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STRUCTURAL TRANSFORMATION AND SUSTAINABLE DEVELOPMENT IN COMMON MARKET IN EASTERN AND SOUTHERN AFRICA

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ABSTRACT

Structural transformation is about increase in the contributions of non-agricultural sectors to the overall growth of an economy and a transition from low to high productivity. Evidence shows that it has led to increase in productivity of industrial and service sectors. However, the agrarian scenery of Common Market in Eastern and Southern Africa has only enhanced growth, the growth has not optimally translated to sustainable development. This study argues that there is a link between structural transformation and sustainable development. Theoretically, it leans on Prebisch-Singer hypothesis and employs system generalized method of moments estimation technique for the analysis between 2005 and 2016. Its empirical findings show that the poor performance of the manufacturing sector is caused by weak institutional settings in the region. It also reveals the indispensability of transformation of production patterns and investment in technology via modern infrastructure so as to create more jobs and improve living standards in the region.

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1. INTRODUCTION

A major challenge in Africa is how to accelerate and support the structural transformation of her economies (Breisinger and Diao, 2008). Structural transformation is about an increase in the contributions of non-agricultural sectors to the overall growth of an economy and a transition from low-productivity to high productivity. Evidence shows that it has led to an increase in the productivity of the industrial and services sectors (Christiaensen and Kaminski, 2015). In most African countries, agriculture is mainly traditional, and the main source of employment generation; Africa's exports are dominated by unfinished or semi-processed products. Africa is predominantly an agrarian continent compared to the western world, which is systematically classified as industrialized. Manufacturing productivity in Africa is limited to main production of last stage consumers' goods or the first stage processing of minerals (Todaro and Smith, 2009). However, industrialization, especially manufacturing is considered as an import lever of structural transformation through the process of 'creative destruction' (Schumpeter, 1911). Common Market for Eastern and Southern Africa (COMESA), as one of the eight Regional Economic Communities recognized under the African Union; is an economic confederacy of Burundi, Comoros, Democratic Republic of Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Swaziland, Sudan, Uganda, Zambia and Zimbabwe (COMSTAT Data Portal, 2018).

These countries have similar economic features. The agrarian scenery of COMESA has only enhanced growth, but the growth has not optimally translated to sustainable economic development. She focuses more on the production of low value-added goods and services and the export of primary products such as food, tobacco, and beverages (Owino and Otieno (2017). Her industrial sector features little backward and forward linkages to other sectors of the region. This has led to growth in her GDP with little job creation and economic transformation (United Nations, 2013). In addition, the region is behind some of her peers in terms of share of global manufacturing value-added in GDP and manufacturing exports ((World Bank, 2016). According to (Lawrence and Graham, 2015), the median share of employment in the industry across African countries was 7%, while the median share of industry in GDP was 21%. To this end, the importance of structural change that would lead to more employment generation and consequently impact the standard of living in the continent should be rigorously pursued.

COMESA is one of the largest economic organizations in Africa. The mission of the industrial development of COMESA is spelled out in Article 99 of the Treaty that established it. Its principal objective is to promote balanced growth, increase the availability of industrial goods and services for the intra-Common market, improvement of competitiveness of the industrial sector and growth of industries within COMESA. As of 2017, her population was 592 million with a GDP value of USD 718 billion (2016 base year) among other indicators. It is assumed that these will translate into higher per capita income, saving, investment, and capital inflows, leading to growth and development. COMESA economies enjoy large advantages in the land, natural resources, climate as well as the existence of rich and abundant raw materials; however, she has not been able to carry out industrialization optimally following a strategy of self-reliance. She has not availed herself of the most advanced technologies in the world and other possibilities to transform her economies like other advanced regions such as the European Union (EU). The success of Asian Tigers (Taiwan, South Korea, Malaysia, Indonesia, Singapore, and Thailand) lies in their early perception of industrialization strategies and their determination to apply them. They remain a reference point today (after more than three decades of industrialization), for agrarian economies that want to transform into industrialized ones (Mohamad, 1995). In addition, governments of some of these economies have not provided sufficient incentives for their citizens to engage in formal productive and economic activities, hence the continuation of a narrow/minority economic integration. This submission lends credence to the fact that without industrialization ("a global process of structural change whereby a country or region strives to become a technological leader, creating wealth and dominating trade through manufacturing"- UNECA, 2013); sustainable economic development remains a mirage.

