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THE IMPACT OF CLIMATE CHANGE ON CUSTOMS REVENUES IN THE WAEMU ZONE

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ABSTRACT

Dalam beberapa tahun terakhir, planet ini telah ditandai oleh peristiwa-peristiwa besar: imigrasi, terorisme, konflik bersenjata, dan terutama pemanasan global yang menarik perhatian negara-negara di seluruh dunia, khususnya negara-negara di WAEMU. Pemanasan global menyebabkan gangguan dalam fungsi siklus produksi. Selanjutnya, negara-negara ini yang pada dasarnya adalah negara agraris menghadapi beberapa fenomena. Dampak perubahan iklim terhadap pendapatan bea cukai di *West African Economic and Monetary Union* (WAEMU) merujuk pada efek-efek variasi iklim, seperti peningkatan suhu, cuaca ekstrem, kenaikan permukaan laut, dan perubahan curah hujan, pada pendapatan yang dihasilkan oleh kegiatan bea cukai di wilayah ini. Produksi pertanian turun tajam merupakan hal yang tidak terhindarkan dan mengakibatkan penurunan pendapatan bea cukai. Pendapatan bea cukai merupakan sarana utama pembangunan bagi negara-negara ini. Pertanyaan ini sangat penting karena mewajibkan negara-negara untuk mengadopsi kebijakan-kebijakan baru. Mereka harus mendiversifikasi bidang produksi dan memikirkan transformasi produk untuk meningkatkan nilai tambah. Selain itu, negara-negara WAEMU akan mendapat manfaat dari tingginya ketertarikan pada kebijakan industrialisasi untuk meminimalkan impor yang memberatkan neraca perdagangan karena dampak pemanasan global akan terus berkembang.

In recent years, the planet has been marked by major events: immigration, terrorism, armed conflicts and above all global warming which is attracting the attention of countries around the world and those of WAEMU in particular. Global warming leads to disruptions in the functioning of production cycles. Indeed, these countries which are essentially agricultural are facing several phenomena. The impact of climate change on customs revenues in the West African Economic and Monetary Union (WAEMU) area refers to the effects that climate variations, such as increased temperatures, extreme weather events, rising of sea level and changes in precipitation, can have on the revenue generated by customs activities in this region. Agricultural production is falling sharply. This inevitably leads to a reduction in customs revenue. Customs revenues constitute the main means of development for these countries. This question is of capital importance insofar as it obliges States to adopt new policies. They should diversify areas of production and think about transforming products in order to increase added value. Furthermore, WAEMU States would benefit from taking an increasing interest in industrialization policies in order to minimize imports which weigh heavily on the trade balance because the effects of global warming will continue to grow.

1. INTRODUCTION

1.1. Background of Study

The impact of climate change on customs revenues in the West African Economic and Monetary Union (WAEMU) area refers to the effects that climate variations, such as increased temperatures, extreme weather events, rising of sea level and changes in precipitation, can have on the revenue generated by customs activities in this region.

Customs revenue comes mainly from customs duties, taxes and duties levied on imported and exported goods[1]. Climate change can have several impacts on these revenues: Alteration of business models: Disruptions caused by climate change, such as extreme weather events, prolonged droughts or

[1] The rise in temperatures was more marked in the countries of Sub-Saharan Africa (SSA) in particular, i.e. a variation compared to the 20th century average of 0.3°C to 1.5°C depending on the region in 2017, against 1°C globally (Debels-Lamblin and Jacolin, 2020).

floods, can disrupt supply chains and business models. This can reduce the volume of trade and therefore customs revenue. Thus, the reduction in agricultural production generated by climatic variations can affect agricultural production, which can reduce exports of agricultural and agri-food products[2]. Fewer exports mean less customs revenue. This state of affairs has an impact on infrastructure to the extent that rising sea levels and the intensification of extreme weather events can damage port infrastructure and transport facilities. This can lead to delays in the movement of goods and a reduction in trade. Also, the fluctuation in raw material prices is due to climate changes which can affect the availability and cost of raw materials. For example, extreme weather events can disrupt the production of essential raw materials for the industry, which in turn can affect imports and associated customs revenues.

