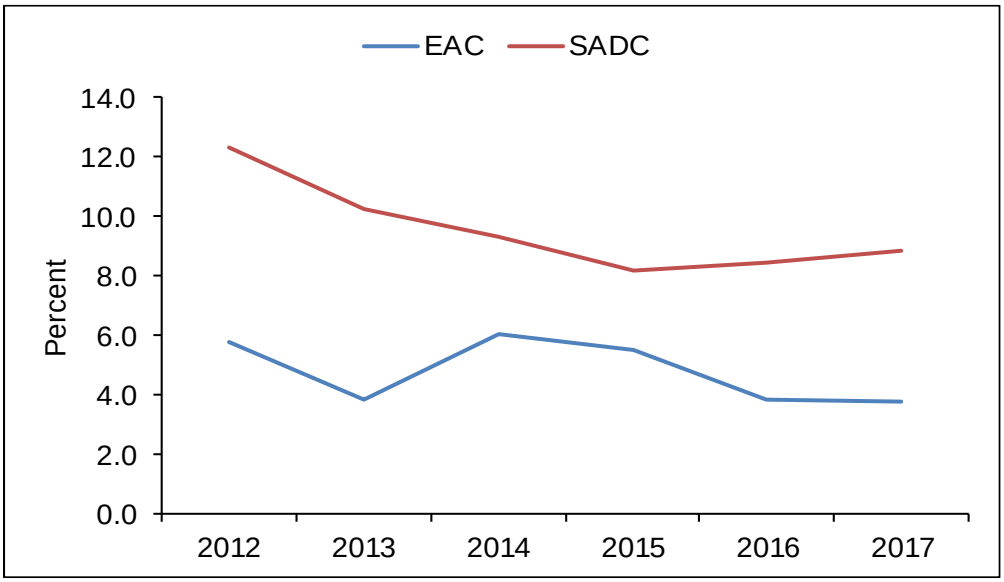
Percent

	2013	2014	2015	2016	2017
India	14.2	24.6	19.8	14.8	25.3
South Africa	14.5	13.5	11.7	13.3	18.0
Switzerland	7.7	2.9	2.7	16.2	6.8
Belgium	1.7	1.9	2.6	6.0	5.0
Kenya	4.3	8.7	12.7	6.6	4.5
China	5.9	13.4	9.7	7.5	3.7
United Arab Emirates	1.6	1.7	2.7	1.3	2.3
Japan	4.2	4.9	4.0	2.9	1.9
Netherland	1.2	1.0	1.3	1.3	1.9
United States	1.1	2.8	0.9	1.2	1.6
Rest of the World	43.7	24.6	32.0	28.8	29.1

Source: Tanzania Revenue Authority

Notwithstanding reduced trade barriers, intra-regional trade in the EAC and SADC markets has remained quite low averaged at less than 10.0 percent over the period 2012 to 2017, reflecting the domestic economy has little to offer in the regional markets (**Figure 5.1 (b)**). Over dependence to external markets, outside the region, increases exposure of the economy to global economic uncertainties.

