The African Continental Free Trade Agreement: Implications for Maritime Labour

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Abstract
Among the several trade and regional economic integration initiatives in Africa, the African Continental Free Trade Agreement (AfCFTA) is the most ambitious. The AfCFTA entered into force in 2019 and its implementation commenced in 2021. The objective of the AfCFTA is to create single continental market to further trade liberalization of goods and services, raise productivity and investment, increase employment as well as income levels, and fostering prosperity within Africa. It establishes the African Continental Free Trade Area, and its full implementation is expected to have macroeconomic and distributional effects on trade, employment, wages, government revenue, poverty, gender and across sectors of the economy. Consequently, this paper examines the implications of the AfCFTA implementation for maritime labour - a group of workers in the maritime sector. It envisages that under the AfCFTA scenario certain developments and trends would most likely occur that would impact maritime labour in a number of ways. Furthermore, it suggests couple of policy responses that may help address the potential effects of implementing the AfCFTA agreement for maritime labour.

Introduction

The promotion of intra-African trade is not a new idea. In fact, intra-African trade has long been acknowledged as a mechanism for advancing Africa's independence, industrialization, and socio-economic development. This is reflected in the several treaties, for instance, the Lagos Plan of Action adopted in 1980, the Abuja Treaty in 1991 that established the African Economic Community, and the number of regional economic organisations or associations formed over the years. However, the key difference today is the scale, scope, and pace at which the idea of intra-African trade is facilitated.

At the African Union (AU) summit held in Addis Ababa, Ethiopia in 2012 the assembly of Heads of State and Government agreed to establish the African Continental Free Trade Area (AfCFTA) by 2017. AfCFTA is a single continental-wide market to facilitate the liberalization of trade in goods and services in Africa and deepen the economic integration of the continent in line with the objectives and principles enunciated in the Abuja Treaty and the Pan African vision expressed in Agenda 2063 (African Union, 2019). The African Continental Free Trade Agreement is the legal instrument establishing the AfCFTA and was initially signed by 44 African countries during the AU summit held in Kigali, Rwanda in March 2018.

The AfCFTA agreement has been widely acknowledged and commended by several individuals, institutions and transnational entities as a very laudable initiative and

a significant milestone in Africa's development; however, the ultimate accomplishment will be its full implementation. Akin to other continental developmental initiatives, the full implementation of the AfCFTA agreement certainly may not be devoid of far-reaching economic, political, regulatory, and social implications for member states, considering its objectives and scope. The potential impact may differ significantly across the economies of member states. According to a recent report by the World Bank (2020), the implementation of the AfCFTA agreement will have macroeconomic and distributional effects on a range of economic sectors such as manufacturing, agriculture, and services as well as on government revenue, employment, wages/incomes, gender, and overall intra-regional and continental trade. Also, the reports by the United Nations Conference on Trade and Development (UNCTAD, 2019; 2021), the African Union (2019) and the United Nations Economic Commission for Africa (UNECA, 2020) indicate similar outcomes following the implementation of the AfCFTA agreement. Even though the reports projected the implementation of the AfCFTA agreement to significantly boost intra-African trade, accelerate industrialization, expand employment opportunities, increase wages/real incomes, reduce poverty and enhance productivity; they acknowledged (e.g. World Bank, 2020) that it can lead to shifts in employment structure, loss of jobs and a reallocation of resources.

This paper therefore examines the potential implications of implementing the AfCFTA agreement for maritime labour regarding employment, wages and skills. The paper is structured into five sections. After this introduction, section two gives a bit of background to the AfCFTA initiative, its framework, developments and the potential socio-economic benefits. Section three explains the concept of maritime labour and highlights its significance to the maritime industry. Section four examines the implications of the AfCFTA implementation for maritime labour, and the last section is the conclusion and recommendations. To the best knowledge of the author, there exists no study that evaluates the implications of implementing the AfCFTA agreement for maritime labour; and this paper aims at preparing the ground for future research in this area.

African Continental Free Trade Agreement

The African Continental Free Trade Agreement is the legal instrument establishing the African Continental Free Trade Area (AfCFTA). AfCFTA is the continental common market for trade liberalization. The AfCFTA agreement has seven Parts consisting of thirty Articles, Protocols covering Trade in Goods; Trade in Services; Investment, Intellectual Property Rights and Competition Policy; Rules and Procedures on the Settlement of Disputes; and the associated Annexes and Appendices. The overall objective of the agreement is to deepen the economic integration of the African continent by having a common continental market platform for economic activities, realizable majorly by facilitating easy movement of persons, goods, capital, information and investments across diverse economic sectors of the continent. It recognizes the Regional Economic Organisations or Communities (AMU, CEN-SAD, COMESA, EAC, ECCAS, ECOWAS, IGAD & SADC) as strategic building blocks for the successful implementation of the AfCFTA agreement. Included in the agreement is the

establishment of an institutional framework to oversee the administration and implementation of the AfCFTA agreement.

