

Export Diversification Dynamics in Tanzania Non-Traditional Products Approach

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Abstract

This paper empirically examines the influence of export diversification on export growth, following strides towards non-traditional exports diversification in Tanzania. The causal relationship between export growth and growth rate of aggregate non-traditional products using time series data from 1980 to 2012 was examined. Growth rate of aggregate traditional products was included in the study for comparable purposes. The results indicate that growth rate of aggregate non-traditional products has a statistically significant impact on the overall export growth in the short run while that of aggregate traditional products has recorded insignificant impact. This suggests that recent export growth in Tanzania is attributed to by non-traditional product growth. However, there is no long run relationship between the two variables but a bi-directional short run relationship which runs from non-traditional products to export growth and vice-versa exists.

Keywords: Export Diversification, Non-Traditional Product, Traditional product, export growth, vertical export diversification, horizontal export diversification.

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1.0 Introduction

In an attempt to increase foreign exchange earnings and generate more revenue for economic development, many developing countries have been pursuing export expansion strategies. This is because almost all developing countries are largely dependent on exports of primary commodities which are prone to serious problems of price volatility (over the short and medium terms) resulting in export income variability and instability from year to year, detrimentally affecting growth, governments financial planning, investment, terms of trade and the livelihoods of the people due to reliant on agriculture.

Export expansion strategies resorted to are either through the extensive margin (new products or new markets) or the intensive margin (more of current products). Export diversification is therefore understood as the expansion of exports due to new products or new markets and is seen critical for developing countries to achieve and sustain economic growth. Brenton, Newfarmer and Walkenhorst 2007) and Delgado (1995) argued that diversifying the agricultural export base and diversifying the economy across sectors are central to the long-run growth strategies in Africa given the high concentration ratio of agricultural exports (food and beverages typically account for well over half of merchandise exports in non-oil exporting African countries).

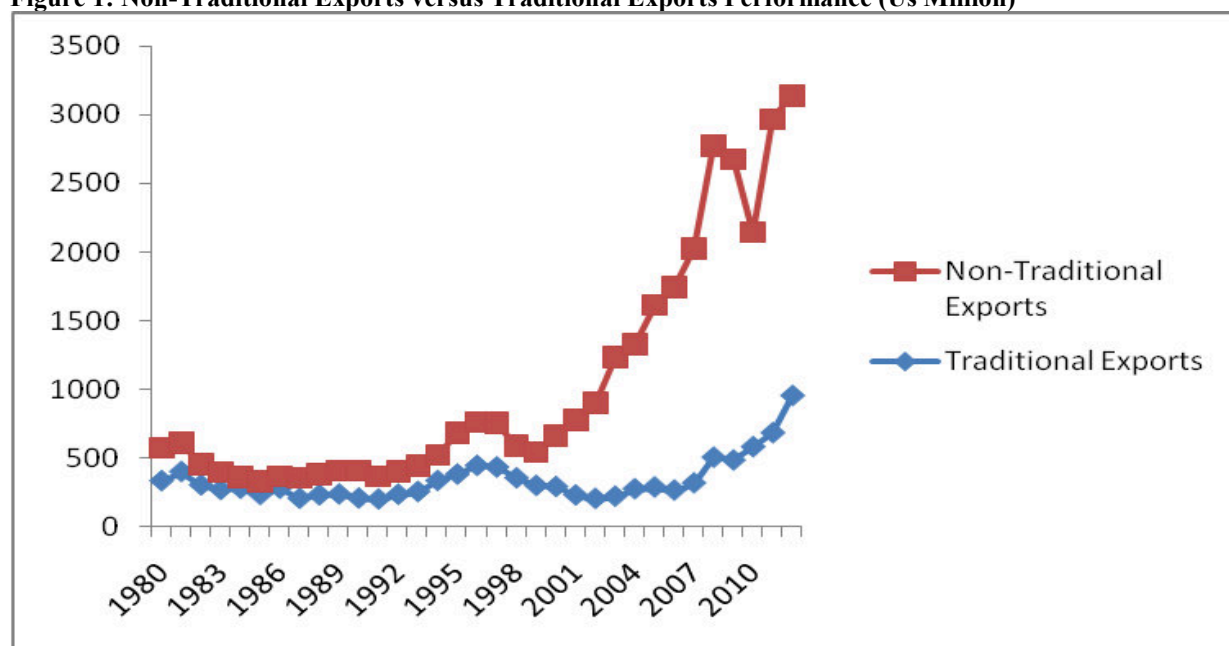
Since 1980s Tanzania has been pursuing several reforms that sought to stimulate economic growth. Having experienced a steady economic decline in the late 1970s and a financial crisis in the early 1980s, led to the adoption of Structural Adjustment Program (SAP) in 1983/85 and the Economic Recovery Programs between 1986/89 and 1989/1992. They were primarily intended to address deteriorating in the economy by raising production levels through appropriate incentives, improving marketing structures and increasing industrial capacity utilization, correcting the external imbalance, reducing budget deficit and cutting down inflation. The adoption of Economic Recovery Program (ERP) spearheaded trade liberalization policy which facilitated the increase of profitability of export crops by allowing exporters to receive a higher share of proceeds from export sales and import inputs which are necessary in their production. Restrictions on exports were relaxed, by introducing schemes such as Export Retentions Scheme (ERS) in 1986 which allowed traditional and non-traditional exporters to retain a certain percentage of their export earnings for the purpose of importation of key inputs necessary to sustain their production. As in most developing economies, the concentration of Tanzania's exports in agriculture commodities has long been regarded as a major factor contributing to the short-term instability of exports. Volatility in international prices for agricultural commodities introduces considerable uncertainty of export earnings from one year to another. Other factors, such as the susceptibility of exports to adverse weather conditions have also introduced considerable volatility into export earnings. Kipilimbi (1994), observes that Tanzania suffers from two major export earnings fluctuations, price fluctuations and quantity fluctuations are the major cause of earning fluctuations in the export sector, she recommends that efforts on diversification of exports should be increased focusing at breaking the present export structure where quite long few products have remained dominant to beyond agricultural commodities (increased manufactured exports).