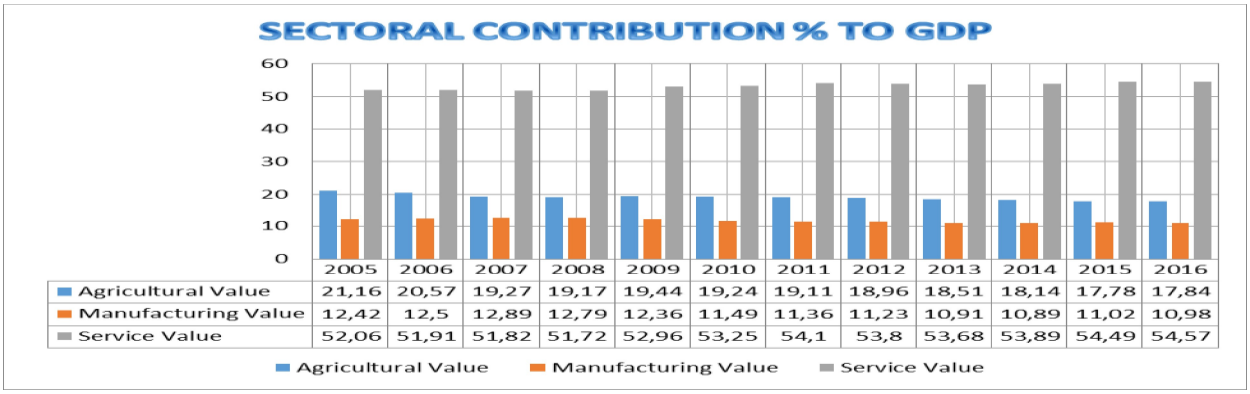
Most importantly, for any developing economy to get out of poverty, unemployment, consistent fall in real GDP and dwindling foreign exchange rate, she has to justifiably look away from exporting primary agricultural products alone and channel more effort on revitalizing her industrial sector. Further, she has to implement policies that can encourage foreign investors to come into proliferating manufacturing in some areas where raw materials can easily be sourced. The

transformation of the agricultural sector has a direct impact on both consumption and production linkages, between the sector and other non-agricultural sectors (manufacturing, services, etc.) as well as poverty reduction (Delgado, Hopkins, Kelly, Hazell, McKenna, Gruhn, Hojjati, Sil, and Courbois,, 1996; Christiaensen, Demery, and Khuhl, 2006; Diao, Hazell, Resnick, and Thurlow, 2007; World Bank, 2007). Unfortunately, COMESA has not fully benefited from the dynamics of globalization via structural/economic transformation. With the demographical dividend, potential opportunities for robust regional trade integration remains untapped. Thus, the rational question that begs for an answer is: what can be done to invigorate economic transformation in the sub-region so that it can become a common economic union that could enhance sustainable economic development?

There is a dearth of empirics on the link between structural transformation and sustainable development on COMESA, thus limiting the available knowledge of the subject matter in the region. Therefore, this study advances literature as it portrays the pattern of structural transformation conducive to sustainable development in the regional bloc. The general objective of the study is to empirically investigate the relationship between structural transformation (manufacturing value-added) and sustainable development (public infrastructure, governance, per capita income and inflation) in COMESA for the periods between 2005 and 2016. Also, it identifies policies that will help the region maximize its demographic dividend to graduate from low-income to middle-income status. In addition to the introduction, the remaining parts of the study are divided into 4 sections. Section 2 discusses related works in the literature. Section 3 presents a theoretical framework and methodology. The paper's main results and discussions are in section 4, while the conclusion and policy suggestions conclude the study.

1.1. Stylized Facts on COMESA's Sectoral Contributions to GDP

COMESA's sectoral (%) contributions to the regional GDP, is depicted in figure 1. It is observed that in terms of sectoral distribution of her GDP, service got the highest share within the period under review (2005-2016), followed by the agricultural sector while the manufacturing sector had the lowest share. A critical evaluation of the sectoral performance in the figure shows that the manufacturing sector's performance trend was downward throughout. This is against the regional bloc's ambitious industrialization policy to promote the manufacturing sector and enhance its growth rate. The slow growth of manufacturing can be attributed mainly to the fact that the region is fast losing control of its own domestic market to China, India and Japan. Based on value addition and product diversification, it is expected that the region's industrialization policy would have eased the dependence on agriculture and increase the value of manufactured exports to an enviable position compared to what is obtainable in other regions. For the region to become a middle-income economy, and achieve its industrialization policy cum sustainable development based on the 2030 agenda, the manufacturing sector needs a conducive environment (governance) to grow and become competitive within and outside the region.



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Agricultural Value	21,16	20,57	19,27	19,17	19,44	19,24	19,11	18,96	18,51	18,14	17,78	17,84
Manufacturing Value	12,42	12,5	12,89	12,79	12,36	11,49	11,36	11,23	10,91	10,89	11,02	10,98
Service Value	52,06	51,91	51,82	51,72	52,96	53,25	54,1	53,8	53,68	53,89	54,49	54,57

Figure 1: Sectoral Contributions to GDP of COMESA*

•This is the percentage mean value of sectoral contributions of 19 Member States of COMESA to the regional gross domestic product (GDP).