The AfCFTA agreement was adopted at the AU summit held at Addis Ababa, Ethiopia in 2012. Discussions to effecting the agreement commenced after the AU summit held in Johannesburg, South Africa in 2015, and continued until the AU summit held in Kigali, Rwanda in March 2018, in which the AfCFTA agreement was formally signed by 44 out of 54 African countries. On 30th May 2019 the agreement entered into force, 30 days after the deposit of the 22nd instrument of ratification as specified in Article 23 of the agreement (Tralac, 2019).

The operational phase of the AfCFTA agreement was launched on 7th July 2019 during the African Union summit held in Niamey, Niger. The AfCFTA operations are to be governed by five key instruments (1) the Rules of Origin, to ensure that products which would benefit from tariff preferences actually originate from countries within the continent, (2) Online Portal, to facilitate discussions between member states, customs unions and regional groupings for tariff negotiations, (3) Online Mechanism for monitoring, reporting and elimination of non-tariff barriers (NTBs), (4) a Pan-African Payment and Settlement System, which would make it possible for African companies to clear and settle intra-African trade transactions in their local currencies; and (5) the African Trade Observatory, which will provide stakeholders with up-to-date and reliable trade data, as well as information about exporters and importers in various countries (African Union 2019; Tralac 2021; Luke, Ameso & Bekele 2021).

The first Secretary-General of the AfCFTA Secretariat, His Excellency, Mr. Wamkele Mene was appointed on 19th March 2020. The AfCFTA Secretariat is hosted in Accra, Ghana and was officially commissioned and handed over to the AU on 17th August 2020. The Secretariat is responsible for the administration and operational matters concerning the implementation of the AfCFTA agreement. On 5th December 2020, Nigeria deposited its instrument of ratification of the African Continental Free Trade Area agreement, thus, becoming the 34th member state to formally ratify the agreement (UNECA, 2020; African Union 2021). At the AU summit held virtually on 5th December 2020 because of the COVID-19 pandemic, the assembly of Heads of State and Government approved trading under the AfCFTA agreement to begin from 1st January 2021; accordingly, this has commenced, marking a historic milestone for the continent. As at April 2022, except for Eritrea, 54 Member States have already signed the AfCFTA agreement, and 41 member states have endorsed and deposited their instruments of ratification with the AU Chairperson as required (African Union, 2022; Tralac, 2022).

As designed, the AfCFTA agreement is to be implemented in phases and based on negotiations among the member states according to Articles 7 and 8 which state that the negotiations are between AU member states, and the agreement reached shall be binding on the parties. Sequentially, negotiations in Phase I cover the Protocols on trade in goods and services, dispute settlement procedures, customs cooperation, tariff concessions and rules of origin. Negotiations on some items in this phase have been concluded except for tariff reductions, rules of origin and the specifics for trade and in the priority services sectors, which are still ongoing. So far 41 countries have submitted their schedules of tariff concessions and have agreed on approximately 87.7% of tariff lines (Albright

Stonebridge Group, 2021; McLeod & Luke, 2022). Negotiations on Phase II cover Protocols on intellectual property rights, investment, and competition policy, as well talks on the various items have commenced; and Phase III negotiations cover e-Commerce. The negotiations for phase III should commence immediately after the conclusion of Phase II negotiations and after the necessary capacity building (Erasmus & Hartzenberg, 2021; Chidede 2021). As planned, all outstanding negotiations especially for phases I and II were to be finalised by 31st December 2021 but that was not achieved.

Notwithstanding the setback, the Pan-African Payment, and Settlement System (PAPSS) has been deployed, though in the pilot stage. PAPSS is a collaborative initiative of the African Export-Import Bank (AFREXIM), the AfCFTA Secretariat and the African Union (AU) would serve as the continent-wide platform for the processing, clearing and settling of intra-African trades and commerce payments. The full implementation of PAPSS is expected to save the continent more than US$5 Billion in payment transaction costs each year (Nwafuru, 2022; Usman & Csanadi, 2022). The AfCFTA is a flagship programme of the African Union's Agenda 2063, a roadmap for attaining inclusive and sustainable socio-economic development across the African continent and beyond. AfCFTA is the "continent's most ambitious economic integration initiative," to usher in a new era of significant developments.

