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The Impact of Trade Agreement Policy on Employment

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Introduction

The African continent has been trying to achieve integration through trade among themselves through the establishment of trading agreements from regional block. In Addis Ababa the capital of Ethiopia, on January 2012, during the 18th Ordinary Session of the Assembly of Heads of State and Government (HOS/G) of the African Union (AU) a decision was made to establish the African Continental Free Trade Area (AfCFTA) for Africa by 2017. The mandate was for the summit endorse an Action Plan for the Boosting of Intra-African Trade (BIAT) under the Assembly/AU/Dec394(XVIII). In Johannesburg, South Africa, on June 2015 during the Ordinary session of the AU summit of the Heads of State and Governments the negotiations for the African Continental Free Trade Area (AfCFTA) was launched with negotiations starting in 2017. The Agenda was to establish a single market for the trade in Goods and Services in Africa. The First step in the implementation of AU Agenda 2063 which was adopted in June 2015. The Agenda 2063 sort to bring the strategic framework for the socio-economic transformation of the continent for inclusive growth and sustainable development. The vision

was to form an integrated, prosperous, and peaceful Africa, driven by its own citizens by representing as a dynamic force in the international area. The introduction of the African Continental Free Trade Agreement (AfCFTA) with 27 member countries out of the 54 countries currently signatories to the agreement. This agreement is expected to increase trade and financial integration between African countries with expected welfare gains for signatory countries. The African continent boast of over one billion people and still growing and a combined gross domestic product of over 3.4 trillion US dollars, the AfCFTA agreement is one of the most important instruments the continent needs to accelerate growth. Trade in any form is one major employer of labour in most economies who seek to implement policies that improve trade competitiveness. According to economist the division of labour and trade are both important in the creation of wealth in an economy. Labour is an integral and driving force for the success of trade. The trade theory has evolved over the decades since the comparative advantage theory by David Ricardo which seeks to point out the benefits for which is alluded to trade is through the differences in the labour market for productivity. Trade theory over the years has shown the link of trade to the factors of production showing the importance of capital and the link to wages. Theories from Smith with “surplus product theory” reflected on growth in employment with development in foreign trade, Metgerler and Harburger with “trade multiplier” who also believed that new investment could improve employment and Samuelson with the “H-O-S theory” saw employment from the angle of full employment. Researchers such as Ricardo, Heckscher, Olin, Stolper and Samuelson and Krugman also explored the effect of trade from the perspective of labour effects, thus, a rise in the demand for labour and the reallocation of inputs for efficient production. The expansion of trade among parties over the years has led to competition among producers and countries as the market expands. The liberalization of trade allows the market to be efficient, pushing out less efficient producers and giving their share to more efficient firms. Trade liberalization brings into fore the changes that

occur with economic activities changing with some production firm closing while others grow with the onset of demand and supply from the new trade lines. Various reviews suggest that jobs in labour-intensive sectors would fall while skill-intensive sectors expand for developing countries because of trade liberalization. Mixed results have been found for the impact of trade liberalization on informal employment attributing the various effects to the country-specific issues. The impacts of trade on employment is seen to be positive when social and labour policies are strengthened (ILO-2019). Trade liberalization can lead to disruption in the economy through the destruction and creation of jobs. This is seen in the work of Groizard, Ranjan and Rodriguez-Lopez (2015) who found for manufacturing firms in California trade cost from inputs and outputs led to job loss and business collapse in the least productive firms. Priyaranjan, Jae, Yang, Devashish (2019) found that a decrease in trade cost led to fall in employments. The effect of this could be positive or negative depending on the unique factors in the countries or economies involved across all sectors. From the traditional point of view this labour-intensive industries will increase while skill and capital-intensive industries will experience a slow down for developing countries with developed countries experiencing the opposite. The importance of governments in helping informal firms to grow through the provision of infrastructure and policies that promote workforce growth through education and inclusivity for all was expressed in the work of the ILO in 2011 as a crucial method in spurring up employment to take advantage of trade liberalization. The paper seeks to measure the impact of international trade on employment in Morocco, the study will look at the long run and short run effect of trade on employment through investment.