Source: Author, underlying data is from WDI (2016), COMSTAT (2018)

2. RELATED WORKS IN THE LITERATURE

2.1. Conceptual Issues

Conceptually, structural transformation can be described as the reallocation of economic activities across various sectors in an economy. In the same vein, it can be described as the transition of an economy from low productivity and labor intensive economic activities to higher productivity and skill-intensive activities. The driving force behind the structural transformation is the change in productivity in the modern sector, which is dominated by manufacturing (Szirmai, 2005). Szirmai emphasized that structural transformation leads to increases in savings, investments, rapid urbanization, demographic & epidemiological transitions; changes in income inequality & changing social institutions, attitudes, and beliefs. Structural transformation makes room for structural stability, which in turn provides sustainable economic development that has the capacity to manage social change without resorting to violent conflicts (Timmer, 2007). It could materialize through the production of increasingly sophisticated goods and industrial upgrading, which in the long run would lead to higher value-added, more productive activities and building long term productive capabilities. This would make manufacturing firms more competitive, and consequently spurring shared economic growth and lifting people out of poverty (Cimoli, 2005; Katz, 2000).

Sustainable development is seen as the organizing principle for meeting human development goals while at the same time sustaining the ability of natural systems to provide the natural resources and ecosystem services upon which the economy and society depend. Its main goal is to build a society, where living conditions and resource use continue to meet human needs without undermining the integrity and stability of the natural system. It can be classified as development that meets the needs of the present without compromising the ability of future generations (United Nations, 1987). In September 2015, the United Nations General Assembly formally adopted the "universal, integrated and transformative" 2030 Agenda for Sustainable Development, a set of 17 Sustainable Development Goals (SDGs). The goals are to be implemented and achieved in every country from the year 2016 to 2030 (United Nations, 2015). While the modern concept of sustainable development is derived mostly from the 1987 Brundtland Report, it is also rooted in earlier ideas about sustainable forest management and twentieth-century environmental concerns (United Nations, 1987). Since the Brundtland Report, the concept of sustainable development has developed beyond the initial intergenerational framework to focus more on the goals of "socially inclusive and environmentally sustainable economic growth". As the concept developed, it focuses more on three areas: economic development, social development, and environmental protection for future generations. However, this study concentrates on the aspect of economic development and employs manufacturing value added to GDP as a measure of structural transformation.

The rationale for COMESA's structural transformation for sustainable economic development can be linked to the increasing trend of globalization, global communication systems, high mobility of financial resources, and a greater level of integration that is taking place among different regions of the world. Sustained economic growth is linked to productivity growth and structural transformation (UNCTAD, 2016). To seize the available opportunities created by the global markets, the regional bloc needs to re-structure its economic activities to enhance sustainable growth, which can lead to economic development. UNCTAD (2016) emphasized that structural transformation is a continuous process whereby each level of economic development moves along the continuum, and the structure of an economy continuously changes as technological methods change. However, the process is not automatic due to institutional discordance that can be a major obstacle to structural transformation (Schneider, 2015).

However, the approach in this study is quite different from some of the related literature in that only one aspect of sustainable development (economic) is the focus. This is mainly for data accessibility and also a sensible choice in a developing regional context.

2.2 Empirics

In literature, the debate on the link between structural transformation and sustainable development/growth is unresolved.

Armah and Seung-Jin (2019) evaluated the Kuznets hypothesis, which assumes that structural transformation leads to higher inequality in a comparative analysis of a large number of developing and developed countries between 1960 and 2012. Different paths of structural transformation emerged from its result. In contrast to the Kuznets hypothesis, the results showed that the movement of workers to

manufacturing sub-sector generally decreased income inequality in all the stages of structural transformation either developed or developing economies. Nevertheless, the findings suggested that there would be an increase in inequality when workers moved from agriculture to services sub-sector. Baymul and Sen (2018) employed Good Governance and Development Contracts (GGDC) 10-Sector database to identify different paths of structural transformation with a panel data set for twenty-nine (29) African countries between 1995 and 2011 It used a structural equation modelling approach to estimate the direct and indirect impacts of economic, environmental and social indicators on a composite index of structural transformation. Its empirical analysis indicated that manufacturing decreased inequality. However, the marginal effect of an increase in the share of workers in services is positive on inequality.

Jayasooriya (2017) examined the impact of the structural transformation of Sri Lanka's economy on sectoral interdependencies to provide evidence for policy making from 1950 to 2015. The analysis used secondary data from the Central Bank of Sri Lanka and the Institute of Policy Studies publications. Vector auto-regression technique was used and the evidence of structural change through open economic policies depicted a significant impact between pre-open economic and post-open economic policies for a drastic economic growth the under structural break. Matthias and Erdogan (2017) investigated the role of structural transformation in view of the remarkable growth performance of sub-Saharan African countries since the mid-1990s. The analysis covered 41 African countries over the period, 1980 to 2014 and accounted for structural transformation by employing the analytical frameworks of growth decomposition and growth regression. Even though, the low-productive agricultural sector employed most of the African workforce; the results revealed that structural transformation took place and that it contributed significantly to African growth in the past decades.