The AfCFTA agreement is significant and promising in many ways. It establishes the largest free trade area in the world since the formation of the World Trade Organization, in terms of the number of countries involved. Also, it brings together about 1.3 billion people in an economic bloc with a gross domestic product (GDP) value of US$3.4 trillion and a combined consumer and business spending of more than $4 trillion (Crabtree, 2018; UNECA, 2020; World Bank, 2020; African Union, 2020; IMF, 2020). Estimates from the literature (UNECA, 2018; 2020; UNCTAD, 2019; World Bank, 2020) indicate that the implementation of AfCFTA agreement has the potential to yield a range of macroeconomic benefits that include (a) increasing trade among African countries from 15% to 25% in the medium term, and could double if tariff and non-tariff barriers are reduced or removed completely (b) stimulate industrial development, diversification of sources of growth, technology transfer and structural transformation, (c) generate productive employment resulting to increase in wages by 10%, reduce poverty by lifting 30 million people out of extreme poverty and 68 million people from moderate poverty by 2035, (d) boost the capacities of African companies to access and supply world markets, increasing the volume of total exports by almost 29%, (e) create new opportunities for African manufacturers and workers, (f) strengthen Africa's economic and commercial diplomacy, as well boost its global competitiveness, (g) attract foreign direct investments and (h) mitigate in the short term, some of the negative economic effects of the COVID-19 pandemic as it supports regional trade and value chains. In the long term, provide a framework for increased cooperation, integration, and policy reform in Africa, which will help countries increase their resiliency in the face of future economic shocks.

Nigeria is projected to gain significantly from the socio-economic opportunities that the AfCFTA will inevitably bring. Some of the benefits highlighted by the Central Bank of Nigeria (2021) and Tralac (2020) include (a) having access to a larger market for the

export of goods and services that would stimulate an increase in Nigeria's total exports up to 8%, in addition to a small structural shift in Nigeria's economy towards manufacturing and services, (b) an expanded platform for Nigerian producers, manufacturers and service providers to connect to regional and continental logistics supply and distribution value chains, (c) accelerate the integration of small and medium-sized enterprises, foster competitive manufacturing and economic diversification within and outside Nigeria, (d) creation of more jobs, increase in state revenue, real incomes and inflow of foreign direct investment, (e) utilise the Dispute Settlement Mechanism to prevent further discriminatory treatments meted out to Nigerian owned businesses, (f) create an opportunity for Nigerian professionals to seek employment in other African countries, and (g) offers a platform for Nigeria's continued economic and political leadership role in Africa. But, how Nigeria intends to reap the benefits is another issue.

Overall, the AfCFTA agreement is a decisive and progressive step toward the continent's long-held economic integration and self-reliant aspiration. It is indeed an economic journey of change as it would reshape markets and economies across the continent and a major opportunity to help member countries diversify their economies, grow faster and attract more foreign direct investments, as well as strengthen African economies to be more competitive globally.

Maritime Labour

The term maritime labour is viewed from diverse perspectives and is sometimes quite difficult to define clearly. In the Maritime Labour Convention, 2006 (or MLC, 2006) as amended, the definition of maritime labour is narrowed to seafarers, i.e. "all persons who are employed or engaged or work in any capacity on board a ship." This includes not just the crew involved in navigating the ship but also persons working in hotel positions who provide a range of services for passengers on cruise ships and yachts irrespective of the process of their recruitment (ILO Convention No. 185; Doumbia-Henry, 2003). The MLC, 2006 as amended is an international legal labour instrument adopted by the International Labour Organization (ILO); and it establishes the minimum international employment standards for all persons working on ships, as well to protect economic interests through fair competition for quality by countries, ship owners and labour organisations regarding employment and operational matters in the maritime industry globally.

From another perspective, maritime labour is described as dock labour or dockworkers or stevedores, personnel charged with the core duty of loading and unloading vessels at the ports and engaged in ancillary services such as the checking, storage and intra-port transportation of cargo, and operations at passenger terminals (Aryee, 2011; Hooydonk, 2014). In another vein, maritime labour seems to have a vague definition, for instance, in countries without specific legislation concerning it, (Aryee, 2011). However, in countries that have legislation and succeeded to define it, for example, Nigeria does so broadly to include both the seafarers and dockworkers (NIMASA Act, 2007).