Hypothesis

H₀= There is a positive and significant relationship between trade and employment through investment on economic growth

H1= There is no relationship between trade and employment through investment on economic growth

The paper is sectioned in three parts with section one covering the introduction, section two on the literature review, section three on methodology and section four results and discussion with section five focusing on conclusion and policy recommendations.

Literature Review

David Ricardo in his theory for comparative advantage expressed that gains from trade arise because of the differences in the productivity of labour. The theory has explained the its importance of factor abundance with labour and capital. The theory also points out the benefits of specialization bring both countries an increase in welfare leading to trade. Heckscher-Ohlin through the abundant factor showed that as trade expands the price of goods produced with the abundant factor effect, there will be corresponding rise the exporting country as well as a rise in the factor. For countries with abundant labour trade will rise the demand for labour causing rise in wage, however countries with lower labour will experience low demand with a fall in wages. Solow (1956) proposed the New growth theories which brought into consideration the exogenous variables such as technology with dependency on human capital and targeted investment in technology (Romer 1986, Romer 1990). They both show the extent to which investment and growth are directly impacted by productivity. With the onset of trade liberalization there is the elimination of restrictions which hindered foreign direct investment in the related economies. The removal of such restrictions and the introduction of laws and

policies help to attract foreign direct investment. In 2012 Davidson et al. developed the new trade theory looking at the effects of trade liberalization on labour transition. The model was on the single high or low-skilled manager for each firm. The authors in their study showed that cross-skill matching (CSM) which looked at the mismatch of skills among high skilled workers in low technological firms before trade liberalization and the result after which led to underemployment. This phenomenon changes with the onset of trade liberalization as the high skilled labour is attracted to more productive firms with higher wage rates than the low-tech firms. Their model looked at the impact of trade on skilled labour indicating that with trade liberalization industry with high skilled labour will experience a rise in skilled labour as against low skilled labour sectors. In 2010 Helpman, Itskholi and Redding in developing their model looked at the heterogeneity in firm productivity and labour market friction. Their model specified that with trade liberalization, labour in large productive firms will rise regarding skilled labour in proportion with higher wages however the overall employment effect will be low due to the stricter hiring process. The industrialization effect of trade liberalization especially in the manufacturing sector point to the new line of global value chains which is because of manufacturing activities now occurring in developing countries (UNIDO 2015). These shifts which are being sped on by trade is for seen to increase jobs for developing countries as competition among developed countries rise with respect to manufacturing. The cost associated with offshore production has encouraged firms in the developed countries to take advantage of the lower cost of production with factors such geographical location and the internet being a strong push in the production line in the global value chain (GVCs). The GVCs being activated across the globe has increased the production breakdown with products being produced in fragments across different geographical locations. This has in turn increased FDI inflows across the new production countries. Shingal, (2015) the GVCs impact trade through its tasks instead of industries as specialization becomes more pronounced after the shift in