As a result of the successive reforms pursued, there is a noticeable shift of dominance in export composition from traditional exports to non-traditional exports largely being due to the decline of the share of traditional exports in total exports, for example the total share of traditional exports declined from an average of 65.2% between 1980 and 1985 to 59.4% in 1986-1995 and 41% in 1996-2004, hence the growth divergence

between the two categories of exports in the last few years has resulted in a significant shift in a composition of exports from about 50% in each category to nearly 78% being made up of non-traditional exports in 2004 (Masenya, 2008).

The reforms have further succeeded in arresting the exports declining trend of the early 1980s and has improved the performance of exports through diversifying Tanzania's exports' composition and reducing vulnerability to external shocks in the world market. This can be explained by two reasons, after the year 1986, export volumes of cash crops moved in contrast to the movements in their prices with export volumes expanding despite the fall in export prices. The second reason refers to foreign direct investment flowing into the country. Tanzania has been experiencing an increase in foreign direct investment (FDI), most of which flows into the mining and tourism industries. For-example, FDI flows increased from an average of US\$ 150 million per year before 1997 to an average of US\$ 450 by 2005. This has led to the diversification of the country's exports (Mboghoina, 2008). The situation existed in 1990s when traditional and non-traditional exports had almost similar performances changed as from 2000 onwards, the performance of these two categories of exports diverged significantly, with the sharp recovery in merchandise exports, entirely being attributed to the acceleration in non-traditional exports (Figure 1).

Figure 1: Non-Traditional Exports versus Traditional Exports Performance (Us Million)