Enwerem and Isik (2016) examined the impact of industrialization on economic development from 2000-2013. The study specified a workable model, which had GDP as the dependent variable while industrial output, foreign direct investment, interest rate, foreign exchange rate and inflation rate were independent variables. Ordinary least square (OLS) technique was used as an analytical technique. The study revealed that industrialization had a negative impact on economic development in Nigeria in the long run. The study recommends amongst others that the government should redirect its industrial and investment policy to increase the output of the domestic production.

Ibrahim and Adam (2015) observed the characteristics of positive growth episodes. The analysis was based on a novel dataset of sectoral shares in GDP and growth rates for 108 countries from 1960 to2010. Rather than focusing exclusively on average growth rates, its independent variables include the duration of positive growth episodes and the potential risk in such growth episodes. They found that higher shares of manufacturing, high and increasing shares of the modern sector and a more diversified structure of production contribute to a longer duration of growth episodes and reduced volatility of growth patterns. In the same vein, Foster-McGregor et al. (2015) econometrically investigated the relationship using a panel dataset comprised of 108 countries between 1960 and 2010. The results confirmed that a larger manufacturing sector, measured by the share of manufacturing value-added in GDP, was significantly associated with longer periods of economic growth. Hence, it opined that a strong manufacturing sector was a key to sustainability both to economic growth and development.

Zerihun (2014) introduced a new measure of development known as a multidimensional structural transformation index (STI). It measures structural transformation in two phases based on economic and socio-demographic indicators. The investigation of the relationship between structural transformation and development (GDP per capita) revealed that the structural transformation based on socio-economic dimensions appeared to have a greater effect on development than structural transformation focusing on economic indicator only. It inferred that structural transformation was essential in achieving inclusive growth, poverty reduction, and economic development. Similarly, Bartholomew and Mama (2014) examined the relationship between structural transformation, economic, social and political dimensions of inequality. Empirical evidence of the study showed that structural transformation was not a sufficient condition for inclusive growth. It opined that even though structural transformation could result in poverty reduction, however, in the absence of active policies, the latter often coexisted with rising inequalities. The study suggested that active government policies that could improve social service delivery, enhance agricultural

sector productivity, gender inequalities and strengthen social protection programs were important to an inclusive structural transformation agenda.

Francis (2011) reviewed the evidence for the link between structural change and poverty reduction in Sub-Saharan Africa (SSA). According to him, the revival of growth in these economies was placed in a longer run context and contrasted with the patterns of more sustained growth that characterized other countries. It argued that the growth revival was associated with some, but very modest, reductions in the poverty rate. The extent of structural change over the period since 1980 was observed. It observed a decline in the agricultural share to GDP and an accelerating decline in the share of the manufacturing sector. However, the possible link from the pattern of structural change to employment creation and poverty reduction was documented. It concluded that the problem of the desired growth/development did not lie in the differences in returns across sectors but lack of a common linkage between urban and rural sectors in the region.

Using data (1962-93) for ten countries of Latin America and the Caribbean Elliott (1998) explored the problem of causation between structural transformation and economic growth. The result revealed that structural transformation causes economic growth in Jamaica; the line of causation is weak in Dominican Republic. For other countries, he obtained a positive but statistically insignificant relationship between structural transformation and economic growth. He concluded that causation was country-specific and not universal. Finally, from recent empirical evidence, it is believed that structural transformation does not only enhance economic growth/development, but that the economic development can be sustained over time (Ray, 2015; Szirmai et al., 2013; Szirmai and Verspagen, 2015).

3.THEORETICAL FRAMEWORK AND METHODOLOGY

3.1 Theoretical Insight

This study leans on Prebisch-Singer Hypothesis (1950). The economic idea was originally developed by Hans Singer in 1948 and later expanded by Raul Prebisch in 1950. It has since that time served as the basis of the dependency theory. The hypothesis states that the terms of trade between primary goods and manufactured products deteriorate over time. It is based on the premise that countries that export primary or unfinished products will lose out in the long run, as their goods will become relatively cheaper than manufactured goods. This can be explained by the fact that primary products have a low price elasticity of demand. On the other hand, the income elasticity of demand for manufactured goods was greater than those of primary products. Consequently, a decline in their prices tends to reduce revenue and as income rises, the demand for manufactured goods increased more rapidly than demand for primary products, ceteris paribus. The Prebisch hypothesis (1950) noticed a similar statistical pattern in long-run historical data on relative prices, but such regularity was consistent with several different explanations and policy stances.