manufacturing jobs to countries with lower cost which increases employment. This shift by companies is done to reduce their cost through offshoring in the GVC lines. The comparative advantage from offshoring results in creating employment across the trading lines. GVC technology line post 2008 has seen a reduction, as the more, production is fragmented among countries the more the advantages for trade flows, falls in comparison to total value added. There will rather be an increase in the total output produced as firms reach a perceived optimal growth (Srinivasan et al., 2014). The IMF in 2013 expressed that when workers are unable to adjust their skills to take advantage in time to match up with the new demand in the production industry unemployment will rise especially among low-skilled labour. Dee et al., (2011) in their study find that FDI inflows generates a demand in skilled labour for the services sector. There is significant rise in employment in the manufacturing firms for skilled labour. FDI is said to have created over 53 million jobs around the globe according to leading to specialization in the production of goods and services. FDI inflows have a strong impact on employment growth through trade whiles finding mixed results for the impact of aid for trade on employment whiles in trade openness and FDI caused an increase in job creation for unskilled labour in Vietnam and Bangladesh in South Africa and Kenya jobs increased for skilled labour (Jenkins and Sem (2006): Abbey et al. (2017): Abor and Harvey,(2008):Gnangnon and Robert (2017) Gnangnon (2019)). Hollweg et al (2016) from their study found evidence of positive effect on employment through structural reforms through trade liberalization whiles Ha and Tran (2017) found a negative effect of international trade on employment for small firms but a positive impact on large firms. Trade openness bring an onset of expansion of the various sectors of the economy with technological investment. Wang (2016) in his study had a mixed result with the effect of trade on employment using trade openness. There was a negative impact on employment when imports rose whiles a rise in exports caused a positive impact. He also found a strong impact on employment when China joined the WTO. Acharya (2015)

confirmed from his study on Canada that the overall impact of trade on employment in the skill and wage structure was small and the negative impact negligible. According to Autor et al, (2016) the US manufacturing sector experienced negative effects of trade liberalization with offshoring to China to take advantage of the GVCs low cost of production. However, Bi, (2017) in his work found that the effect of trade on employment based on China-US trade was mainly in the manufacturing industry, which was due to adjustment and allocation cost, expansion effects of trade shocks among others. Overall, he found the China- US trade balanced out the its effects on employments as exports rose in other trade sectors such as services and manufacturing sectors. The agriculture sector is expected to increase employment when governments match up infrastructure and agricultural trade policies to take more advantage of the export in agriculture (ILO-UNCTAD, 2013). Countries that practiced trade protectionism and employment were found to experience unemployment at significant level by Dutt, Mitra and Rajan (2009) and Felbermayr, Prat and Schmerer (2009) whiles the opposite was true for countries that practiced trade liberalization. In 2014, Cai and Du found that employment in the export sector-oriented countries rose in line with wages. The introduction of trade policies has always come with an expectation in the rise of jobs. Yahmed and Bombarda (2016) on analysis the impact of NAFTA on employment found that formal employment increase as against the informal sector in the area of trade whiles Carrere, Grujovic and Robert-Nicoud (2015) found a rise in US employment and a fall in employment in European countries with the introduction of the Transatlantic Trade and Investment Partnership (TTIP) and the Trans-Pacific Partnership (TPP). The impact of trade on economic growth showed a unidirectional long run causality existing between exports and economic growth in South Korea and a unidirectional short run causality for export and import in the short run for economic growth by Tsegaye (2015). The role of technology, engineering effect on exporting firms with trade increased employment in the European Union (Cernat and Sousa 2015). The impact of international trade on employment

was studied by Umoru (2013) and found that in the case of Nigeria the volume of trade had no significant positive effect on the generation of employment.

Methodology

The objective of this study is to investigate the dynamics of the relationship between trade, employment, investment, and its impact on growth of the economy. The study uses time series data annual in nature for the period 1990 to 2017. In The study the variables to be used are Trade (TRD), employment rate (EMP), Investment (FDI) and economic growth (GDP). Trade comprises both exports and imports expressed in US dollars, Gross domestic product (GDP) in US dollars as a proxy for economic growth. Employment is proxied by the labour employed out of the total labour force with investment proxied by FDI in US dollars. All variables will be collected from the World Development Indicators (WDI) database from the world bank.