Source: Ministry of Finance and BOT

Some of the products constituting non-traditional exports are minerals, manufactured Goods, fish and fish Products and horticultural Products. Tanzania is reckoned to have rich mineral deposits in form of gold, Silver, tanzanite, diamond, iron ore, nickel, tin and coal which have not been fully explored. On the part of manufactured exports, they fall under resource-based manufactures, medium technology manufactures and high technology manufacturers. However, the high technology manufacturers are scanty in Tanzania due the fact that they involve cutting edge technology with high amounts of both human and physical capital with companies gaining competitive advantage by developing new and unique products through research, development, and acquisitions of other firms. The most common form of manufactures are resource-based manufactures, such as processed foods and tobacco, simple wood products, refined petroleum products, dyes, leather (but not leather products), precious stones, organic chemicals, textiles, garments, footwear, toys, simple metal and plastic products, furniture and glassware. The Medium technology manufactures are still a minor part of the manufacturing sector, concentrating in heavy products like, industrial chemicals, machinery, and standard electrical and electronic products. Fish and fish products is one of the largest non-traditional exports being exported to both industrial countries and to a lesser degree to neighboring countries. Trade in Nile Perch from Lake Victoria accounts for 80 percent of fish exports, though other high value species such as prawns, crabs, and lobster are also traded internationally and smaller fish are traded to Uganda, the Congo and Kenya (TIC, 2008). With Horticultural products, the local demand for fruits and vegetable consumption is growing rapidly. Tanzania produces citrus, mangoes, pineapples, tomatoes, Irish potatoes, other vegetables and floriculture which have now gained prominence in the world market.

Non-traditional exports have recorded an upward trend year after year, for example in 2012, the value of non-traditional exports increased to USD 4,184.4 million compared to USD 3,747.5 million in 2011,

equivalent to an increase of 11.7 percent. The increase was attributed to the improvement in exports of manufactured goods, horticultural products and fish and fish products. In addition, minerals contributed 50.4 percent of total merchandise exports in 2012 (Table 1).

Table 1: Tanzania's Export Performance (US Million)

Products	1995	2005	2006	2007	2008	2009	2010	2011	2012
Traditional exports	383.6	354.5	267.1	319.6	417.7	470.8	583.2	685.5	956.7
Non-Traditional Exports	299.4	1324.6	1476.2	1704.4	2270.6	2193.6	3177	3747.5	4184.4
Minerals	44.9	710.7	836.8	848.6	995.4	1145.2	1561.2	2283.4	2187.8
Gold		655.1	786.4	788.2	932.4	1106.5	1561.2	2224.1	2107.4
Diamond		24.3	22.2	26.0	20.2	18.9	11.1	10.2	30.2
Other minerals		31.4	28.2	34.4	42.8	19.7	33.5	49.2	50.2
Manufactured goods	109.3	156.0	195.7	309.7	662.3	497.6	964	861.5	1047.3
Fish and Fish Products		150.9	145.9	163.5	141.5	127.5	150.4	137.7	160.6
Horticultural Products		18.3	15.4	19.1	32.2	33.6	30.8	36.4	51.3
Other Export Products	134.3	161.5	153.9	213.7	278.6	310.5	132.5	98.3	181.7
Re-Exports		127.0505	128.3	149.6798	160.2936	78.91144	338.2	330.2	555.7

Source: Ministry of Finance and BOT

Export diversification is one of the key pillars of structural economic transformation being advocated by Africa Centre for Economic Transformation (ACET) to developing countries, if are to register sustainable and significant economic transformation that warrant poverty reduction in their economies. An essential part of economic transformation is acquiring the capability to produce a widening array of goods and services and then choosing which ones to specialize in based on international relative prices. This has been the experience of today's developed countries: increasing the diversity of production before specializing to better take advantage of market opportunities. Today, Sub-Saharan countries are confined to a narrow range of commodity production and exports not because they choose to specialize, but because they lack the technical and other capabilities to expand into other higher technology products and services (ACET, 2014). Like other developing countries, Tanzania carries the potential of expanding further its export portfolio. However, is fraught with several challenges that have to be addressed to warrant broadening the sectoral origin of exports to include more manufactures and high-value services, increasing productivity in the agriculture and manufacturing sectors via technology upgrading, creating a business friendly environment that fosters effective state-business consultation and collaboration on economic transformation.