In response to climate change, countries can implement policies to reduce greenhouse gas emissions, which could involve tariff adjustments or tax incentives. This may have an impact on customs revenue, depending on how these policies are implemented. Climate change is significantly altering consumer preferences and economic priorities. This can influence imports and exports, which, in turn, can affect customs revenue.

As the effects of climate change become increasingly tangible[3] through extreme weather events, unpredictable variations in weather conditions and environmental disruptions, the region's economies face new and complex climate challenges. customs revenue management. This development raises crucial questions about the sustainability of revenues from international trade and the ability of WAEMU countries to maintain their economic activities and infrastructure as they face the growing impacts of climate change[4]. A question therefore arises: what is the impact of climate change on customs revenue in the WAEMU zone? This study will explore the intersection between climate change and customs revenues in the WAEMU zone. First, we will highlight the main challenges facing member countries and the potential implications for their economies and development (I). Secondly, we will opt for prospects for a balance of customs revenues (II).

2. LITERATURE REVIEW AND HYPOTHESIS

The integration of climate risks into customs policies would thus be in line with international commitments in the fight against climate change (Paris Agreements). Climatic disruptions, such as storms, droughts, floods and unpredictable variations in temperatures, have significant impacts on the production and distribution of raw materials and agricultural products, leading to major price fluctuations on global markets[8]. In Niger, the 2009 drought affected up to 50% of the population (Croitoru et al., 2019; Debels-Lamblin and Jacolin, 2020).

3. RESEARCH METHODOLOGY

For the writing of this article, we resorted to consulting documents and works. We also visited certain sites for data collection.

Our contribution is intended to be an empirical assessment of the effects of climate change on the customs revenues of WAEMU countries. Indeed, the question of the effects of global warming are increasingly visible on the economies of countries, especially sub-Saharan countries like those of the WAEMU.

Such an analysis fills the literature gap and is part of the work that considers the rare impacts of climate change on WAEMU customs revenue. According to data specific to each country, customs revenues constitute primary resources in the development program of States.

It was therefore necessary to go through the actual data from each State over a relatively long period (twenty years).

Difficulties in accessing documentation must also be noted. Indeed, the libraries are not sufficiently provided on new questions like ours. It is important that the leaders of universities and training establishments adapt their operations and their equipment to new challenges.

4. RESULTS AND FINDINGS

4.1. Assessment Of the Impacts of Climate Change on Customs Revenue

There is no doubt that climate change has considerable repercussions on nature in Africa in general and in the WAEMU zone in particular. This impact is visible through the various modifications that our planet has undergone. For example, from 2001 to 2017, annual precipitation fell compared to the 20th century average, by 4.0 cm in the WAEMU region compared to 2.8 cm for the entire planet. However, this is hardly perceptible on the economy. However, it is a fact which, moreover, deserves to be examined. Following a rigorous diagnosis, it is clear that climate change impacts supply chains (A), thus

[2] Global surface temperature would continue to rise, absent mitigation measures, and would result in a negative impact of between 1.0% and 3.3% on global annual GDP by 2060 and between 2% and 10% by the end of the century. Global agricultural damage would be in the range of 0.6% to 0.8% of global GDP by 2060 (OECD, 2015).

[3] Climate change is a real concern facing economic agents on a global scale. It manifests itself in the form of shocks resulting in the occurrence of extreme and volatile weather events which induce significant disruptions within an economy (Batten, 2018; Eckstein et al., 2020; Andersson et al., 2020).

[4] BERG Elliot, "Economic integration in West Africa: problems and strategies", Development Economics Review, 1st year no. 2, 1993. The political economy of regional integration, pp.51-82 , spec. p. 53.

creating volatility in the prices of raw materials and agricultural products (B).

4.1.1.Supply chain disruptions

Supply chain disruptions caused by climate change have a significant effect on customs revenues in the WAEMU (West African Economic and Monetary Union) Zone. WAEMU is an economic union made up of eight West African countries, namely Benin, Burkina Faso, Ivory Coast, Guinea- Bissau, Mali, Niger, Senegal and Togo[5]. This zone shares a customs union and a common currency as well as coordinated economic and monetary policies.