Figure 5.1 (b): Intra-regional Trade in the EAC and SADC

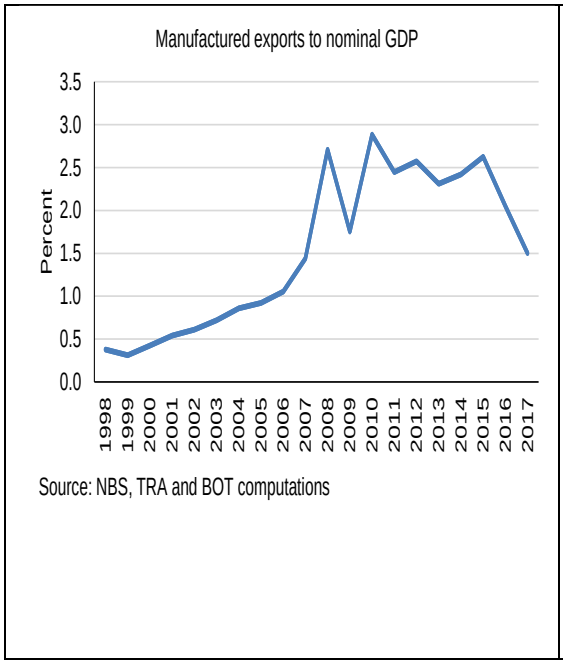


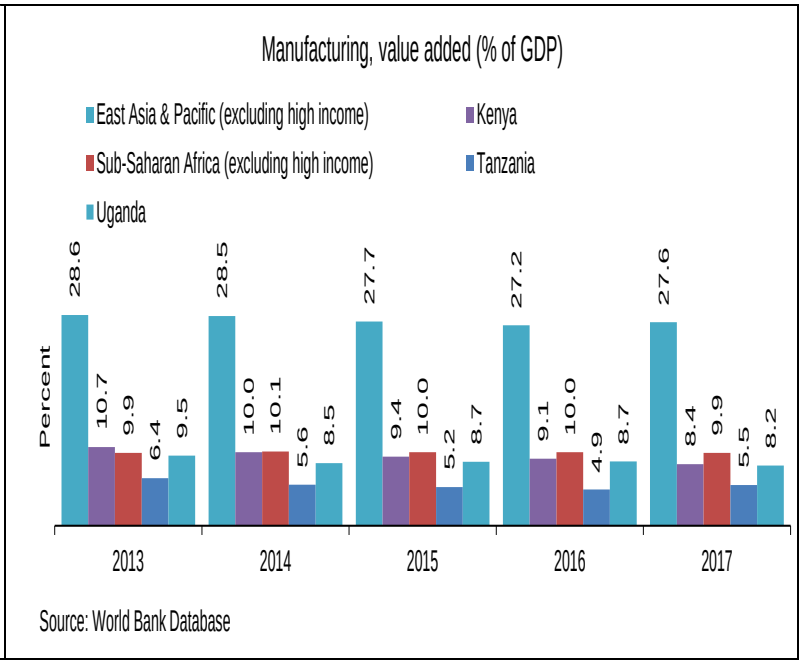
Source: Bank of Tanzania Computations

5.2 Narrow Exports Base and Low Value Addition

Cash crops and minerals accounted for about 51.1 percent of total goods exports over the last five years to 2017, with share of minerals to total primary commodities exceeding 60.0 percent. Price uncertainties associated to these commodities has been quite detrimental to stability of export earnings. On the other hand, manufactured goods export contributed to around 20.0 percent of goods exports. Despite its sizable contribution to total exports, were relatively stable even during the Eurozone and global financial crisis, because of its high reliance on regional markets compared to traditional crops whose major markets are in developed countries. The positive developments notwithstanding, the shares of manufactured exports to nominal GDP, at an average of 2.2 percent in the five years to 2017, are still small. In addition, manufacturing value added as share of GDP, has remained steady and lower compared to the level for sub Saharan Africa and selected peers such as Kenya and Uganda, suggesting that the country has potential to venture into manufacturing value addition to enhance its contributions to the economy (**Figure 5.2**).

Figure 5.2: Value Added of Manufacturing Sector





5.3 Low Participation in the Global Supply Chains

One feature characterizing strong economic linkages among economies in the East Asia and Pacific is large-scale participation in the global supply chains (GSC). Tanzania's manufactured goods export base is narrow and thus country's participation to GSC is limited. Currently, Tanzania participation in GSC is only significant under the USA preferential market access arrangement (AGOA) and only qualified to garment industry. Such developments point to the need to improve the quality of export products to broaden country participation to GSC.

5.4 Easy of Doing Business and Trade Facilitation Still Lag Behind

Exports competitiveness, which can highly help a country cushion its economy from external shocks, is influenced by, among others, the cost of doing business embedded in inadequate physical infrastructure and cumbersome requirements to comply with government regulations. Other important considerations are related to hurdles of trading between countries in relation to costs of trade and measures to improve volume of trade. An assessment gauging Tanzania's performance in world rankings along "easy of doing business", "global enabling trade indices", and "global logistics performance indices" suggest mixed performance, with improvements recorded in only few areas.

According to the World Bank Ease of Doing Business Report (2018), Tanzania ranked 137 out 190 countries in the ease of doing business, dropping five places in the global ranking compared with a rank of 132 achieved in the 2017 Report. The areas where Tanzania did not perform well compared to 2016 are starting a business, dealing with construction permits, registering property, getting credit, trading across the border and resolving insolvency. In comparison with other EAC countries, Tanzania ranks low in most indicators of ease of doing business, particularly in areas such as paying taxes, trading across the border, registering property, starting a business, and dealing with construction permits. The low performance is attributed to, among others, existence of various non-tariff barriers, existence of multiple taxes, non-transparency in taxation, and increase in land and property registration fees (**Table 5.3**).

Table 5.3: Economy Ranking by Easy of Doing Business

(Ranking out 190)

Indicator	Tanzania	Kenya	Rwanda	Burundi	South Sudan	Uganda	Zambia	South Africa	Average EAC
Ease of Doing Business Rank	137	80	41	164	187	122	85	82	122
Starting a Business	162	117	78	42	181	165	101	136	124
Dealing with Construction Permits	156	124	112	168	178	148	69	94	148
Getting Electricity	82	71	119	182	187	173	155	112	136
Registering Property	142	125	2	95	181	124	149	107	112
Getting Credit	55	29	6	177	177	55	2	68	83
Protecting Minority Investors	129	62	16	132	177	108	89	24	104
Paying Taxes	154	92	31	138	66	84	15	46	94
Trading across Borders	182	106	87	164	178	127	150	147	141
Enforcing Contracts	58	90	85	150	81	64	128	115	88
Resolving Insolvency	108	95	78	144	168	113	89	55	118

Source: World Bank Easy of Doing Business Report 2018

As for trade facilitation—which involves minimizing steeplechases of trading between countries by reducing costs of trade and improving volume of trade—the World Bank Global Enabling Trade Index Report of 2016 indicates that Tanzania at 115 out of 160 countries, still ranks lowly contributed by underperformance in border administration, infrastructure and operating environment (**Table 5.4**). Although Tanzania performed well in Global Logistics Performance Indices Rankings (**Table 5.5**), the UNCTAD's liner shipping connectivity index suggests that Tanzania is among the countries with lower index (**Figure 5.3**), implying less connectivity with the rest of the world.