Economic growth and poverty alleviation are currently a major concern for many developing countries including Tanzania. Non-traditional exports are likely to affect poverty in different ways in both urban and rural areas. Export of products like vegetables, fruit, cut flowers, meat, minerals, fish, bee products, herbs, spices, nuts, dyes, essential oils, manufactured products, etc, generate considerable employment in both farm and non-farm activities. Non-traditional exports offer increased incomes from the main sources of livelihood of the poor, new income-generating opportunities for the poor and reduce vulnerability to shocks that affect the incomes of the poor. The socio-economic benefits of non-traditional products in Sub-Saharan Africa, and particularly to Tanzania have been lucrative (Maembe, 1997) on the following grounds;

- Stimulation of profitable domestic industries, particularly those dealing with non-traditional exports
- Diversification of the local economy particularly when traditional exports are under performing
- Stimulation and improvement of local transportation and communication infrastructure, which benefit the local people
- Encouragement of the government to provide extra resources for promoting the development of non-traditional export product resources
- Improvement of inter-cultural understanding and global communication.

The paper seeks to identify the impact of export diversification on the growth rate of exports. Export diversification is proxied by two variables namely growth rate of aggregate traditional products, which represents horizontal diversification and the growth rate of aggregate non-traditional products, representing vertical diversification.

2.0 Literature Review

2.1 Theoretical postulations on Export Diversification

i. Modern Portfolio Theory

The concept of diversification gained importance with the modern portfolio theory developed by Nobel Prize winner professor Harry Markowitz linking diversification to reducing a country's dependence on a particular product or a very restricted range of products generally exported before processing. Many developing countries with low economic growth and relying heavily on a handful of commodities for trade, income and employment would benefit from diversifying their economies by selecting export portfolios that optimize market risks against anticipated returns. The portfolio theory can be used to quantify diversification benefits for a country (Love,

1979).

ii. New Trade Theory

The new trade models emphasize the extensive margin of trade and are better suited for understanding the determinants of export diversification. Krugman (1979) presents the workhorse model of trade with a monopolistic competitive market structure. He emphasizes on the extensive margin of trade, with countries in equilibrium producing an endogenous number of varieties. The number of varieties produced in a country is proportional to the size of the economy, with each country (conditional on exporting a particular variety) exporting that variety to all other countries. Evennett and Venables (2002) find a third of the growth of exports of developing countries between 1970 and 1997 can be attributed to the expansion of the extensive margin. According to structural models of economic development, countries should diversify from primary exports into manufactured exports in order to achieve sustainable growth (Chenery, 1979; Syrquin, 1989). This vertical export diversification could according to the Prebisch-Singer thesis reduce declining terms of trade for commodity dependent countries, because of its impact on domestic demand, export instability could discourage necessary investments in the economy by risk-averse firms, increase macroeconomic uncertainty and be detrimental to longer term economic growth. Export diversification could therefore help to stabilize export earnings in the longer run (Ghosh and Ostry, 1994; Bleaney and Greenaway, 2001).

iii. Self Discovery Paradigm

The economic literature has recently linked export diversification to the process of “self discovery” or innovation which implies the discovery of new export products by firms/farms or the Government; emphasizing the role of externalities related to the process of discovering new exports (Hausmann and Rodrik (2002); Klinger and Lederman (2005)) or those associated with coordination failures in taking the necessary steps to increase sector-wide productivity (Rodriguez-Clare, 2005). It appears from self discovery literature that export diversification can be shaped by Government policies, and that an appropriate mix of microeconomic interventions in specifically addressing the market failures is important in the development process at different levels of development.

Various authors have defined non-traditional exports depending on the focus of their studies, Bagachwa, Luvanga and Mjema (1990), broadly define non-traditional exports to include manufactured/processed products, petroleum products, minerals, forestry and marine products and services. The general definition of non-traditional exports, which this study adopts, is total exports minus six traditional exports of Tanzania; coffee, cotton, tea, sisal, cashew nuts, tobacco and service exports. Policy interest in non-traditional export is centered in the following grounds;

- The hope of finding new export products that are not as vulnerable to deteriorating terms of trade and/or declining world demand as are the traditional bundle of exports (e.g. Delgado, 1995);
- The hope that diversification in the export portfolio will reduce export instability and, more broadly, risk; diversification may, for these purposes, be achieved either through a new mix of products or via an expanded range of markets (e.g. Alwang and Siegel, 1994);
- The belief that certain new export products may generate greater dynamic effects learning, positive externalities, etc. than traditional exports (e.g. Wangwe, 1995; Ernst et al., 1998);
- The prospect of exporting products that were previously produced within the country but not exported.