Climate change affects supply chains in different ways, which, in turn, can influence customs revenues in the WAEMU region[6]. Thus, climate change is causing enormous damage to the supply chains of the WAEMU zone, which should be presented in the following lines.

The observation of the impact of climate change on agriculture and raw materials is obvious. Indeed, Climate change can cause extreme weather events[7] such as droughts, floods and storms, which can reduce agricultural production and affect the availability of raw materials. Agricultural and raw material exports decline due to these disruptions, thereby causing declines in export earnings and associated customs revenues.

Beyond that cited above there is the reduction in industrial productivity. Industries that rely on specific raw materials or imported components may be affected by supply chain disruptions. If finished products are less available due to the impact of climate change on production or transport, this may reduce customs revenue generated by imports.

This state of affairs causes the increase in transport costs. Weather disruptions can affect transportation infrastructure, causing delays and additional costs for shipping goods. Businesses may be forced to raise prices to offset these costs, which may reduce demand for imported goods and, therefore, customs revenue.

There is also the vulnerability of certain sensitive sectors. Certain economic sectors within WAEMU could be more vulnerable to the effects of climate change. For example, the agricultural and coastal sectors could be particularly affected. Some countries such as Benin, Ivory Coast, Senegal and Togo are experiencing the phenomenon of coastal erosion, with more than half of their coasts (around 56% of the coastline) being affected. If these sectors suffer significant losses, this may result in a reduction in tax and customs revenues.

The climate situation is inexorably contributing to the reorientation of international trade negotiations. Disruptions to supply chains caused by climate change could potentially influence WAEMU international trade negotiations. Member countries may need to reassess their trade priorities and seek support measures to address climate challenges, which could impact trade flows and customs revenues.

Finally, climate change exacerbates risks for customs revenues in the WAEMU Zone through disruptions to supply chains and by impacting key economic sectors.

Faced with the complex issues of climate change and its impacts on customs revenues and local economies within the WAEMU Zone, it is imperative that governments and economic actors in the region become fully aware of these challenges and actively engage in the search for solutions to mitigate the negative effects. Such a proactive approach is crucial to ensuring economic stability and long- term sustainability.

First, governments should adopt policies and regulations that encourage climate resilience and economic diversification. This involves investing in resilient infrastructure, promoting sustainable agricultural practices, and encouraging innovation in emerging sectors linked to renewable energy and green technology. By developing national strategies to combat climate change and integrating these objectives into economic development plans, governments can provide a favorable framework for adaptation and sustainable growth. Intergovernmental cooperation within the WAEMU Zone would be essential to address these issues on a regional scale. Climate challenges know no borders, and the coordination of policies and actions between member countries can strengthen the effectiveness of the measures taken. This could include sharing best practices, establishing regional financing mechanisms for climate resilience and promoting sustainable technology exchanges.

Economic actors, for their part, should position themselves as drivers of change. Businesses can play a major role by integrating environmentally friendly business practices and investing in innovative solutions. Adopting sustainable supply chains, promoting energy efficiency and exploring new markets consistent with the principles of sustainable development are all strategies that can reduce economic vulnerability to climate disruption.

Finally, the challenges posed by climate change for customs revenues and local economies in the WAEMU Zone require concerted and proactive action on the part of governments and economic actors. By addressing these issues and adopting policies and practices that promote resilience and sustainability, the region can not only mitigate the negative effects of

[5] Revised WAEMU Treaty of January 10, 1994

[6] Reflections have been devoted to the economic impacts of climate change on macroeconomic variables in general and on inflation in particular in central banks (Faccia et al., 2021; Andersson et al., 2020; Batten, 2018; Batten et al. ., 2016).