In this light, maritime labour can be adopted as a generic term that encompasses varied categories of persons having specific skills and competencies and are working

onboard a ship and onshore at the port. Suffice to say that maritime labour is the human element in maritime operations. It is the workforce employed to work onboard seafaring vessels as seamen, boatswains, deckhands, officers, engineers, pilots, cooks, firemen, mates, service staff and stewards; and those onshore at the ports as dockworkers or stevedores, and are responsible for loading and unloading of ships. These categories of persons are employed by a variety of persons and organizations such as ship owners, shipping companies, private terminal operators, public port authorities as well as government-owned entities and cargo handling companies. (NIMASA Act, 2007; Hooydonk, 2014; Notteboom 2021)

The working environment of maritime labour is somewhat distinct from that of other workers, as even depicted by the masculinity of the profession. The working environment by nature is institutionalized with strong hierarchical and rigid organisational structures based on crews. It is a setting where work dominates almost all other concerns. The occupational culture demands both physical and mental strength to deliver on the job because the tasks can potentially be hazardous and entails long hours of work and long periods of time to be spent away from home (Acejo, 2012; Sampson, 2021). As well, work roles are defined within a time-conscious and fast-paced workflow. Maritime labour is a "profession'' that is highly regulated in line with international standards because of the related issues of safety, security, economy, technology and productivity involved in shipping operations.

Maritime labour is very critical to the logistics supply chain of goods and services, port performance and competitiveness, and trade globally. More than 80% of the world's trade which is done by shipping depends on the professionalism, skills, competence and dedication of this workforce. Undoubtedly, they are very essential to international trade and the international economic system. Recently, as a result of the COVID-19 pandemic, this group of workers have been designated as "key workers" (International Maritime Organisation (IMO, 2020). Put differently, maritime labour are essential workers and very critical to the success of global trade.

In view of the importance of maritime labour to local and global trade, it becomes imperative to examine how the AfCFTA implementation would impact it. This is because trade affects the aggregate number of jobs in an economy (WTO, 2017). Frequently, there is no available estimates on the impact of AfCFTA implementation on maritime labour. Further, knowing how and to the extent, the AfCFTA implementation would impact maritime labour can help in designing informed responses to the possible outcomes.

AfCFTA Implementation: Implications for Maritime Labour

In a review of the literature, for example, the World Bank (2020) two main outcomes for labour can be implied. One is that AfCFTA would impact labour positively reflecting in more employment opportunities, wage increase and real income gains in some sectors like manufacturing, services, and agriculture. The other outcome would be negative with the loss of jobs and shifts in employment structures wherein groups in the labour force may need to redeploy from shrinking economic sectors towards expanding ones. Some workers may not benefit from the AfCFTA implementation even when and where the

welfare of the majority increases. Perhaps, this may be because trade like technology impacts individuals, firms, sectors, and countries unevenly; thus, while some may benefit, others may not (WTO, 2017).

Trade has been a central thesis in global economic discourse and its effects on the economies of nations including jobs are varied, and a subject of continued discussion. Trade by nature is complex and dynamic, and this is amplified by several factors like policies, environment, objects of trade, means of production, technological innovations, and the forces of demand and supply. The interplay of these factors with the nature of trade tends to make it a bit difficult sometimes to predict the actual signs of the effects and extent of the impact. However, following the cohort of techniques and methods (Stopford, 2007; WTO, 2017; UNCTAD 2019; Ocampo, 2020) suggested and used for analysing trade and estimating possible outcomes; the paper then considers certain developments and trends it envisages will likely occur under the AfCFTA scenario and can impact maritime labour. The developments and trends are discussed below.

A development that might occur in the implementation of the AfCFTA and can impact maritime labour would be increased trade flows overland. The AfCFTA implementation is expected to significantly increase demand on all transport modes: road, rail, maritime and air (UNECA, 2022), but the paper is of the view that the demand would be more on the road mode than on sea. Underlying the demand first is geography. A look at the geography of the African continent picturesque a peculiar terrain of landlocked countries, i.e., about a third of the African countries having 17% of Africa's total population and 7% of the GDP, have no direct territorial access to the ocean or sea. Besides, African countries are closer to each other and share common borders by land than by sea, for example, Nigeria and Benin republic. Second, is the top priority objective of increasing intra-African trade; third, the resources, producers, manufacturers and consumers of the goods and services are mostly land-based. Fourth, is the expected reduction or complete removal of cross-border tariffs on several goods and services, and non-tariff barriers to trade; and Fifth low financial capital and credit facilities that may hinder the acquisition of ships, aircraft or the building of heavy transport infrastructure even in the short term. Following that the demand for transport services is primarily in response to the economic environment (Dovi, 2018; Fezoua, 2019; AUDA-NEPAD, 2021) as portrayed by the factors mentioned, it would be safe to infer that the transport mode fitting to meet the demand of trade within the continent under AfCFTA would most likely be road rather than seaborne. Increasing demand for road transport to move goods and services can lead to reduced maritime activities onboard vessels and at the ports. Experience showed that before Nigeria closed its land border with the Republic of Benin, trade overland between both countries had some downside effects on Nigeria's maritime sector (The Guardian 2019; Maritimemag, 2019). The possibility of transporting products from one location to another within the continent without getting to the ports and seaborne is real.