Dennis and Shepherd (2007), define export diversification as widening the range of products that a country exports, diversification makes countries less vulnerable to adverse terms of trade shocks by stabilizing export revenues. Export diversification has different dimensions and can be analyzed at different levels (Ali *et al.* 1991). There are two well-known forms/dimensions of export diversification from the supply side that may take place in developing countries, namely, horizontal and vertical export diversification. Matthee and Naude (2007), define horizontal export diversification as an increase in the number of export sectors, and vertical diversification as a shift in the composition of exports from primary to manufacturing products. Vertical export diversification, occurs when the composition of exports shift from primary product to manufactured products. Vertical export diversification also contributes to stabilization in export earnings, as the prices of manufactured exports do not fluctuate as much as those of primary exports (Ali *et al.* 1991).

Hasan and Toda (2004) have investigated the export diversification and its impact on economic growth using linear growth model. They specified the model and captured the notion of export diversification through variable such as the growth rate of aggregate non-traditional commodities that representing vertical diversification and the growth rate of aggregate traditional commodities reflecting horizontal diversification of the growth rate of total exports. They estimated for Bangladesh, Nepal and Malaysia. The result obtained for both Bangladesh and Nepal, vertical diversification variable measured in terms of aggregate growth rates of non-traditional export commodities is statistically significant, at the same time the horizontal diversification variable measured in terms of aggregate traditional commodities has no statistically significant impact on total export growth. While in the case of Myanmar, neither vertical nor horizontal export diversification produced any significant impact on total export growth. For Malaysia both non-traditional (vertical diversification) and

traditional (horizontal diversification) export commodity variables have a statistically significant impact on total export growth. Then they conclude that, for Bangladesh and Nepal vertical diversification strategy has certainly boosted their total export. Malaysia relied on balanced approach strategy; that is, horizontal and vertical diversification to augment its total exports growth.

Feenstra *et al.* (1999) evaluated the link between increased product variety and productivity using sectoral data for South Korea and Taiwan and found that the changes in relative export variety across the two countries have a positive and significant effect on productivity growth. A related theoretical analysis by Williamson (1975) explains that the relationship between export diversification and economic growth has emphasized two possible channels through which diversification may affect profitability and thereby economic growth. First, diversification may be expected to increase profitability by facilitating increased efficiency through greater exploitation of the firms' assets and benefits that accrue from economies of scope. A further possibility is that diversification strengthens firms' recognition of their interdependence by increasing the numbers of sectors/products (i.e. horizontal export diversification) in which firms meet and compete.

Hesse (2008), presents an extensive literature review on export diversification and economic growth, and estimates a simple augmented Solow growth model to investigate the relationship between export diversification and income per capita growth. His findings present strong evidence that export concentration, measured by a Herfindahl index, is detrimental to GDP per capita growth in developing countries. Suggests that export diversification could assist developing countries in overcoming export instability, terms of trade shocks and macroeconomic instability, a view also documented by Ghosh and Ostry (1994). He also suggests that export diversification is associated with higher income growth rates and a number of spillover benefits (production, management, marketing and informational) which further serve to foster higher economic development.

Semboja *et al.* (2000), found that the success of the cut-flower industry in Tanzania, beginning in the mid-1990s, was facilitated by a combination of factors that provide lessons for developing other export commodities in the country. First, cut-flowers are a non-traditional high value commodity that enjoys access to a rapidly expanding international market. Second, initial producers in Tanzania were able to tap international linkages and gain access to overseas sources of technology and capital. A key facilitating factor was that foreign firms with essential know-how were permitted to come to the country and provide the crucial ingredients that allowed the industry to take off and become competitive in a world market dominated by producers from developed countries. Third, growth in interregional linkages involving technology transfers and the physical movement of people further contributed to the development of cut-flower exports. Fourth, water, land and abundant cheap labour were readily available. Fifth, in contrast to most other agricultural (traditional) crops in Tanzania, there has been very little government involvement in the floricultural industry; the Government has neither given special consideration to the cut-flower industry nor provided intensive services to it. Instead, the cut-flower industry represents an interesting case of a private sector that is capable of organizing itself and making its own arrangements in order to meet international standards.