Table 5.4: Global enabling trade indices rankings for 160 economies

Country	Global Enabling Trade Index in 2016	Global Enabling Trade Index in 2014	Market access	Border administration	Infrastructure	Operating environment
Tanzania	115	121	18	134	107	92
Kenya	77	86	66	76	79	96
Uganda	84	95	7	101	112	84
Rwanda	50	60	52	59	96	17
Burundi	125	123	38	129	130	132
South Africa	55	58	87	61	38	61
Zambia	97	79	33	118	116	60
EAC Average	90	97	36	100	105	84

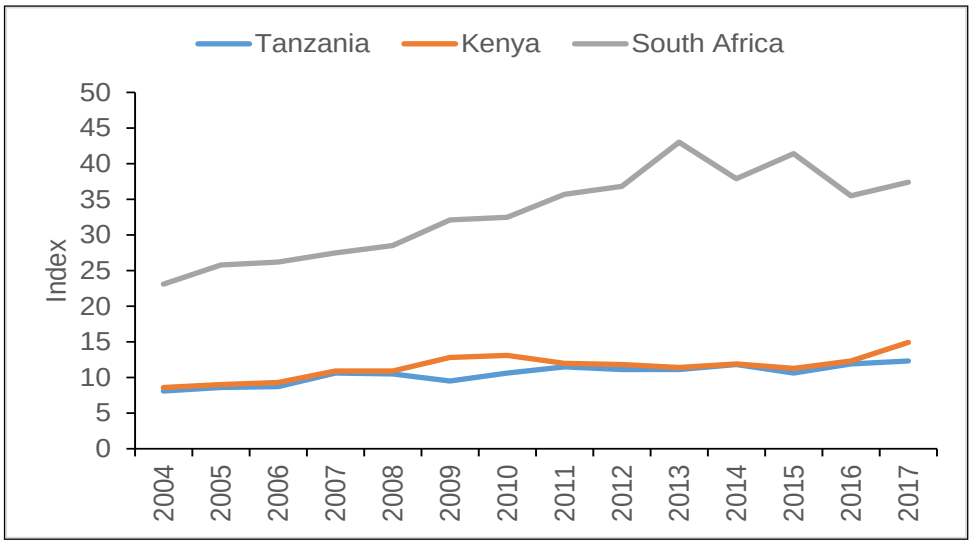
Source: World Bank 2016

Table 5.5: Global logistics performance indices rankings for 160 economies

Country	Overall Logistics Performance Index	Customs	Infrastructure	International shipments	Logistics quality and competence	Tracking and tracing	Timeliness
Tanzania	61	60	60	63	58	60	64
Kenya	42	39	42	46	40	38	46
Uganda	58	51	67	74	57	59	45
Rwanda	62	52	76	59	63	58	69
Burundi	107	137	147	119	107	83	63
South Africa	20	18	21	23	22	17	24
Zambia	114	119	113	106	114	119	124
EAC Average	66	68	78	72	65	60	57

Source: The World Bank, 2016

Figure 5.3: Liner shipping connectivity index



Source: UNCTAD (*unctadstat.unctad.org*)

5.5 Dependence Transfers as Major Sources of Finance

Transfers/ODAs continue to be the main source of external finance for Tanzania. Volatility in these sources of funds adversely affects government financing of budgetary commitments, especially development projects. The declining trend in development assistance to Tanzania proposes that other sources of finance could be explored. Two main options could be put at use: public-private partnership (PPP); and non-concession borrowing. The later requires international rating of the government and private companies operating in the country. Partly due to delay and unreliability of these sources of funds, the Fifth Phase Government has also been taking other measures to address the problem; that is fiscal harmonization through enhanced domestic revenue mobilization and expenditure prioritization. With these measures, resources have been saved and directed to infrastructure projects.

5.6 Weak Domestic Demand

In the global downturn, and especially in 2009, all major economies in Asia experienced declining exports. However, China, India, Indonesia and Viet Nam, retained positive and high economic growth rates as expanding domestic demand made up for export (Oxford Analytica, 2011 and World Bank, 2010). Tanzania and other least income countries recorded contraction in export earnings and output growth as internal markets were generally small and thus domestic demand was insufficient to offset the export squeeze. Cognizant of this, Government implements a number of initiatives to boost domestic consumption and investment. These include pursuing inclusive growth policies, settlement of arrears to government suppliers, injecting liquidity onto the economy through

lower reserve requirements, acceleration of public investment, reduction in corporate income tax from 30 percent to 20 percent over the five years period from 2018/19 (2018/2019 budget speech).