Furthermore, the increase in trade flows overland can be intensified by the regionalization of trade as the case of AfCFTA. A report by the International Transport Forum (ITF, 2020) affirms that regionalisation of trade has consequences for maritime transport. First, it minimizes distance and growth in regional trade, and this can translate

into less growth in maritime transport activity than previously. Secondly, nearer, and smaller distances would require smaller ships; therefore, it may not be economically wise to use bigger ships which ordinarily are for trade between distant locations and large centres for nearer and smaller distances. Besides bigger ships take more space and time to handle. The implications of using smaller ships would include reduced or fewer labour onboard vessels as well as at the ports and a possible drop in wages. Based on contrasting historical trends, UNCTAD (2019; 2020) acknowledges that regionalisation of trade is impacting shipping variously. Sequentially, the value of shipping may no longer be determined by scale and cost alone but also by time, demand, and distance. An example where trade flow overland is already impacting shipping is the Belt and Road Initiative by China. Expanding overland trade route between China and Europe has attracted movements of high-value, time-sensitive goods–which previously would have been transported by sea (UNCTAD, 2018). Increasing volume of trade is expected to increase the demand for transportation in the continent but the demand will be towards the mode of transportation where infrastructure is available to meet the demand, and in this regard, the road mode appears expedient. Besides recent events show that transport infrastructure development in Africa focus more on the construction of transnational highways, for example, the West African transnational highway from Nigeria to Cameroun through African Central Republic. It may be necessary to note that forecasts of increased demand for maritime transport have been more on international shipping rather than regional. Growth in regional trade like AfCFTA is among the key trends identified to redefine maritime transport and shape its outlook (UNCTAD 2019 & 2020).

Another possible development that would impact maritime labour under the AfCFTA scenario will be the increase in the deployment of technologies in forms of automation and digitization of maritime operations, services, and infrastructure. This will be driven more by the economies of scale and improving competitiveness. Regarding international trade comprising exports and imports, the World Bank (2020) projected that under AfCFTA, exports to non-African countries would increase by 19% and intracontinental exports increasing by over 81%. Accordingly, manufacturing exports to AfCFTA members would rise by 110% and to non-African countries by 46%; intracontinental trade exports in agriculture rising to about 49% and outside the continent to 10%, and overall gains in services exports to about 4%. In the same vein, total imports are expected to increase by 41%, imports from intracontinental trade expand by 102%, and imports from outside Africa by 25%. To benefit significantly, coastal member states like Nigeria certainly would like to maximise their maritime potentials to maintain their strategic positions and relevance as regional maritime hubs for international exports and imports. This will require modernising port infrastructure, improving service delivery and increasing overall port performance by leveraging new technologies; since global trends show that attractive, competitive, and efficient ports are those that have not only modernized port infrastructure but also continue to automate and digitize their operations and services (ITF, 2019; UNCTAD, 2019; 2020).

Seaports are strategic assets that play a vital role in intra- and international trade. As a sea-land interface and point of convergence between various modes of transportation, ports act as gateways to trade, providing access to wider markets, including for

landlocked countries (UNCTAD, 2019). In addition to other reasons, ports are established for economic and social gains, and with expanding regional and global trade they are increasingly under pressure to improve capacity, services and efficiency, which technology is critical to achieving (ITF, 2019; UNCTAD 2020). Trade is an important vector of technological innovations and adoptions, spurring cross-border collaboration and competition. Equally, technology has remained a powerful driver of trade, helping to bring about today's integrated global economy by encouraging economic openness, enhancing efficiency and productivity, enabling collaboration and integration (Vivarelli, 2014; WTO, 2017; UNCTAD 2019). The World Trade Report 2017 accentuate that trade and technology are inextricably linked, and the linkage is a virtuous circle in which advances in technology lead to more openness in trade, and trade openness spurs technological advances; both helping to deepen growth and greater regional and global integration. Trade and technology are mutually reinforcing and the two dominant forces driving global economic advances and transformation today. Acknowledging that many technological innovations or tools are applicable in the maritime sector with considerable value additions in the form of greater efficiency, enhanced productivity, greater safety, heightened environmental protection, trade facilitation and logistics, the need to effectively embrace and leverage them has not only been emphasized but is greatly encouraged (UNCTAD, 2018 & 2019).