Imbs and Wacziarg (2003) have identified two stages of diversification in the process of economic development. First, poor countries tend to diversify as their incomes rise; then, the level of diversification will reach to a turning point and later begin to become more specialized. In this case, the diversification of an economy could be related to its development level, measured by GDP per capita, through an inverted-U shaped relation. Hummels, Ishii and Yi (2001) and Yi (2003) give further support to the notion that countries at further stages of development may tend to specialize also in their export structure, by identifying the importance of vertical specialization (when a country specializes in a specific stage of production rather than in the production of the whole product) in global trade. Vertical specialization, for example, has been responsible for 50 percent of the growth in USA trade since 1962 (Yi 2003: 9).

According to Chickhasu (2007), for many developing countries and as a part of an export led growth strategy, export diversification is conceived as the progression from traditional to non-traditional exports (extensive margin of exports). By providing a broader base of exports diversification can lower instability in export earnings, expand export revenue, upgrade value added, and enhance growth through many channels, including improved technological capabilities via broad scientific and technical training as well as learning by doing, facilitation of forward and backward linkages within output of some activities which then become input of the other activities, increased sophistication of markets, scale economies and externality, and substitution with commodity of positive price trends for those with declining price trends.

Kenji and Mengstu (2009), found out that vertical export diversification played a vital role to induce economic growth in the case of East Asia. East Asia success was highly attributed by their huge investment on human capital through education and the high rate of physical capital accumulation mainly driven by Foreign Direct Investment, conversely, the level of human capital (skilled) and physical capital including FDI in Sub-Saharan Africa has been under the threshold level in playing a positive role to materialize significant export diversification and structural change in the economy. Further argue that horizontal export diversification by non-

traditional dynamic exports such as cut flower as it has started recently in Kenya, Uganda and Ethiopia to supplement or partially replace the traditional exports like coffee and tea.

3.0 Data and Methodology

The study uses secondary data for the annual series of the growth rate of aggregate non-traditional products, and the growth rate of aggregate traditional products for the period of 1980 to 2012. Data was obtained from the Ministry of Finance and Bank of Tanzania (BOT).

The study performs two set of tests;

- i. The first one is the impact of export diversification on export growth by adopting the model used by Hasan and Toda (2004) which was used for Bangladesh, Nepal and Malaysia in (2004) which is given as follows;

$$GREXP = \alpha + \beta_1 GRTP + \beta_2 GRNTP + U$$
 Where GREXP is growth rate of export (total)
 GRTP = is growth rate of traditional products
 GRNTP = is growth rate of non-traditional products.
 α , is constant or intercept term
 U = error term
 β_1 and β_2 are the coefficients to be estimated
- ii. The Second test is determining the relationship between export growth and non-traditional products (NTP). In order to test for the influence of exports growth (GREXP) on non-traditional products (NTP). NTP was regressed as a function of GREXP and in order to test the influence of NTP on GREXP, GREXP was regressed as a function of NTP.

2.1 Estimation Procedures

i. Unit root test:

The standard procedure in econometric analysis is to first examine the time series properties of the variables in the model. In this case the unit root tests are undertaken using Augmented Dickey Fuller (ADF) test with the lag length based on Schwarz Information Criterion (SIC). Consider the following equations; For *Augmented Dickey Fuller (ADF) Test*

$$\Delta\gamma_t = \beta_1 + \beta_2 t + \delta\gamma_{t-1} + \alpha_i \sum_{i=1}^m \Delta\gamma_{t-1} + \varepsilon_i$$

Where γ_t = Export growth, Δ is the differencing operator, t is the time trend and ε is the White noise residual while β_1 , β_2 , δ and $\alpha_1 \dots m$ are parameters to be estimated. The null hypothesis implies unit root or non stationary and alternative refers to stationarity. Specified as:

H0: = 0 (γ_t is non-stationary)

H1: $\neq 0$ (γ_t is stationary)

ii. Co-integration test

If the variables are stationary, the cointegration test using Johansen and Juselius (1990) is undertaken to establish whether there is a long-run relationship between the variables in the model. In this case two likelihood ratio tests are considered the trace and Maximum Eigenvalue tests. And two possibilities are assumed; null hypothesis assumes no cointegration; while the alternative implies cointegration. Consider the following equation;