[7] Some countries such as Benin, Ivory Coast, Senegal, and Togo are experiencing the phenomenon of coastal erosion, with more than half of their coasts (around 56% of the coastline) being affected. In Niger, the 2009 drought affected up to 50% of the population (Croitoru et al., 2019; Debels-Lamblin and Jacolin, 2020).

climate change, but also pave the way for resilient and environmentally friendly economic growth. environment.

4.1.2. Volatility of prices of raw materials and agricultural products

The volatility of prices of raw materials and agricultural products is a phenomenon that has been accentuated by recent climate changes. Climatic disruptions, such as storms, droughts, floods and unpredictable variations in temperatures, have significant impacts on the production and distribution of raw materials and agricultural products, leading to major price fluctuations on global markets[8]. In Niger, the 2009 drought affected up to 50% of the population (Croitoru et al., 2019; Debels-Lamblin and Jacolin, 2020).

It is clear that the volatility of prices of raw materials and agricultural products has a considerable impact on agricultural production. Variations in climatic conditions have a direct impact on agricultural production. Prolonged droughts, flash floods, heat waves and changes in precipitation patterns can reduce agricultural yields. This can lead to insufficient supply in the market, which can push prices up due to the scarcity of agricultural products[9].

Apart from the above, we note the uncertainty of returns. Farmers face increased uncertainty due to increasing climate variability. They face unpredictable challenges such as early or late arrival of seasons, which can make planning crops and harvests difficult. This uncertainty can influence planting and production decisions, which can contribute to price volatility.

Climate change is undermining limited water resources. Climate change can cause water shortages in certain regions, which directly impacts agricultural irrigation. Reductions in water supplies can reduce agricultural productivity and increase production costs, which can potentially lead to increases in agricultural product prices.

Also, we are seeing extreme weather incidents: Extreme weather events, such as hurricanes, storms and wildfires, can destroy crops, infrastructure and storage facilities. These incidents can result in significant production losses and supply disruption, which can result in abrupt price fluctuations.

Climate change may also influence global demand for certain raw materials, particularly those used in sectors such as clean energy, information technology and climate-resilient infrastructure. An increase in demand can put additional pressure on prices. Interconnectedness of global markets: Markets for raw materials and agricultural products are increasingly interconnected on a global scale. Production disruptions in one region can impact global markets, causing spillover effects and amplifying price volatility.

To mitigate the volatility of prices of raw materials and agricultural products due to climate change, it is important to put in place adaptation and mitigation measures[10]. This could include investments in climate-resilient agricultural practices, efficient irrigation systems, improved storage infrastructure, as well as risk management mechanisms and market regulation policies.

Establishing international collaboration to reduce greenhouse gas emissions and limit climate change is of crucial importance, not only for the global environment, but also for mitigating negative effects on energy chains. supply and prices of agricultural products. This cooperative approach presents considerable advantages for countries in the WAEMU zone and beyond. Indeed, reducing greenhouse gas emissions globally would help slow the pace of climate change, which in turn would mitigate extreme weather events and environmental disruption. This would have a direct effect on supply chains by stabilizing logistics, avoiding weather- related delays and minimizing losses due to natural disasters. More stable supply chains would result in more predictable prices for agricultural products and other goods, which would benefit WAEMU economies that rely heavily on these sectors. Also, international cooperation aimed at reducing greenhouse gas emissions could stimulate the development and adoption of clean and sustainable technologies. This would create new business and investment opportunities in emerging sectors such as renewable energy, green technology and sustainable agricultural practices. Such a transition to more environmentally friendly production methods could help diversify economies, while reducing dependence on sectors vulnerable to climate change.

Furthermore, international collaboration would strengthen the stability of global markets by encouraging regulatory consistency and environmental standards. This would reduce risks associated with sudden fluctuations in environmental and trade policies, thereby promoting investor confidence and economic growth. More stable and predictable markets would enable better planning of economic activities and more effective risk management. Let us remember that international cooperation to reduce greenhouse gas emissions and limit climate change goes beyond the environment; it has direct repercussions on regional economies, including in the WAEMU zone. By stabilizing supply chains, fostering the development of sustainable sectors and enhancing the stability of global markets,

[8] AHADZI-NONOU Kofi, "Comment on the obstacles to the liberalization scheme", in N'buéké Adovi GOEH-AKUÉ (ed.), Nation States facing regional integration in West Africa. The case of Togo, Paris, Karthala, 2009, pp.176-182, spec. p. 177.