6.0 Conclusion and Recommendations

The integration of global economies has important implications for investors, businesses, and policy makers since higher integration may contribute to increase in output, better standard of living, improved quality of goods and services and advancement of information technology. However, the integration may result in, among others, loss of jobs, widening divergence between rich and poor, increased vulnerability against external shocks. With this, policy makers are required to keep an eye not only on the local economic conditions, but also to the shocks originating outside their economy. This paper sought to investigate key channels of Tanzania's economy linkage to the world, vulnerabilities, and recommend mitigation measures. The technique used comprise descriptive analysis to appraise the possible channels of economic linkages, trailed by scatterplots to trace long run associations between key domestic and external variables, and pairwise Granger Causality tests to identify direction of causal effects.

The study confirmed existence of significant linkage between Tanzania's economy and that of the world, mainly through trade and financial flows (especially through FDIs, and transfers, including official development assistance). While the trade channel was found to be relatively strong over the last five years to 2017, financial channel registered mixed performance. Stronger financial linkage was recorded over the period 2006-2013, but weaken drastically during the period 2014-2017, mainly due to decline in ODAs and FDIs.

The trade channel was characterized by increasing trade competiveness with major trading partners, evidenced by rising terms of trade over the period 2014-2018. Consequently, the economy has been persistently opening up with the trade openness index averaging 43.0 percent of GDP between 2000 and 2017; having risen from 33.5 percent in 2000 to the peak of 53.3 percent in 2011 before declining to 32.0 percent in 2017. The upward movements of imports and exports particularly since 2002 characterize the trade openness. Nevertheless, the trade openness index has remained below an average of 50.0 percent for the world, 80.0 percent for East Asia and Pacific, and 70.0 percent for sub-Saharan Africa, partly explained by a considerable decline in world commodity prices, especially for coffee, tea, tobacco and gold. On the other hand, increased use of local natural gas has significantly reduced import bill.

Furthermore, the study found a strong correlation and significant response of domestic economic variables to global exogenous shocks, largely arising from changes in global income, prices, cost of production and interest rates. Full exploitation of some of the benefits offered by the global

linkage such as the recent global economic recovery, were constrained by a number of structural problems in the domestic economy. These are in relation to concentration of exports markets to few destinations (mainly India and South Africa), narrow exports base (mainly cashew nuts and gold), low value addition, and dependence on volatile transfers/official development assistances (ODAs) as the major external sources of finance.

The implications of these findings are two-fold: first, appeals for policy measures to offset undesirable effects of economic shocks from the rest of the world. Second, efforts should be intensified towards expanding production base and diversify the economy. Third, addressing the remaining structural bottlenecks in order to improve further the country's trade competitiveness and resilience to various shocks. In achieving that, the following recommendations are made, among others:

i. The ongoing industrialization efforts need to be complemented with emphasis on improving value addition in the manufactured goods, particularly on agro-industries and minerals processing. It was evident in the study that manufactured goods exports were resilient to global shocks, even during the Eurozone and global financial crisis. Notwithstanding its potential, manufactured value added as share of GDP found to remain steady at 5.0 percent and relatively lower compared to the level 10.0 percent for sub-Saharan Africa, 9.5 percent for Kenya and 8.7 percent for Uganda, over the five years period to 2017.
ii. There is a need to scale up supply of local natural gas to cater for transportation, household and industrial use. This is because pass-through of the effects from the world oil price shocks onto domestic prices were found to be immediate and thus threaten domestic inflation.
iii. Enhance promotional efforts to attract more FDIs, cognizant the fact that FDI to GDP remained relatively low, averaged at 2.0 percent for the last five years to 2017, the level which is below an average of 8.0 percent in the sub-Saharan Africa. FDIs from non-traditional source countries such as Vietnam, Indonesia, UAE and Singapore are to be encouraged together with attracting complementary FDIs from the EAC and SADC.
iv. Strengthen private sector participation in the EAC and SADC markets which is currently not fully exploited (intra-regional trade is only 10.0 percent of total external trade). Effective participation to this regional market could be realized through supply of products that Tanzania has competitive advantages. These include iron and steel, plastic products, cooking oil and fats, cement and ceramic products.

Matrix 1 summarizes the key observations, impacts and recommended policy actions.

Matrix 1: Key findings and recommended policy actions

	Findings	Impacts	Government initiatives	Gaps/Risks	Proposed Actions
1.	Strong linkage persists between Tanzania's economy and the rest of the world. Notable channels include trade and monetary/financial system.	Tanzania recorded trade and foreign investment gains characterized by expanding trade openness, favourable terms of trade and continued FDIs inflows.	• Appropriate policy framework including the National export strategy (2010-2014). • Trade and investment facilitation, improved power supply and business logistics. • Implementation of the Blue Print for regulatory reforms to maintain friendly business environment and thus pave way for more investment inflows. • Establishment of the EPZs and SEZs. • Continuous monitoring of external sector developments for effective policy decisions and hedging against risks.	• Trade openness index has remained below an average of 50.0 percent for the world, 80.0 percent for East Asia and Pacific, and 70.0 percent for sub-Saharan Africa, largely explained by a considerable decline in world commodity prices, especially for most of the primary commodities. • Linkage to regional markets (EAC & SADC) remained weak. Intra trade across these markets accounts for less than 10% of total trade over the period 2012-2017	Enhance participation in EAC and SADC markets. This could be realized through supply of products that are affordable and complementary to the existing ones that include iron and steel, plastic products, cooking oil and fats, cement and ceramic products.
				• Manufactured goods exports were found to be resilient to shocks. Notwithstanding this potential, manufactured value added as share of GDP, has remained steady at 5.0 percent, lower compared to the level for sub-Saharan Africa and selected peers such as Kenya and Uganda over the five years period to 2017.	The relatively low value addition in the manufacturing sector reflects unexploited potential and that the Government is advised to continue venturing into manufacturing value addition, with emphasis on processing agro-products and minerals.