The model estimation is as follows:

$Y_t = \alpha + \beta X_{t-1} + \eta Z_{t-1} + \gamma K_{t-1} + \epsilon_t \dots\dots\dots(1)$ Where Y is the Gross Domestic product (GDP), X_{t-1} represents Employment rate as a percentage of total labour force , Z_{t-1} represents Trade, K_{t-1} representing Investment and ϵ_t , represents the error term. Taking the natural logarithm of the all the variables in order to level the data in terms of scale of measurement is seen as below.

$$\ln GDP_t = \alpha_1 + \sum_{i=1}^{n-1} \gamma_{li} \ln GDP_{t-1} + \sum_{i=0}^{m-1} \beta_{li} \ln EMP_{t-1} + \sum_{i=1}^{j-1} \eta_{li} \ln TRD_{t-1} + \sum_{i=1}^{k-1} \gamma_{li} \ln FDI_{t-1} + \delta_1 ECT_{t-1} + \epsilon_{1t} \dots\dots\dots (2)$$

Unit Root Test:

Testing the Unit roots of the equations to check whether the data is stationary or not stationary. This is determined if its mean variance and covariance remain constant over the time in question where, $Y_t = \alpha Y_{t-1} + \epsilon_t$, Stationarity is achieved on the condition that $\alpha < 1$. When $\alpha > 1$

the data series is not stationary and $\alpha=1$ there is the presence of unit root and non-stationarity. The study uses the Augmented Dickey -Fuller (ADF) of (1979) and Phillip-Perron. The Durbin-Watson d-statistic (4, 27) = 2.672558 compared to an R-square of 0.1359 as such I accept the alternative hypothesis and reject the null (see table1).

Cointegration test

The Johansen cointegration test was employed to check the long run relationship between the concerned variables, Johansen (1988,1991) with the variables integrated of the same order at levels I(0) and at first difference I(1). The Johansen test was employed to test for the cointegration among the variable based on the null hypothesis that there is no cointegration among the variables. The test shows the long run properties of the variables with maximum likelihood estimation of K-dimensional Vector Autoregression (VAR) with the order (p) and the trace statistics and maximum eigen value used in the decision. Thus, using the data set at levels in their natural logarithm form. From the results I accept that the alternative hypothesis of the presence of cointegration in the equation. This is so as the Trace statistics is 23.8913* less than the 5% critical value of 29.68 at the maximum rank 1 and the Max statistics confirming this at 15.5641 at 5% critical value of 20.97 at the maximum rank 1. From the test we find that there is a maximum of 1 cointegration in the equation (see table 3).

Estimating the short run and long run models as seen below:

Short -run models (VAR)

$$\ln\text{GDP}_t = \alpha + \sum_{i=1}^n \gamma_i \ln\text{GDP}_{t-1} + \sum_{j=0}^n \beta_j \ln\text{EMP}_{t-1} + \sum_{m=1}^n \eta_m \ln\text{TRD}_{t-1} + \sum_{s=1}^n \gamma_s \ln\text{FDI}_{t-1} + \mu_{1t}$$

.....(1)

Where K is the optimal lag length, α , b, d, c are the intercepts, γ_i , β_i , η_i , γ_i , are the short run dynamic coefficients of the model's adjustments long-run equilibrium and the μ_{1t} is the residuals in the equations.

The Long -run model (VECM):

Original form

$$\Delta Y_t = \alpha + \sum_{i=1}^{k-1} \gamma_i \Delta Y_{t-i} + \sum_{j=1}^{k-1} \eta_j \Delta X_{t-j} + \sum_{m=1}^{k-1} \xi_m \Delta R_{t-m} + \lambda ECT_{t-1} + \mu_{it}$$

$$\Delta \ln GDP_t = \alpha_1 + \sum_{i=1}^{K-1} \beta_{1i} \Delta \ln GDP_{t-i} + \sum_{j=0}^{k-1} \varphi_{1j} \Delta \ln EMP_{t-j} + \sum_{m=1}^{k-1} \eta_{1m} \Delta \ln TRD_{t-m} + \sum_{n=1}^{k-1} \phi_{1n}$$

where $K-1$ is the lag length reduced by 1, β_i ϕ_n ϕ_j η_m is the short run dynamic coefficients of the model's adjustment long run equilibrium, λ_i is the speed of adjustment parameter with a negative sign, ECT_{t-1} = the error correction term in the lagged value of the residuals obtained from the cointegration of the dependent variable on the regressors. Contains long-run information derived from the long-run cointegration relationship, μ_{it} is the residuals (stochastic error terms often called impulses or innovations or shocks).