Prebisch suggested that primary exporter countries need to diversify their economies, lessen dependence on primary commodity exports and rigorously develop their manufacturing industry. Prebisch-Singer hypothesis lost some of its relevance in the last 3 decades, as exports of manufactured products overtook exports of primary commodities in most developing countries excluding Africa. However, Prebisch-Singer Hypothesis has been incorporated, implicitly and explicitly, in the piece of advice given by Bretton Woods Institution to developing countries to be prudent when prices of their primary products were temporarily favorable (Wikipedia, accessed on 23/04/2018). In addition, literature lends credence to the theory (see, Rabah, Kaddour, Prakash, and Yao, 2013; Singer, 1999; Baffes and Dennis, 2013; Ocampo and Parra, 2004; Grilli and Yang, 1988).

3.2 Model Specification

This study covers 19 countries in COMESA region over the period of 2005 to 2016; the choice of the period is based on data availability. Thus, it investigates the link between structural transformation and sustainable economic development of COMESA. The econometric approach for this study is guided by the use of system generalized method of moments (SYSGMM). The justification of this choice is to determine the long–run dynamics among the variables and how they can enhance sustainable development in COMESA. It has been observed that linear regression (pooled, fixed effect and random effect) and difference generalized method of moments techniques could not address the endogeneity bias in panel dataset (see, Jiraporn, Kim, and Kim 2011; John and Knyazeva, 2006; John and Kadyrzhanova, 2008). This makes OLS and difference-GMM estimators biased and inefficient (Baltagi, 2008). SYSGMM originated in Arellano and Bond (1991) but Blundell and Bond (1998) articulated the condition in

which the novel instruments associated with it are considered valid. In addition, it provides consistent estimation if the underlying assumption of no second order autocorrelation in the residuals is fulfilled. Arellano and Bover (1995) however, suggested a specification test (Sargan test) to check for the over-identification and AR (2) test for second order autocorrelation in the model. The estimator is realistic because its estimates are not likely to distort the nature of the true relationship between the structural transformation and sustainable development in the regional bloc (Baltagi, 2008). It is expected that its results can better predict the dynamic behavior of the dependent variable in the long run.

Drawing from Odeleye (2017) with modifications, the estimated model of the study is specified as:

$$MVAit = \beta1MVAit-1+\beta2(PCIit)+\beta3(IFSit) +\beta4(GOVit) – \beta5(INFit) +\tau t+\psi i+\varepsilon it \quad (1)$$

Table 1: Variables Descriptions and Sources of Data

Variable	Definition	Source	Expected sign
Manufacturing Value Added (MVA)	Value added is the net output of the sector after adding up all outputs and subtracting intermediate inputs.	WDI	Positive
Infrastructure (IFR)	Infrastructure is the fundamental facilities and systems needed for the economy of a country	WDI	Positive
Governance (GOV)	It is described as "the manner in which power is exercised in the management of a country's economic and social resources for development"	WDI	Positive
Inflation (INF)	A general increase in prices of goods and services and fall in the purchasing power of money	WDI	Positive
Per capita income (PCI)	The average income earned per person in an economy during a specified period of time which is arrived at by dividing the total income by the number of the total population.	COMSTAT	Positive

Source: Author

4. DATA ANALYSIS

4.1 Preliminary Analysis

This section explains the preliminary analysis that involves both descriptive statistics and correlation analysis of our variables described in the methodological part of the study. The results of the preliminary analysis are presented in Tables 2 and 3. In Table 2, the mean value of manufacturing value added to the GDP stood at 25.83%, implying that industrialization progression in these countries' accounts for 25.83% of the total market value of goods and services produced. Likewise, the average of real income per capita growth is 1.76%, which is relatively low for the group of countries. More so, there is a high variation in their income per capita growth as indicated in the standard deviation value. The mean of infrastructure measured by numbers of fixed telephone subscription stood at 42.78 per person, while the average of governance index is 26.72. The unstable price (inflation) in the countries showed a single-digit value with an average of 9.82%.

Table 2: Summary Statistics

Variables	Measurements	Mean	Standard Deviation	Maximum	Minimum	Observation
MVA	Manufacturing value added (% of GDP)	25.83	14.98	78.52	2.595	228
GOV	Governance index	26.72	20.00	83.65	0.474	228
IFRS	Fixed telephone subscriptions (per 100 people)	42.78	33.04	100.00	4.797	228
PCI	GDP per capita (constant 2010 US$)	1.763	8.030	36.516	-62.23	228
INF	Inflation, consumer prices (annual %)	9.823	9.379	74.298	-25.31	228

Note: MVA denotes manufacturing value added; GOV is governance; IFRS is infrastructure; PCI represents infrastructure; PCI is per capita income; and INF denotes inflation rate.