[9] In most WAEMU countries, there has been a decline in the volume of exports of agricultural products over the period from 1995 to 2020. In Burkina Faso, it went from 63% to 6%, in Côte d Ivory from 20% to 11%, in Mali from 61% to 12%, in Togo from 32% to 9%.

[10] Convention A/P4/5/82 of May 29, 1982, relating to inter-State road transit of goods

such collaboration would help mitigate the negative effects of climate change and promote long-term economic resilience.

4.2. Incentives For the Balance of Customs Revenue

Climate change represents a major challenge for customs revenues in the WAEMU zone. In order to deal with this situation, it is necessary to take incentive measures to balance customs revenue. With this in mind, the States of the WAEMU zone could not only adapt their customs policies to climate change (A), but could also diversify the sources of customs revenue (B).

4.2.1. Adaptation of customs policies to climate change situations

The adaptation of customs policies would firstly involve the integration of climate risks into customs policies and the development of customs in the WAEMU zone (West African Economic and Monetary Union) as regulatory bodies would be an essential approach for several fundamental reasons. Indeed, climate change is an indisputable reality that is having increasing impacts on the global economy and ecosystems. By integrating these risks into customs policies , the WAEMU zone could adopt a proactive approach to minimize the economic, social and environmental consequences of extreme climatic events. By promoting the adoption of preventive measures and risk management procedures, customs could contribute to the resilience of member countries in the face of climate disruption.

The integration of climate risks into customs policies would thus be in line with international commitments in the fight against climate change, such as the Paris Agreements. This would show the WAEMU zone's commitment to sustainability and environmental protection, thus strengthening its credibility on the international stage. Additionally, this approach could inspire other regions and countries to follow suit, creating a positive ripple effect for climate change mitigation and adaptation.

It should be noted that customs also play a crucial role as regulatory bodies in international trade. By integrating climate risks into their operation, they could contribute to a better evaluation of the goods exchanged in terms of carbon footprint, sustainability and compliance with environmental standards. This would encourage more responsible trade and discourage business practices that contribute to greenhouse gas emissions and environmental degradation.

The adaptation of customs policies would also involve the implementation of adaptive measures to resist climatic shocks in the WAEMU zone, such as the modernization of port infrastructure and the establishment of early warning systems to manage weather risks. , is of capital importance. Indeed, the effects of climate change are being felt more and more, with extreme weather phenomena becoming more frequent and intense. In this context, modernizing port infrastructure is essential to guarantee the continuity of trade and the proper functioning of the region's economies. Modernizing port infrastructure would increase their resilience to extreme climatic events such as storms and rising sea levels. Stronger docks, better-designed facilities and appropriate protection systems could minimize the damage caused by these events, thereby reducing disruptions to supply chains and associated economic costs. Additionally, ports adapted to changing climate conditions could also facilitate the importation of green technologies and goods needed to mitigate the effects of climate change.

At the same time, the establishment of early warning systems to manage weather risks would play a crucial role in saving human lives and reducing material damage. By having access to accurate, real-time weather information, authorities could make informed decisions to evacuate populations at risk, implement prevention measures and coordinate relief in the event of an imminent disaster. This proactive approach could significantly reduce the impact of major climatic events, while limiting human losses and the costs associated with reconstruction. The implementation of adaptive measures such as the modernization of port infrastructure and the establishment of early warning systems is essential to prepare the WAEMU zone for climate shocks.

Implementing such measures would not only strengthen the resilience of regional economies to extreme weather events,but would also have a significant impact on the preservation of human lives and long-term economic stability. By adopting a proactive approach focused on climate risk management, countries in the WAEMU zone could realize a series of major benefits. First of all, investing in resilient and sustainable infrastructure would significantly reduce human losses in the event of climate disasters. Infrastructure such as early warning systems, cyclone shelters and improved drainage systems would help save lives by enabling faster evacuation and minimizing the adverse effects of extreme weather events.