Technology has greatly transformed the maritime landscape, and still doing so, becoming more pervasive across mechanical systems, communication frameworks, operational infrastructure, port operations, shipping, maintenance facilities and digital commercial transactions (UNCTAD, 2017b; 2021). In leveraging technological innovations in the maritime sector, African countries as a bloc are lagging compared to countries in Europe, East Asia, and America (UNCTAD, 2019; ITF, 2019). However, as experiences elsewhere have shown (WTO, 2017; UNCTAD, 2018), the boost in trade sequel to the implementation of AfCFTA predictably shall accelerate the pace of automation and digitization of maritime operations and services as well improve infrastructure in African ports.

Consequent upon increasing adaptation of technologies, maritime labour faces a number of risks and opportunities, which include a decline in demand for labour, loss of jobs, changes in the work process, wage inequality, demand for new skillsets as well as qualifications, increased efficiency, productivity and creation of new jobs. Manual and mechanical work processes as well as communication and cognitive work can be automated and digitalized. As several studies highlighted, jobs most vulnerable or have a higher risk of being impacted by technologies are mostly low-and medium-skilled jobs, which are intensive on predictable physical activities and data processing (WTO, 2017; ITF, 2019). They are routine and repetitive tasks that can be accomplished by following a set of well-defined rules and procedures, and which technology can be deployed to execute. Examples of such jobs in the maritime sector are loading and unloading cargoes, bagging, stacking and storage, documentation, maintenance, and inventory. Where technologies such as robotics, artificial intelligence, blockchain and big data analytics are deployed to carry out the tasks, for example, can render human labour input redundant can lead to a decline in demand for labour and loss of jobs in the long run. A composite

task measurement indicator shows that some of the jobs like cargo handling have the greatest potential for further automation. ITF (2019) reports that 27% of the current jobs of dockworkers are already automated and up to 90% of their jobs and associated tasks will not exist in their current form by 2040 because they would be automated.

Furthermore, the use of automated ships or maritime autonomous surface ships can lead to a reduction in the crew size onboard vessels. Foresight simulations conducted for maritime transport show that the introduction of highly automated ships can lead to a decrease in the demand for seafarers by 22% (ITF, 2019). A recent paper (IMO 2018a; UNCTAD 2019) reflects the concern of seafarers about the possible job losses owing to the advent of automated ships. Focusing on the maritime cluster in the Netherlands, Vonck (2017) finds that the number of jobs in the maritime cluster will decrease by at least 25% with the advent of automation and digitization. Jobs in the port sector are projected to drop by 8.2% and by comparison, the number of jobs in shipping is expected to fall by 1.8%. Further decline in demand for labour can be experienced if current and new technologies become cheaper than labour (International Monetary Fund, 2017). Moreover, the likely decline in the demand for labour because of the automation of some low-and medium-skilled jobs is consistent with historical trends (WTO, 2017; ITF, 2019; Gekara & Sampson 2021). It is important to point out that whilst some jobs at sea are relatively unskilled like ratings, others are highly skilled such as officers (Sampson 2013). As Acejo (2021) noted recent technological innovations in terms of containerization and fast vessels turnaround have negatively affected the ratings more than the officers, in addition to the reduction in the numbers of the crew on ships from approximately40-50 per ship to 20-30 for the same sized vessels.

Although technology can replace human labour or reduce its demand, it can also engender new types of jobs, such as remote-control operators, software programmers, shore-based system monitors and analysts, digital maintenance crews and mobile service providers. The new jobs will require also new skillsets and qualifications to ensure effective and efficient operations. In the case of using automated ships, seafarers are expected in addition to maritime skills or qualifications, to acquire digital skills such as data fluency- having the ability to interpret and analyse large amounts of data; digital operation of equipment like high-tech ships and cranes, and basic software engineering of fundamental programmes and systems (ITF, 2019). For seafarers and shore-based personnel to keep abreast with the changes brought by technology and function effectively in the redefined roles or tasks either onboard or ashore will require continuous learning and training (UNCTAD, 2019).