	Findings	Impacts	Government initiatives	Gaps/Risks	Proposed Actions
2.	Tanzania economy is vulnerable to external shocks, mainly arising from external demand and supply risks.	Vulnerability constrained the economy from fully exploitation of benefits offered by the international trade and investment. Specifically, • Tanzania' s exports earnings have been highly volatile over the period 1996-2018 (*fluctuating with global price changes*). • A slump in Tanzania' s trade share in GDP to 40% in 2009 compared with 50% in 2008 as result of global recession	a) 5-Years Development Plan supports industrialization as well as export diversifications. b) Participate in regional integration arrangement (EAC & SADC). This contributes to increased access to regional markets. c) Ongoing infrastructure projects stir up exports. These include the Standard gauge railway, revamping national airline to boost tourism and horticulture and power projects such as the Stigler Gorge. d) Trade facilitation and market access initiatives are implemented to nurture new export products. e) Export guarantees scheme to compensate for the fall in foreign demand. f) Supportive initiatives to boost domestic consumption and investment. These include the inclusive growth policies, settlement of arrears to government suppliers, injecting liquidity onto the economy through lower reserve requirements	While response to most of external demand and supply shocks has been indirect and with lags, effects from oil price shocks on domestic prices was found to be immediate and thus threatening domestic inflation.	In order to contain the effects of oil prices, the Government is advised to scale up gas supply to cater for transportation, household and industrial use.

	Findings	Impacts	Government initiatives	Gaps/Risks	Proposed Actions
		in 2009 and the subsequent decline in both export volumes and prices. • Pass-through of oil prices changes into domestic inflation.	and reduction in corporate income tax from 30 percent to 20 percent over the five years period from 2018/19. g) The Written Laws Act, 2017 impose local content requirements on incoming FDI to ensure that the country realizes the employment and technology transfer benefits of FDI. h) In enhancing skills, the Government supports access to primary education through free education programme. In addition, support access to higher education level by extending student loans.		

	Findings	Impacts	Government initiatives	Gaps/Risks	Proposed Actions
3.	FDIs is persistently declining, particularly from the major source markets such as the Euro Area. The mostly affected sector due to decline in FDI is the manufacturing with its share to total FDI declining from 36.0 percent in 2016 to 2.5 percent in 2017.	Decline in imports as well as trade openness, notably in recent years (2016-2018).	Due to unreliability of development assistances and FDIs the Government has been taking other measures to address the financing need. These include: • Enhanced domestic revenue mobilization, • Public-private partnership (PPP), and • Expenditure prioritization whereby resources have been saved and directed to infrastructure projects to support productive sectors including exports.	Sustained dwindling of FDIs and ODAs has adversely affected Government financing of budgetary commitments, especially development projects. FDI to GDP averaged 2.0 percent for the last five years to 2017, the level which is below an average of 8.0 in the sub-Saharan African.	• Government through Tanzania Investment Centre (TIC) is advised to enhance the efforts to strengthen promotional efforts to attract FDIs, focusing to non-traditional source countries such as Vietnam, Indonesia, UAE and Singapore and complementary FDIs from the EAC and SADC. • Meanwhile, the Government is advised to continue soliciting non-concession loans to address funding gap. Nevertheless, this has to go together with the process to undergo international rating for accessing affordable loans. • Nurturing of diaspora community ought to continue so that in the long run Tanzania could tap on remittances.

References

Bank of Tanzania (2016), Banking Supervision Annual report 2016, 20th Edition.

Bank of Tanzania (2017), Financial Stability report September.

Biljanovska, N., and A. Meyer-Cirkel (2016), "Testing Shock Transmission Channels to Low-Income Developing Countries (No. 16/102)" International Monetary Fund.

Chowla, S; L. Quaglietti and L. Rachel (2014), "How have world shocks affected the UK economy?" Bank of England Quarterly Bulletin, 54, No.2, 167–79.

Dees, S.F.; F.D. di Mauro; M.H. Pesaran; and L.V., Smith (2007), "Exploring the international linkages of the Euro Area: A global VAR analysis", Journal of Applied Econometrics, 22, 1-38.

Deloitte (2017), Trade to trump protectionists and boost global growth. Voice of Asia. Deloitte University Press.