Additionally, a focus on sustainable economic diversification and the adoption of climate-resilient agricultural practices would help stabilize the livelihoods of local populations. By strengthening key economic sectors so as to make them less dependent on volatile weather conditions, income and employment stability could be better preserved. This would have a mitigating effect on forced migrations, which are often triggered by environmental disruptions, thereby contributing to social and economic stability. Finally, by adopting a long-term vision of economic resilience, countries in the WAEMU zone could better position their economies to prosper in a context of global climate change. Companies that invest in sustainable and innovative practices are likely to be more competitive in the ever-changing global marketplace. Recognition and adoption of

sustainable and environmentally friendly economic practices can open the door to new export opportunities, which promotes stable and sustainable economic growth. The global economy is moving toward increasing awareness of environmental issues and sustainability, which creates fertile ground for companies and countries to embrace these values. Commitment to sustainability can give exporters a competitive advantage. Consumers and international markets are increasingly showing interest in products and services that are produced in an environmentally responsible manner. Companies that meet these requirements can enter new markets and increase their market share by capitalizing on these trends.

Increasingly strict environmental standards imposed by importing countries can exclude products that do not meet these standards. By adopting sustainable practices, businesses and countries can more easily comply with these regulations, avoiding trade barriers and compliance delays.

Exporting environmentally friendly products can also enhance the international reputation of companies and countries. Consumers are increasingly inclined to support brands and products that have a positive impact on the planet. This image of responsibility can not only increase demand for exported products, but also improve the overall perception of the exporting nation.

In short, these measures aimed at strengthening economic resilience and minimizing climate risks within the WAEMU Zone would not only result in better adaptation to changing conditions, but would have much broader positive impacts. They would save lives, protect livelihoods and create strong economic foundations for the future, contributing to long-term stability and prosperity. But at the same time, we must exploit other avenues such as the diversification of sources of customs revenue which would also help to deal with climate change.

4.2.2. Diversification of customs revenue sources

The diversification of exported and imported products within the WAEMU (West African Economic and Monetary Union) region is a crucial measure to reduce excessive economic dependence on certain sectors sensitive to the effects of climate change. Currently, many economies in the region rely heavily on specific industries, such as intensive agriculture and natural resource extraction, which are vulnerable to increasing climate disruption[11]. By encouraging diversification, WAEMU countries could reduce economic risks linked to climate change, such as droughts, floods and disruptions in the global supply chain. By investing in new sectors, such as renewable energy, clean technology, manufacturing and services, countries in the region could create alternative sources of revenue and boost economic growth while minimizing the adverse consequences of change climatic.

Diversification would encourage innovation and competitiveness. By developing new industries, WAEMU countries could leverage their local assets and natural resources to create higher value-added products. This would strengthen their position in international markets and reduce their vulnerability to fluctuations in commodity prices. This approach would promote economic and social resilience. By creating a diversified economy, WAEMU countries would be better prepared to face climatic and economic shocks. They could better absorb negative impacts through a strong and diversified economic base, which would help maintain social stability and reduce the risk of conflicts linked to economic pressures.

Apart from the diversification of products exported and imported within the WAEMU region, trade should be encouraged with new partner countries within the WAEMU zone (West African Economic and Monetary Union) constitutes an essential approach to reduce the vulnerability of customs revenue. Indeed, excessive dependence on a limited number of trading partners exposes the region to considerable economic risks. By diversifying trade relations, WAEMU countries can mitigate the negative effects of a fall in trade with certain partners. By expanding the list of partner countries, WAEMU can not only increase its economic potential, but also mitigate potential fluctuations in customs revenues. Member countries could exploit new trade opportunities with countries with complementary needs and resources. This commercial diversification can help stimulate economic growth by encouraging the development of new sectors and industries.

In addition, the diversification of trading partners can strengthen WAEMU's negotiating position on the international scene. By having several important trading partners, the region gains negotiating power when discussing trade agreements and tariffs[12]. This more solid position can make it possible to better defend the economic and commercial interests of the WAEMU, thus promoting a more balanced distribution of economic benefits.