In another vein, technology adaptation will require skills upgrades for the tasks that may be automated. It is anticipated that increasing automation will trigger the need for a substantial wave of re-training of the labour force. Associated with a life-long learning process workers need to be prepared to adapt to the changing nature of work and develop new skills and competencies. As highlighted in ITF (2019) the requirements of being a remote-control driver of the automated quay cranes become amplified and more complex than those of traditional quay crane operators. In turn, it is compulsory for the 'new' quay crane drivers to obtain general prior knowledge of mechanics and electronics, in addition to state-of-the-art handling skills on control panels. In other words, technology provides

the opportunity for skills upgrades that can enhance the value of workers. There is the indication that there will be shortages of suitably qualified personnel in this regard if necessary, steps are not taken on time.

Further adaptation of technologies in the workplace can affect the earnings of maritime labour, depending on the skills acquired and tasks performed. Because technology is skill-biased, it favours highly skilled workers in terms of employment retention and wages (WTO, 2017; ITF, 2019), whereas technological innovations open the door for the automation of jobs performed by low-and medium-skilled workers, they assist and complement the jobs of high-skilled workers, who are mostly cognitive and least prone to automation. The situation wherein some of the jobs done by low-and medium-skilled workers are automated and lead to declining demand for those categories of workers can force a shift in the employment structure from medium to low-skilled and lower-wage jobs.

Conversely, technology complementing the jobs of high-skilled workers (e.g., ship captains), enhancing productivity, and therefore, the demand for such workers and their wages will rise; thereby expanding the wage inequality gap. As Fonseca, Lima, and Pereira (2018) noted while a particular group of workers has benefitted from technological advances, others did not. Research undertaken in both developed and developing countries, technology, in particular automation and digitalization of routine tasks was found to be the leading cause of polarized labour market and earnings (Acemoglu and Autor, 2011; WTO, 2017; ITF, 2019). Since there exists a beneficial complementarity between technology and skills driving labour demand and wages upward, the perception of implication suggests that the category of workers who will benefit most from the increasing adaptation of technologies in the maritime sector would be the high-skilled group compared to the low-and medium-skilled workers whose demand and earnings might reduce. That said, technology presents both opportunities and challenges, and depending on the context, thus, its overall effects is considered somewhat ambiguous.

The other development under the AfCFTA that can impact maritime labour might be the significant growth that would be experienced in certain sectors of the economy with the attendant increase in employment opportunities and incomes. Within the continent, trade is projected to increase significantly with the manufacturing, agriculture, and services sectors, including wholesale and retail playing critical roles as they would become the major areas of trade activities. Economic gains from the manufacturing sector to be around 62%; the gains in the agriculture sector would be up to 49% and the gains in the service sector about 14%. Increases in employment opportunities and wages across sectors are also expected (World Bank 2020). This positive view of trade can lead to several changes that include the structural transformation of employment at the level of tasks, occupations, firms or sectors, as well as wages. Evidence of trade effects on labour generally shows that trade tends to impact employment as well as real wages and can lead to a reallocation of economic activity (WTO, 2017).

In terms of employment, trade expansion under AfCFTA can trigger and accelerate transitions from jobs in sectors of comparative disadvantage to jobs in sectors of comparative advantage. For instance, increasing employment opportunities and better

wages in the manufacturing sector compared to the maritime sector where technology adaptation might render human labour redundant and trade flow overland might reduce traffic to the ports can trigger a movement of workers in the maritime sector to manufacturing. The incentive for workers to move between jobs or across sectors is usually dependent on a combination of wage differences and job opportunities (Öberg, 1997), and where the wage differential is higher, the incentive for workers to move is likely to be more, and this might be the case in the implementation of AfCFTA. Moreover, the WTO (2017) highlights those important transformations have occurred across sectoral and occupational structures of employment in developed countries over the past due to trade expansion, and an increasing number of developing countries are already experiencing a sustained shift in employment from agriculture and manufacturing toward the services sector. Trade expansion can increase the relative demand for varied skilled workers. Results from several studies indicate that besides the increase in demand for high skills which often translates to an increase in the wages of high-skilled workers, it can also lead to an increase in the wages of low and medium-skilled workers though depending on a combination of factors (WTO, 2017; World Bank, 2020). Resulting job opportunities from trade expansion can raise the incentive for low-and middle-skilled to acquire relevant new or higher skills to enhance their value. For example, this is happening currently in Nigeria's maritime sector. Furthermore, the multiplier effect of the trade outcomes can boost the purchasing power of poor, low-skilled workers by enabling them to purchase cheaper products, and therefore its impact on the relative real wage can be favourable to the poorer (WTO, 2017).