Trace test

$$trace = -N \sum_{i=r+1}^m \ln [1 - (r^*)^2]$$

Where N is the number of observations, M is the number of variables and r_i is the I correlation between i th pair of variables. τ_{trace} has a chi-square distribution with $M - r$ degrees of freedom. Large values of τ_{trace} give evidence against the hypothesis of r or fewer cointegration vectors. In order to estimate the causal correlation between non-traditional exports and export growth in Tanzania, we employ VAR.

iii. Maximum Eigen value Test

This test evaluates the null hypothesis H0: $r = r_0$ against H1: $r = r_0 + 1$, and according to Johansen and Juselius (1990) the maximum eigenvalue test is more influential than the trace test. The null hypothesis of r cointegrating vectors is tested against the alternative of $r+1$ cointegrating vectors. In equation form it is presented as;

$$\tau_{max} = -T \ln(1 - \lambda_{r+1})$$

iv. Wald restriction test:

The causality or direction of the export growth relationship will be obtained by using Wald test. Wald test will be conducted by imposing restrictions on short-run estimated coefficient of the exports growth and Non-

Traditional product while long-term causality is obtained from the long run regressions. The null hypothesis refers to non-causality and if rejected, then we conclude that non-traditional product cause export growth.

4. Estimation Results and Discussion

4.1 Impact of Export Diversification on Export Growth

The results manifest that non-traditional (vertical diversification) variable measured in terms of aggregate growth rate has a statistically significant impact on total export growth while traditional export though its coefficient seems to be positive is insignificant. This means that, in order to increase total export growth, Tanzania largely depends on non-traditional commodities such as minerals; manufactured exports; horticultural products; fish and fish products. The coefficient of non-traditional export products i.e. 0.398 implies that in the long run a 1 percent rise in growth rate of the non-traditional exports is associated with 39 percent increase in the growth rate of total export (Table 1). This implies that the country depends on non-traditional exports for its foreign exchange earnings.

Table 1: Dependent Variable = GREXP

Variables	coefficient	Std.Error	t.value	P.value	R2
GTP	0.162474	0.134336	1.2095	0.23593	0.798284
NTP	0.398982	0.0457685	8.7174	0.00001	
Constant	-0.702154	0.663924	-1.0576	0.29869	

Regression Output

4.2 The relationship between Export growth and Non-Traditional Product

In order to test for the influence of exports growth (GREXP) on non-traditional products (NTP). NTP was regressed as a function of GREXP and in order to test the influence of NTP on GREXP, GREXP was regressed as a function of NTP. The estimated results are presented in four stages; the first step is to establish the maximal order of integration (d) for growth rate of export, traditional and non-traditional products, this was done by the use of Augmented Dickey Fuller (ADF) unit root test. The second was to find out the optimal lag order (k) using Sequential modified LR test statistic (each test at 5% level), Final prediction error (FPE), Akaike information criterion (AIC), Schwarz information criterion (SIC), Hannan-Quinn information criterion (HQ) and Schwartz Bayesian information criterion (SBC). The third was to find out order of integration; Johansen co-integration test is conducted to examine the existence of long run equilibrium relationship among them.

The result of ADF test for unit root is shown in Table 1. The result of test suggests that the absolute values of test statistics for both the variables on the level are smaller than that of the critical values which implies that these variables on their levels are non-stationary. When the first differences of these variables are considered, the test statistics exceed the critical values at 5%. Thus, we may conclude that all the variables of the model are non stationary at level but stationary at first difference, i.e. they are integrated of first order I (1).

Table 1: ADF Results

Variable	Level	First Difference	Test Critical Values			Decision	Order of Integration
			1 % Level	5% Level	10% Level		
GREXP	-1.2144 (0.2355)	-4.7003 (0.0001)	-3.6661	-2.9627	-2.6200	Non-stationary at level but stationary at first difference	I (1)
NTP	-0.2634 (0.7943)	-4.7173 (0.0001)	-3.6661	-2.9627	-2.6200	Non-stationary at level but stationary at first difference	I (1)

Before testing cointegration, the optimal lag order was determined using Akaike Information Criterion (AIC), Schwartz Bayesian Criterion (SBC), Akaike's Final Prediction Error (FPE), Schwartz Information Criteria (SIC), Hannan-Quinn Information (HQ) and LR values. Four criteria select order 2 while one selects order 1 (Table 2). The paper adopts order 2.