Farag, M; D. Harland and D. Nixon (2013), "Bank capital and liquidity", Bank of England Quarterly Bulletin, 53, No. 3, 201–15.

Granger C. J.(1969), "Investigating Causal Relationships by Econometrics Models and Cross Spectral Methods", Econometrica, Vol. 37, 1969, pp. 425-435.

Greenwood–Nimmo; V. N.M. Hoang and Y. Shin (2008), "International Linkages of the Korean Macroeconomy: The Global VAR Modelling Approach", Leeds University Business School, March, 14.

International Monetary Fund, (2012), Regional Economic Outlook, Sub-Sahara Africa, April 2012

International Monetary Fund, (2018), Trade and Foreign Investment – Keys to Diversification and Growth in the Gulf Cooperation Council (GCC).

Kose M.A; C. Otrok; and C.H. Whiteman (2003), "International business cycles: world, region, and country-specific factors", American Economic Review, 93, 1216-1239.

Masawe, J.L.; Johnson Nyella; Pantaleo Kessy; Augustino Hotay; and Wilfred Mbowe (2015), "The Interaction between finance, financial stability and economic growth", Bank of Tanzania WP No 2: September 2015.

Morrissey, O. (2001), "Does aid increase growth?," Progress in Development Studies, 1:1, 37-50.

Oxford Analytica (2011), "Asia: Domestic Demand Will Lift Asia", Oxford Analytica Research Daily Brief Service, 5 January 2011, Oxford.

Pesaran, M. H.; T. Schuermann; and S.M Weiner (2004), "Modelling regional interdependencies using a global error-correcting macroeconometric model", Journal of Business and Economics Statistics, 22, 129-162.

Sill, K. (2007), "The Macroeconomics of Oil Shocks", FRB Philadelphia Business Review, 2007:Q1.

Sun, Y., Heinz, F. F. and Ho.G. (2013), "Cross country linkages in Europe: a global VAR analysis", IMF Working Paper, European Department.

World Bank (2010), "Taking Stock: An Update on Vietnam's Recent Economic Developments", World Bank, Hanoi.