Source: Author

The correlation coefficients showing the level of association of manufacturing value-added with income per capita and other indicators are reported in Table 3. The results from the correlation matrix show that per capita income, unstable price and governance index have a negative level of association with manufacturing value-added in the region. However, the correlation coefficient of infrastructure and manufacturing value-added is positive, implying a direct relationship between them. The outcomes of the correlation coefficients are similar to the directions of the relationship between the variables reported in Figure 1. The figure presents the scatter diagrams of the relationship among manufacturing value-added, per capita income, infrastructure, governance, and inflation.

Table 3: Correlation Matrix

	MVA	GOV	IFRS	PCI	INF
MVA	1	-0.187	0.443	-0.447	-0.069
GOV		1	0.169	0.205	-0.239
IFRS			1	-0.194	-0.169
PCI				1	0.054
INF					1

Note: MVA denotes manufacturing value added; GOV is governance; IFRS is infrastructure; PCI represents infrastructure; PCI is per capita income; and INF denotes inflation rate.

Source: Author.

For the explanatory variables, their coefficients of correlation have the same numbers of positive and negative coefficients at varying magnitudes. Altogether, the coefficients are low in magnitude, implying the absence of multi-collinearity problem. Thus, the low degrees of association among the variables make them suitable for empirical analysis.

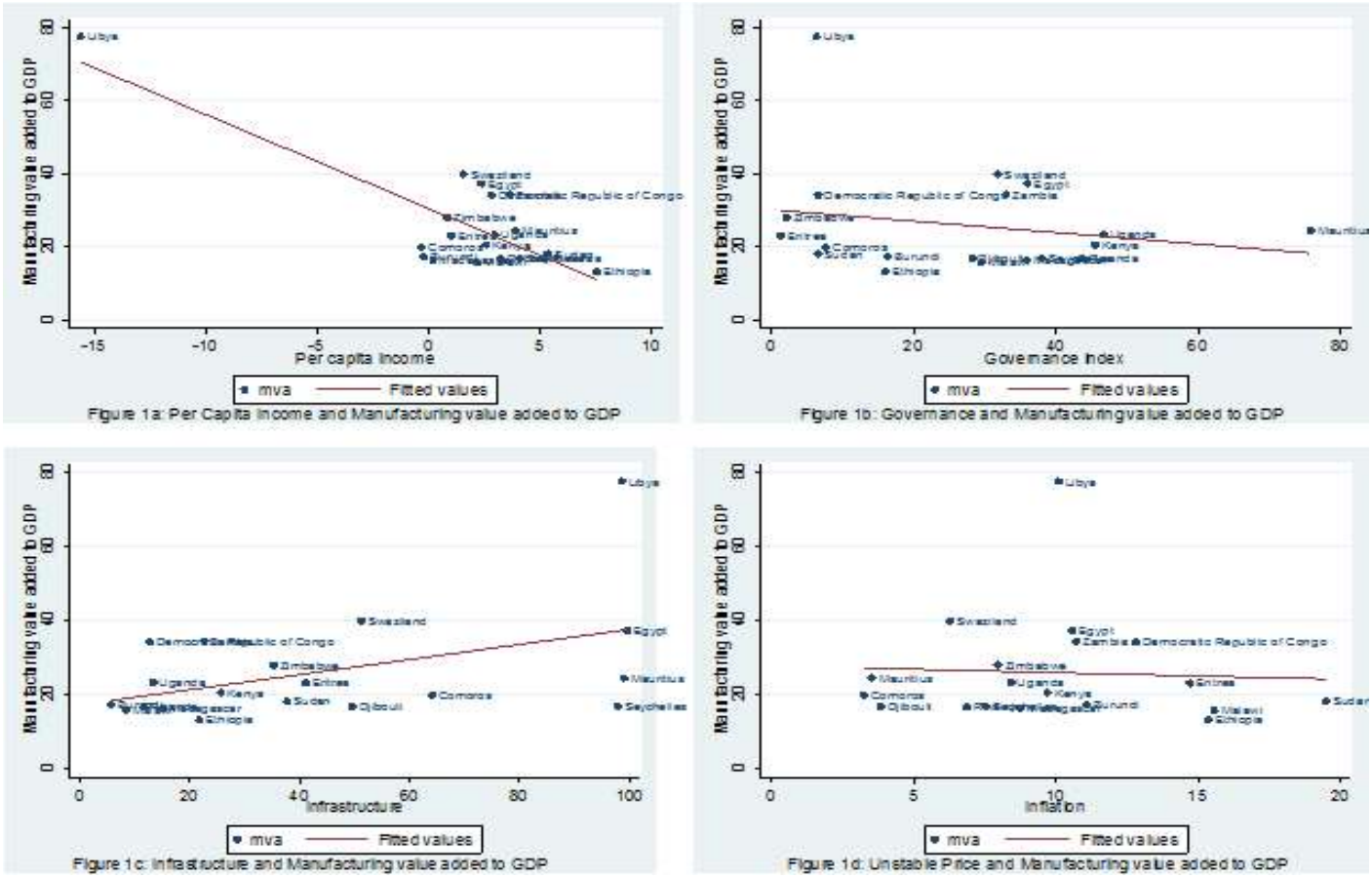


Figure 2: Per capita income, governance, infrastructure, inflation and manufacturing value-added