However, it is crucial that this diversification is undertaken strategically. Potential trading partners should be selected based on criteria such as economic complementarity, political stability, and respect for international standards. Bilateral and multilateral agreements should be negotiated to ensure fair and favorable conditions for all parties involved. Expanding trade with new partner countries within the WAEMU offers significant benefits in terms of reducing the vulnerability of customs revenues. This strategy will help stimulate economic growth,

[11] Philipe ROUDIER , Climate and agriculture in West Africa: quantification of the impact of climate change on yields and evaluation of the usefulness of seasonal forecasts . Doctoral thesis, Paris, EHESS, 2012, p189.

[12] NORDHAUS W. (2015), “Climate Clubs: Overcoming Free-Riding in International Climate Policy”, American Economic Review, vol. 105, no. 4, 2015, p. 1340.

strengthen the region's negotiating position and diversify sources of income. But, it is valuable that this economic diversification is undertaken with care and a strategic approach in order to make the most of the potential benefits while minimizing the associated risks. Although diversification may seem like an obvious response to the challenges posed by climate change for customs revenues and key economic sectors within the WAEMU Zone, careless implementation could lead to undesirable consequences.

First, rushed and poorly planned diversification could dilute the resources and attention needed to effectively develop each new economic activity. It is essential to conduct in-depth analyzes to identify promising sectors, taking into account global demand, local skills, and the region's comparative advantages. Opting for diversification without a long-term vision could disperse efforts and investments, resulting in low profitability and a reduction in overall revenue.

In addition, there are environmental and social risks linked to unconsidered diversification. Some new industries could lead to unsustainable exploitation of natural resources, increased environmental degradation or even social conflict. Therefore, a prudent diversification strategy should favor sectors aligned with the principles of sustainable development, thereby minimizing potential damage to the environment and local communities.

Another crucial aspect is the need to build the skills and capabilities needed to succeed in the new chosen sectors. A skilled workforce is essential to maximize the effectiveness of economic diversification. Investments in education, vocational training and research and development are therefore imperative to ensure that the local workforce can meet the demands of new sectors and maintain competitiveness.

Ultimately, although economic diversification may offer a promising avenue for mitigating climate change risks to customs revenues and key economic sectors within the WAEMU Zone, its implementation must be guided by careful planning., a thorough assessment of risks and benefits, as well as sustained attention to environmental and social considerations. This will ensure that diversification actually contributes to economic resilience and long-term sustainability, while avoiding the potential pitfalls of a poorly managed approach.

5. CONCLUSIONS AND RECOMMENDATIONS

At the end of this study, it is undeniable that climate change has a significant impact on customs revenues within the West African Economic and Monetary Union (WAEMU) zone. The combined effects of extreme weather events, rising sea levels and alterations in agricultural production patterns have direct repercussions on trade and, therefore, on customs revenues of member countries.

Climate disruptions, such as hurricanes, droughts and floods, cause disruptions in supply chains, delay the transportation of goods and damage port and transportation infrastructure. This results in delays and additional costs for imports and exports, thereby reducing tax revenues from customs duties.

Additionally, climate change directly affects key economic sectors within WAEMU, including agriculture, fishing and logging. These sectors are often dependent on climatic conditions for their production. Variations in precipitation, heat waves and unpredictable weather events cause disruptions in the production and availability of products for trade, impacting import and export volumes, and by extension, on customs revenue.

To face these challenges, it is imperative that WAEMU member countries adopt strategies for economic diversification and strengthening their resilience to climate change. This could include investments in climate-resilient transport and port infrastructure, promotion of regional supply chains to reduce dependence on distant imports, as well as support for climate- responsive economic sectors, such as renewable energy and sustainable agriculture. In short, climate change represents a major challenge for customs revenues within the WAEMU zone. The need to adopt adaptation and mitigation policies is crucial to minimize the negative effects of climate change on trade and tax revenues, while promoting sustainable economic development within the region.

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