As discussed in the literature, trade can lead to a reallocation of economic activity to more productive sectors (WTO, 2017; World Bank, 2020). Labour markets are complex and multifaceted systems shaped by demographic, economic, social and institutional factors. Moving resources to areas of comparative advantage, for instance, to services sectors enabled by technological platforms like e-commerce can have an important impact on the work of maritime labour. Simultaneously, this will require some adjustments by workers of which the costs of the adjustments may be significant at the individual level and may require a policy response.

The free movement of persons across the continent might be another development that can impact maritime labour in the AfCFTA scenario. The free movement of persons in the AfCFTA agreement is regarded as a key factor in furthering the common continental market necessary to deepen the economic integration of Africa and promote sustainable development. It is based on the conviction that unimpeded cross-border movement of goods, services, capital and labour can only be achieved if there is free movement of people as well. As stated in the Protocol, the free movement of persons is the right of nationals of a Member State to enter, move freely, reside in another Member State, as well as establish a business, seek and accept gainful employment without discrimination, and exit from it according to the laws of the host Member State (AU 2018). In other words, the free movement of persons includes labour mobility and other factors of production--capital and entrepreneurship. Based on the theorems of relative competitive advantage, expertise and division of labour which have remained the cornerstone of international economics and the economics of integration, the free

movement can lead to an influx of cheaper labour, expertise and higher qualifications which can have implications for maritime labour. The free movement of people creates new dynamics to which states must adapt.

Conclusion and Recommendations

Theoretically, the AfCFTA agreement is a very important initiative that can have a transformative impact on African economies as the released estimates indicate. However, how this works out in practice is where the challenge lies. An attempt has been made to examine the potential implications of implementing the AfCFTA agreement for maritime labour. In doing so certain development and trends envisaged in the AfCFTA scenario were considered. The development and trends include the likely increase of trade flows moving more overland than seaborne, a rise in technology adaptation, economic restructuring because of positive outcomes of trade and the protocol on the free movement of persons. While the implementation of the AfCFTA offers several opportunities to expand trade, as well as create more employment opportunities and higher wages, there are also the potential costs of a slight drop in government revenue and that some workers would lose jobs.

Addressing the costs of the AfCFTA implementation, especially the issues of employment and wages would require a complementary set of policy measures. Further to raising awareness of the envisaged developments and trends that might result from implementing the AfCFTA, it is suggested that governments, policymakers, decision-makers and stakeholders should take time to carefully plan and evaluate the unfolding effects of AfCFTA across sectors, on skilled and unskilled workers, and be able to take preventative or corrective actions. This would entail having informed discussions among all stakeholders to better understand the different positions, opinions, and fears. In addition, policies focusing on local and industry-specific sectors should be designed to reduce the costs of job switching and provide effective safety nets where they are needed most. Empirical evidence shows that without intervention by governments and other institutions, labour market gains from trade are not distributed evenly

Mapping exercises between the present situations and expected future ones would be an essential prerequisite to understanding the dimensions of change and the implications resulting from trade expansion. Important questions to be addressed in the mapping exercises would be which jobs could be created because of AfCFTA and its associated effects, and what skills would be needed, for instance, in a technology-driven future to effectively operate the new automated systems, as well as what specific training will be needed. To a certain extent, this may require a reviewing of the educational and vocational curricula, Re-training on a large scale along with other means of support could be helpful measures to mitigate the potential effects of trade. Constant dialogue and close monitoring of trade developments are therefore key to ensure that education and training can be adjusted to the needs of the labour market. Governments can facilitate the processes needed through adequate policies and necessary funds

Improving and scaling up existing ports infrastructure can increase competitiveness across the continent and sustain jobs in the sector. This should be done with the intention of developing trade corridors and incorporating a continental perspective. This effort

could be particularly important for reducing trade costs in landlocked countries. Improving ports and their efficiency would also help reduce trade costs, increase, and sustain jobs in the sector. Port development should be part of a coordinated African transportation strategy to ensure efficient use of resources and reduce costs and time at customs. It is also important to eliminate bottlenecks faced by many landlocked countries in reaching their transit ports. At the same time, regulatory frameworks and institutional capacity should be strengthened to attract private sector participation in the construction, operation, and maintenance of transportation infrastructure. That said, efficient public investment in areas unlikely to receive private financing (for example, rural roads and rural telecommunications) should continue, along with improvement of public investment management. Beyond the numbers and negotiations, realizing the promise of the AfCFTA will depend on the decisive actions and collective efforts of African stakeholders and governments to ensure that it is achieved.

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