4.2 Estimation Results and Discussion

The study first used the baseline pooled ordinary least square method to report the parameter estimates of the relationship between structural transformation and sustainable development in COMESA. The baseline pooled OLS result is reported in Table 4. The results are presented in six forms, which are: (a) the empirical finding was first presented without augmenting the main variable (per capita income) with other controlling variables. This is reported in the first column of Table 4; (b) the second, third, and fourth columns present the estimates of per capita income after augmenting the model with governance, infrastructure and inflation rate respectively; (c) all the controlling variables were augmented with per capita income in the fifth column while, the last column considers the interaction terms of governance and per capita income. The findings showed that: (a) value-added from the manufacturing sector was significantly driven by income per capita growth of the region; (b) governance has a negative but significant influence on manufacturing value-added; (c) the interaction term of governance and income per capita have a positive impact on manufacturing sector growth; (d) infrastructure development also influenced manufacturing development positively. The study however, extends the analysis by using the system generalized method of moments to estimate our parameters for a comprehensive appraisal of the relationship between structural transformation and sustainable development in COMESA.

Table 4: Baseline Pooled OLS Results

Variables	**Dependent Variable:** Manufacturing Value Added					
	1	2	3	4	5	6
Per capita income (PCI)	**-0.833*** **	**-0.795*** **	**-0.700*** **	**-0.829*** **	**-0.608*** **	**-0.712*** **
	(0.160)	**(0.158)**	**(0.139)**	**(0.160)**	**(0.138)**	**(0.157)**
Governance		**-0.075** **			**-0.147*** **	**-0.199*** **
		(0.037)			**(0.042)**	**(0.048)**
PCI × Governance						**0.017***
						(0.009)
Infrastructure			**0.168*** **		**0.185*** **	**0.179*** **
			(0.033)		**(0.035)**	**(0.036)**
Inflation rate				**-0.072**	**-0.047**	**-0.036**
				(0.134)	**(0.123)**	**(0.124)**
Constant	**27.301*** **	**29.231*** **	**19.884*** **	**28.001*** **	**23.378*** **	**23.756*** **
	(0.993)	**(1.704)**	**(1.286)**	**(1.500)**	**(1.972)**	**(1.988)**
Adj. R-squared	0.296	0.302	0.426	0.295	0.454	0.457
Observations	228	228	228	228	228	228

Note: Standard errors in parentheses; *, **, & *** signify significance level at 10%, 5% & 1% respectively. The significance of the estimated coefficients and Fisher statistics are in bold forms.

Source: Author

Table 5 presents the results of the dynamic effects of structural transformation on sustainable development in COMESA. The lag one of manufacturing sector growth, which was positive, less than one and statistically significant at 0.05 critical level indicates the convergence condition in the regional bloc. The Wald tests were found to be significant at 5%, which implies that all the parameters are jointly significant at the conventional level. In the case of the post estimation test, the null hypothesis of the first order of serial correlation [AR (1)] was not rejected, whereas the null hypothesis of the second order of serial correlation was not accepted. The results are consistent with Arellano and Bond (1991, 1998), implying that there is no autocorrelation in the model. Likewise the Sargan and Hasen tests are expected to be rejected for the instruments to be valid. This suggests that the instruments are valid and do not correlate with the disturbance term.

On average, the findings revealed that the parameter estimate of per capita income is negative and significant, implying that the average income of persons in the region does not positively drive the manufacturing sector growth. It shows that despite the potential market for the manufacturing sector growth, a low level of income per capita affects the sector's growth. Also, the result shows a positive and statistically significant relationship between infrastructure and per capita income. The implication of this is that the level of infrastructure in the regional bloc improved the standard of living of the citizenry. In addition, governance is negatively and significantly related to manufacturing sector growth. The poor performance of the manufacturing sector might have been caused by some governance indicators (e g, unconducive business environment etc.) that hindered private investment leading to poor economic performance in the region. However, the interaction term of per capita income and governance has a positive and significant coefficient indicating that if the institutional framework in the region is improved upon, it has the capacity of modulating the inverse effects of per capita income on manufacturing sector growth to be positive. Another factor that drives manufacturing sector growth is the level of infrastructural development. More so, the coefficient of inflation rate was negative and significant all through implying that stable price drove manufacturing sector growth in the region. This however, does not conform to our a priori expectation. Generally, our result is consistent with Gollin and Rogerson (2010), Collier and Dercon (2014), which suggested that a structural move from agriculture to manufacturing had positive implications for poverty-reduction; and consequently sustainable economic development.