Appendices

Appendix 1: Granger Causality Tests

	Lags: 1		Lags: 2	
	Observations: 63		Observations: 62	
Null Hypothesis:	F-Statistic	Probability	F-Statistic	Probability
DLNTCPI does not Granger Cause DILB	0.53327	0.4681	1.68438	0.1947
DILB does not Granger Cause DLNTCPI	0.10831	0.7432	0.27457	0.7609
DLNTRGDP does not Granger Cause DILB	0.58872	0.4459	0.4701	0.6273
DILB does not Granger Cause DLNTRGDP	3.52047	0.0655**	10.699	0.0001***
DLNTRM does not Granger Cause DILB	0.2884	0.5932	0.08304	0.9204
DILB does not Granger Cause DLNTRM	0.14233	0.7073	1.25451	0.293
DTIR does not Granger Cause DILB	1.84736	0.1792	0.13855	0.8709
DILB does not Granger Cause DTIR	0.53623	0.4668	2.29774	0.1097
DLNREER does not Granger Cause DLNCCPI	4.59434	0.0361**	0.17483	0.84
DLNCCPI does not Granger Cause DLNREER	9.87374	0.0026***	2.9126	0.0625*
DLNTCPI does not Granger Cause DLNCCPI	3.13348	0.0818**	0.77407	0.4659
DLNCCPI does not Granger Cause DLNTCPI	10.0961	0.0023***	4.51701	0.0151**
DLNTRGDP does not Granger Cause DLNCCPI	0.01491	0.9032	0.43768	0.6477
DLNCCPI does not Granger Cause DLNTRGDP	2.65533	0.1084	1.55518	0.22
DLNTRM does not Granger Cause DLNCCPI	0.9604	0.331	0.94976	0.3929
DLNCCPI does not Granger Cause DLNTRM	0.39761	0.5307	0.17598	0.8391
DTIR does not Granger Cause DLNCCPI	0.01021	0.9199	1.91901	0.1561
DLNCCPI does not Granger Cause DTIR	0.42833	0.5153	0.6758	0.5128
DLNREER does not Granger Cause DLNCRGDP	2.39313	0.1271	0.83828	0.4377
DLNCRGDP does not Granger Cause DLNREER	5.3048	0.0247**	3.07551	0.05398
DLNTCPI does not Granger Cause DLNCRGDP	3.34647	0.0723*	1.07475	0.3482
DLNCRGDP does not Granger Cause DLNTCPI	26.5861	0.000003***	11.1302	0.00008***
DLNTRGDP does not Granger Cause DLNCRGDP	0.0406	0.841	0.0338	0.9668
DLNCRGDP does not Granger Cause DLNTRGDP	0.04434	0.8339	0.0359	0.9648
DLNTRM does not Granger Cause DLNCRGDP	0.03372	0.8549	0.11673	0.89
DLNCRGDP does not Granger Cause DLNTRM	0.13336	0.7163	0.31008	0.7346
DTIR does not Granger Cause DLNCRGDP	0.57224	0.4523	0.40425	0.6694
DLNCRGDP does not Granger Cause DTIR	3.08093	0.0843*	3.82746	0.0276**
DLNREER does not Granger Cause DLNGOIL	0.10167	0.7509	0.16299	0.85
DLNGOIL does not Granger Cause DLNREER	0.52238	0.4726	0.86092	0.4282
DLNTCPI does not Granger Cause DLNGOIL	2.05356	0.157	1.01948	0.3673
DLNGOIL does not Granger Cause DLNTCPI	0.80934	0.3719	0.08855	0.9154
DLNTRGDP does not Granger Cause DLNGOIL	1.95234	0.1675	0.87446	0.4226
DLNGOIL does not Granger Cause DLNTRGDP	538.832	1E-3***	653.043	5E-40***
DLNTRM does not Granger Cause DLNGOIL	3.16405	0.0803*	4.4332	0.0162**
DLNGOIL does not Granger Cause DLNTRM	2.4595	0.1221	1.55472	0.2201
DTIR does not Granger Cause DLNGOIL	0.2946	0.5893	0.1691	0.8448
DLNGOIL does not Granger Cause DTIR	0.08857	0.767	0.32305	0.7253
DLNREER does not Granger Cause DLNICPI	0.54764	0.4622	0.70174	0.5
DLNICPI does not Granger Cause DLNREER	0.83126	0.3656	0.75345	0.4754
DLNTCPI does not Granger Cause DLNICPI	8.80645	0.0043***	8.96607	0.0004***
DLNICPI does not Granger Cause DLNTCPI	0.02209	0.8824	0.33152	0.7192
DLNTRGDP does not Granger Cause DLNICPI	0.14499	0.7047	0.35724	0.7012
DLNICPI does not Granger Cause DLNTRGDP	0.18088	0.6721	0.31357	0.7321
DLNTRM does not Granger Cause DLNICPI	2.21843	0.1416	1.03234	0.3627
DLNICPI does not Granger Cause DLNTRM	0.03173	0.8592	0.18347	0.8329
DTIR does not Granger Cause DLNICPI	0.09793	0.7554	0.70568	0.498
DLNICPI does not Granger Cause DTIR	0.42505	0.5169	0.76279	0.4711
DLNREER does not Granger Cause DLNIRGDP	0.02931	0.8647	2.79466	0.0695*
DLNIRGDP does not Granger Cause DLNREER	0.31882	0.5744	0.92081	0.404
DLNTCPI does not Granger Cause DLNIRGDP	0.27909	0.5992	0.2799	0.7569
DLNIRGDP does not Granger Cause DLNTCPI	0.00729	0.9322	0.14662	0.8639
DLNTRGDP does not Granger Cause DLNIRGDP	0.04936	0.8249	0.03942	0.9614
DLNIRGDP does not Granger Cause DLNTRGDP	0.05019	0.8235	0.0399	0.9609
DLNTRM does not Granger Cause DLNIRGDP	0.19585	0.6597	0.19305	0.825
DLNIRGDP does not Granger Cause DLNTRM	1.53738	0.2198	0.65556	0.523
DTIR does not Granger Cause DLNIRGDP	0.16291	0.6879	0.20076	0.8187
DLNIRGDP does not Granger Cause DTIR	0.01025	0.9197	0.57903	0.5637