Table 2. VAR Lag Order Selection Criteria

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-44.129				.082547	3.18131	3.21084	3.27561
1	15.8134	119.88	4	0.000	.001745	-.676789	-.588191	-.3939*
2	22.3244	13.022*	4	0.011	.001476*	-.849958*	-.702296*	-.378477
3	24.5544	4.46	4	0.347	.001688	-.72789	-.521163	-.067816
4	27.7979	6.487	4	0.166	.00182	-.675716	-.409924	-.17295

* Indicates lag order selected by the criterion
 LR: Sequential modified LR test statistic (each test at 5% level)
 FPE: Final prediction error
 AIC: Akaike information criterion
 SC: Schwarz information criterion
 HQ: Hannan-Quinn information criterion
 SBIC: Schwartz Bayesian information criterion (SBC)

In testing the cointegration among variables, the Johansen - Jesulius (1992) methodology was used between FDI net inflows and Services exports. The results from cointegration analysis (Table 3) suggest that the null hypothesis of no cointegrating vector i.e. $r(\pi) = O$ cannot be rejected at 5% using both trace test (λ_{trace})

and maximum eigen value test (λ_{max}). This indicates no cointegrating vector among the two I(1) variables and hence one can conclude that both variables are not cointegrated, i.e. are not integrated in the long run.

Table 3: Result of Johansen's Cointegration Test lags interval

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE (s)			5 percent critical value
λ_{trace} test	Eigen values	λ_{trace} values	
None	0.27212	10.5817	15.41
At most 1	0.02344	0.7354	3.76
λ_{max} test	Eigen values	λ_{max} values	
None	0.27212	9.8463	14.07
At most 1	0.02344	0.7354	3.76

Note: Both Trace statistic (λ_{trace}) test and Maximum-Eigen Statistic (λ_{max}) test indicates no cointegration at 5%

The study examined the causal linkage between export growth and non-traditional export product the results indicate the presence bidirectional causality among the two variable in the short run (Table 4). The null hypothesis of non-causality is rejected at (5%) significant level. This implies that non-traditional products cause exports growth and also export growth influences non-traditional products export in Tanzania.

Table 4: Short-run Causality test (Granger Causality Wald Test)

Hypothesis	Chi-square	P-value	Decision at 5 Percent Significant Level
H0= NTP does not granger cause LEXP	9.0644	0.020	Reject H0
H0=LEXP does not granger cause NTP	1.9447	0.005	Reject H0

6.0 Conclusion and Policy Implications

Both non-traditional and traditional products are important in generating country's foreign currency through export trade. How-ever non-traditional products export seems to offset the instability behavior of traditional products prices in the world market, thereby generating relatively stable currency. This means that, in order to increase total export growth, Tanzania depends on non-traditional commodities like minerals; manufactured exports; horticultural products; fish and fish products. The coefficient of non-traditional export products i.e. 0.398 implies that in the long run a 1 percent rise in growth rate of the non-traditional exports is associated with 39 percent increase in the growth rate of total export. This implies that Tanzania stands to earn more foreign exchange via increased non-traditional exports if among others; the following are put in place;

- Increasing manufactured exports by attracting high technology investment in manufacturing sector while addressing constraints such as high cost and unreliable electricity supply as well as reduction in procedures required to set up a business and related costs;
- Capacity strengthening for small producers on good trade practices, ability to meet environmental/health standards for both domestic and foreign consumers;
- Pursue policies that are pro non-traditional exports increase e.g. those offering an appropriate level and stability of the real exchange rate, providing adequate export incentives and the promotion of investment in Export Processing Zone (EPZ);
- putting in place trade policies which are proactive, dynamic, adaptable and differentiated between

sectors and between the various segments of a given sector in order to enable diversification to take place;

- Introduce local contents requirements in major sectors of the economy such as manufacturing, agriculture, mining, construction and service sector to enable local capacity development

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