Table 5: System GMM Regression Result

Variables	**Dependent Variable:** Manufacturing Value Added					
	1	2	3	4	5	6
Manufacturing value added (-1)	**0.881*** **	**0.920*** **	**0.793*** **	**0.907*** **	**0.918*** **	**0.888*** **
	(0.034)	**(0.016)**	**(0.036)**	**(0.023)**	**(0.026)**	**(0.027)**
Per capita income (PCI)	**-0.081*** **	**-0.052*** **	**0.020**	**-0.044*** **	**0.030** **	**-0.045***
	(0.016)	**(0.012)**	**(0.016)**	**(0.014)**	**(0.014)**	**(0.027)**
Governance		**-0.047***			**-0.045***	**-0.049***
		(0.028)			**(0.027)**	**(0.029)**
PCI × Governance						**0.0038***
						(0.0022)
Infrastructure			**0.164*** **		**0.059*** **	**0.031**
			(0.040)		**(0.019)**	**(0.032)**
Inflation rate				**-0.039*** **	**-0.054*** **	**-0.040*** **
				(0.007)	**(0.006)**	**(0.012)**
Constant	**2.951*** **	**2.380** **	**-0.949**	**2.584*** **	**1.188**	**2.875***
	(0.859)	**(0.897)**	**(1.643)**	**(0.568)**	**(0.996)**	**(1.652)**
AR(1)	**(0.021)**	**(0.019)**	**(0.014)**	**(0.039)**	**(0.042)**	**(0.031)**
AR(2)	**(0.249)**	**(0.264)**	**(0.368)**	**(0.138)**	**(0.371)**	**(0.391)**
Sargan OIR	**(0.117)**	**(0.143)**	**(0.133)**	**(0.149)**	**(0.137)**	**(0.147)**
Hansen OIR	**(0.799)**	**(0.758)**	**(0.590)**	**(0.727)**	**(0.646)**	**(0.806)**
Wald (Joint) test	**701.2*** **	**2356.4*** **	**259.07*** **	**742.98*** **	**2443.2*** **	**2536.8*** **
Instruments	6	10	10	10	12	16
Countries	19	19	19	19	19	19
Observations	228	228	228	228	228	228

Note: The bolded values signify significance of (a) estimated parameters and F-statistics and (b) failure to reject the null hypotheses of: (i) no autocorrelation in the AR(1) & AR(2) tests and; (ii) the validity of the instruments in the Sargan OIR test.

Source: Author

5. CONCLUSION

This study extends the literature on the link between structural transformation and sustainable economic development. Its findings reveal the indispensability of transformation of production patterns and investment in technology via modern infrastructure so as to create more jobs and improve living standards in the region. Technological progress coupled with skill development of local manufacturers which are keys to economic transformation should not been shy away from because they would foster decent jobs and economic opportunities so that inequalities can reduce and all economies within the bloc can share in the progress. Another essential highlight of the result is that governance enhances welfare (GDP per capita income) of the citizens. It can be inferred that all other variables are conditional upon good governance for effective global partnership. However, agricultural production cannot be totally done away with since it is seen as a panacea for poverty (Odeleye and Olukwa, 2018). The emphasis of this study is sustainable development; therefore, the following are suggested for policy implications:

Filling the infrastructure gaps in transport, telecommunications, electricity and energy will be critical to expanding manufacturing activities, job creation so as to meet the socio-economic needs of COMESA's population. This need should be met without any further delay so as to deepen trade ties with the rest of the world and integrate successfully into global value chains. Interestingly, it has been observed that digital economy is one of the fastest ways to transform an economy. Digital infrastructure is a general purpose technology that can fundamentally restructure an economy through economic value derived from internet. Digital economy creates new business models that can be explored to reach out to customers via social media (Instagram, Facebook, Twitter, etc.), which could give way to optimized production, better services, and ultimately higher sales and increased brand loyalty. According to Qiang, Rossotto, and Kimura, (2009), a 10 percent increase in internet access correlated to a 1.38% increase in the gross domestic product (GDP) in developing countries. Similarly, Hjort and Poulsen (2018) found that fast internet infrastructure stimulated job-creation in Africa, with between 4.2% and 10 percent higher employment rates in connected areas relative to unconnected areas. As the world moves more fully into the digital economy, COMESA can leverage technologies to promote her manufactured products and serve her international customers through a variety of channels; whereby, economic development could be sustained.

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