Null Hypothesis:	F-Statistic	Probability	F-Statistic	Probability
DLNREER does not Granger Cause DLNOCPI	1.78846	0.1862	0.62268	0.5401
DLNOCPI does not Granger Cause DLNREER	0.29134	0.5914	0.35996	0.6993
DLNTCPI does not Granger Cause DLNOCPI	1.37254	0.246	3.2961	0.0442*
DLNOCPI does not Granger Cause DLNTCPI	5.24694	0.0255**	1.7799	0.1779
DLNTRGDP does not Granger Cause DLNOCPI	0.08992	0.7653	0.13491	0.8741
DLNOCPI does not Granger Cause DLNTRGDP	0.19674	0.659	0.37875	0.6864
DLNTRM does not Granger Cause DLNOCPI	0.07998	0.7783	0.4936	0.613
DLNOCPI does not Granger Cause DLNTRM	0.11897	0.7314	0.16079	0.8519
DTIR does not Granger Cause DLNOCPI	1.69365	0.1981	2.47689	0.093*
DLNOCPI does not Granger Cause DTIR	2.06659	0.1558	0.96682	0.3864
DLNREER does not Granger Cause DLNORGDP	3.74408	0.0577*	2.43322	0.0968*
DLNTCPI does not Granger Cause DLNORGDP	1.92811	0.1701	1.23848	0.2975
DLNORGDP does not Granger Cause DLNTCPI	0.3972	0.5309	0.6584	0.5216
DLNTRGDP does not Granger Cause DLNORGDP	0.01677	0.8974	0.2435	0.7847
DLNORGDP does not Granger Cause DLNTRGDP	0.07752	0.7816	0.53884	0.5864
DLNTRM does not Granger Cause DLNORGDP	0.62812	0.4312	2.76071	0.0717*
DLNORGDP does not Granger Cause DLNTRM	0.1063	0.7455	0.39218	0.6774
DTIR does not Granger Cause DLNORGDP	0.01361	0.9075	2.91464	0.0623*
DLNORGDP does not Granger Cause DTIR	3.41008	0.0697*	2.90463	0.0629*
DLNSCPI does not Granger Cause DLNREER	0.11892	0.7314	0.26133	0.7709
DLNREER does not Granger Cause DLNSCPI	0.09915	0.7539	0.24114	0.7865
DLNSRGDP does not Granger Cause DLNREER	1.77837	0.1874	0.68568	0.5079
DLNREER does not Granger Cause DLNSRGDP	0.30912	0.5803	0.11964	0.8875
DLNTCPI does not Granger Cause DLNREER	3.5206	0.0655*	2.51831	0.0895*
DLNREER does not Granger Cause DLNTCPI	0.2323	0.6316	0.41255	0.6639
DLNTRGDP does not Granger Cause DLNREER	1.72072	0.1946	1.13316	0.3292
DLNREER does not Granger Cause DLNTRGDP	0.03016	0.8627	0.07344	0.9293
DLNTRM does not Granger Cause DLNREER	1.18479	0.2807	1.04245	0.3592
DLNREER does not Granger Cause DLNTRM	0.00547	0.9413	0.27815	0.7582
DTIR does not Granger Cause DLNREER	3.25322	0.0763*	0.13202	0.8766
DLNREER does not Granger Cause DTIR	4.07006	0.0481*	2.53348	0.0883*
DLNTCPI does not Granger Cause DLNSCPI	0.11786	0.7326	0.50637	0.6054
DLNSCPI does not Granger Cause DLNTCPI	0.58236	0.4484	0.81827	0.4463
DLNTRGDP does not Granger Cause DLNSCPI	1.13942	0.2901	2.39033	0.1007
DLNSCPI does not Granger Cause DLNTRGDP	0.00098	0.9751	3.85059	0.027*
DLNTRM does not Granger Cause DLNSCPI	0.82049	0.3687	4.75641	0.0123*
DLNSCPI does not Granger Cause DLNTRM	0.16401	0.6869	0.57992	0.5632
DTIR does not Granger Cause DLNSCPI	0.00284	0.9577	0.47632	0.6235
DLNSCPI does not Granger Cause DTIR	0.0901	0.7651	0.67504	0.5132
DLNTCPI does not Granger Cause DLNSRGDP	0.57361	0.4518	0.7876	0.4598
DLNSRGDP does not Granger Cause DLNTCPI	0.01693	0.8969	0.15039	0.8607
DLNTRGDP does not Granger Cause DLNSRGDP	0.04203	0.8383	0.03374	0.9668
DLNSRGDP does not Granger Cause DLNTRGDP	0.04134	0.8396	0.03232	0.9682
DLNTRM does not Granger Cause DLNSRGDP	1.95332	0.1674	0.84929	0.4331
DLNSRGDP does not Granger Cause DLNTRM	0.03686	0.8484	0.27443	0.761
DTIR does not Granger Cause DLNSRGDP	3.74391	0.0577*	2.54638	0.0872*
DLNSRGDP does not Granger Cause DTIR	0.27733	0.6004	0.22161	0.8019
DLNTRGDP does not Granger Cause DLNTCPI	0.11685	0.7337	1.25993	0.2915
DLNTCPI does not Granger Cause DLNTRGDP	0.85833	0.3579	0.78957	0.4589
DLNTRM does not Granger Cause DLNTCPI	0.69298	0.4085	0.46338	0.6315
DLNTCPI does not Granger Cause DLNTRM	0.00399	0.9498	0.33788	0.7147
DTIR does not Granger Cause DLNTCPI	0.00466	0.9458	0.02618	0.9742
DLNTCPI does not Granger Cause DTIR	0.13111	0.7186	3.78916	0.0285**
DLNTRM does not Granger Cause DLNTRGDP	1.77868	0.1874	1.23109	0.2996
DLNTRGDP does not Granger Cause DLNTRM	1.46702	0.2306	22.3299	0.00000007***
DTIR does not Granger Cause DLNTRGDP	0.31509	0.5767	0.17436	0.8404
DLNTRGDP does not Granger Cause DTIR	0.06604	0.7981	0.96765	0.3861
DTIR does not Granger Cause DLNTRM	0.25675	0.6142	0.89123	0.4158
DLNTRM does not Granger Cause DTIR	0.00092	0.9759	0.20602	0.8144

Note: D represents difference in level; DLN, difference in natural log. A letter after "D" or DLN" denotes a country/group where: C represents China; I, India; O, OECD countries; S, South Africa; and T, Tanzania. CPI stands for CPI inflation; RGDP, real GDP; ILB, Libor rate; REER, real effective exchange rate; GOIL, global oil price; RM, reserve money; and IR, weighted Treasury bill rate.
* (**) *** means statistically significant at 10% (5%) 1%, respectively.