Granger Causality Test:

The vector autoregression (VAR) of the order (p) was chosen based on the Akaike Information Criterion (AIC) and the granger causality test was conducted to test the causality among the variables. Table (4) show the t-statistics, Granger/ Wald test, the Wald coefficient test and the Decisions. From the estimates I found that there is a Unidirectional causality from Foreign direct investment to Gross Domestic product, unidirectional causality from foreign direct investment to trade and a unidirectional causality from Gross domestic product to employment. Bidirectional causality was determined for Trade to Gross domestic product and a bidirectional causality from Trade to Employment. The study revealed that Foreign direct investment has a positive impact on Trade in both the long and short run and a negative impact on Gross domestic product (GDP) from Foreign direct investment in the short run and long run. Trade has a positive stable effect on GDP in the long run and had neutral effects on the. Trade had a stable effect on employment and positive impact in the long run. In the long run, Trade,

employment and foreign direct investment have asymmetric effects or opposite impact on Gross domestic product (GDP) all other things being equal. The Error correction term of the coefficients is:

$$\Delta \ln \text{GDP}_t = 0.042 - 0.471 \Delta \ln \text{GDP}_{t-1} - 0.278 \Delta \ln \text{EMP}_{t-j} - 0.471 \Delta \ln \text{TRD}_{t-m} + 0.003 \Delta \ln \text{FDI}_{t-n} - 0.631 \text{ECT}_{t-1}$$

Thus, the adjustment term (-0.631) is significant at the 10% level, suggesting that the previous year's errors or deviations from the long-run equilibrium are corrected for the within the current year at a convergence of 63.1%.

Conclusions:

The study used the cointegration and Granger causality test to examine the long run relationship and check the direction of the causalities among GDP, trade, employment and FDI in Morocco. The results from the VECM show that in trade, employment and FDI significant have impact on economic growth. The impact of trade was positive significant on employment. The study confirms that changes in the economic growth in the long run affect trade in the short run. Changes in employment in the long run have marginal effect on trade, GDP, and no impact on FDI in the short run. Changes in FDI in the long run have significant effect on GDP and trade in the short run. The implications for policy formation by the government increase private sector participation through trade to strengthen and increase employment and note that trade policies affect the trade dynamics which affect employment and economic activities in the countries pursuit for growth. The study shows that the future impact of the African Continental Free Trade Area will boost employment in the country if the government improves, strengthen and increases private participation in the economy. Trade among countries is deemed not have reached its peak and perceived to be the fastest in the coming decades than income. The ratio which is about 60 percent of global trade from imports and exports to GDP is expected to rise.

Technological changes with digitization, the internet, e-payment, translation software and more expected increase the ability of small firms to engage in international trade and become drivers for the assimilation and integration of small and medium scale firms. The creation of a single continental market for goods and services on the continent with free movement of businesspeople and investments is expected to bring the various countries together and improve and coordinate customs union among countries through the common market. This expansive market will allow countries such as Morocco to function better and promote competition among firms. This will help resolve overlaps in the regional economic communities (RECs) agreements leading to a better inter-REC trade and promote industrial diversification and complement regional trade for the country. There will be the need to for the Morocco as well as other African countries to be innovative in their sources of income as there will be revenue losses from the trade liberalization in the short-term during the implementation of the intra-African trade. Morocco will have to address barriers to trade for the movement of goods and people within and with other countries from transportation, infrastructure, the implementation of innovative strategies, improving maintenance culture, engaging with the private sector and leveraging with other regions of the world through effective and efficient connection through already established infrastructure and trade contracts through the AfCFTA.